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The Impact of Integrated Programs for Women
on Fertility-Related Variables:
Recommendations for Research

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Recommendations for Research

SUMMARY

The purpose of this report is to recommend a research methodology to study the effects of women's participation in small-scale income-generation projects on fertility attitudes and behavior. Of particular concern are those effects on fertility which are in some way attributable to increased income or to the changes in women's lives brought about by the introduction of new economic activities. An attempt will be made to discern, among participants, groups of women who are more receptive to family planning than others and the reasons for those differences.

The following specific research questions will be addressed:

1. Do income-generation projects increase real income?
2. Does success or failure of groups to increase real income have an effect on fertility attitudes, knowledge, or behavior?
3. What are critical components in programs that increase income and decrease fertility or increase family planning receptivity?
4. What external events or conditions are necessary for success or lead to failure of income-generation projects?

Given the inherent conflict between participatory community development programs and the use of an experimental research design, a quasi-experimental design is recommended which employs time-series data and nonequivalent control groups.

Two research sites are recommended: the Association of People for Practical Life Education (APPLE) in Atebubu, Ghana, and Tototo Home Industries in Mombasa, Kenya. Each organization will begin ten new women's projects in 1982.

Research instruments will include: survey questionnaires for a 50% sample of women participants and a random sample of non-participants; survey questionnaires for a small proportion of participants' husbands; forms to monitor family planning service records; forms to monitor income-generation records; forms to monitor outreach workers' log books; mini-survey questionnaires for 100 participants. Baseline and post-program surveys will be conducted as well as periodic mini-surveys on income and expenditures. Monitoring of family planning records,

income-generation accounts, and outreach workers' activities will take place quarterly. Anthropological data will be collected on selected households of participants. The research will be conducted for two years.

The cost of this research will be approximately \$350,000 for two years.

World Education is proposed as the project manager and will supervise the work of APPLE and Tototo staff in data collection. World Education, assisted by two senior research consultants from Ghana and Kenya, will be responsible for design and data analysis.

Research results will provide information to development planners and funders about integrated women's programs and will assist program planners in planning and evaluation.

I. INTRODUCTION

The purpose of this paper is to recommend a research methodology to study the effects of women's participation in small-scale income-generation projects on fertility attitudes and behavior. At the request of USAID's Bureau of Program and Policy Coordination (IQC Contract No. PDC-1406-I-00-1061-00), a World Education staff member made site visits to four integrated development programs for women, two in Ghana and two in Kenya. The purposes of these visits were:

- To evaluate the feasibility of conducting fertility-related research in such a project setting;
- To assess the capacity and willingness of local organizations sponsoring such programs to carry out research;
- To define research objectives, given the potential to conduct a study;
- To suggest a research plan for the study.

This report summarizes the findings of that trip and includes a general discussion of the problem, a profile of the integrated development projects themselves and the reasons for their selection as candidates for study, research questions, a discussion of research design and methodology, suggested institutional arrangements for conducting the research, an indication of the costs of the case studies, and a discussion of the uses of research results for donors and program planners.

II. THE PROBLEM

In Africa, annual population growth rates of up to three percent or more prevent many national economies from experiencing real economic growth. In countries like Kenya and Zimbabwe, where distribution of agricultural land is a severe political and social problem, population growth is now assuming crisis proportions. A major obstacle to slowing population growth in Africa is the deeply-rooted large-family norm. Many cultural and economic factors contribute to the persistence of this norm: the need for children to do agricultural work, which is exacerbated by steady male urban migration; the dependence of parents for old-age assistance from children; culture, tradition and religion that emphasize continuity and expansion of lineages; low social status of women with a correspondingly high status conferred on motherhood, which is related to fewer educational and employment opportunities for girls and women, and early age of women at marriage; and high infant mortality.(1,2,3) Another important obstacle to fertility decline is the low availability and poor organization of family planning services.

Since the World Population Conference of 1974 and the beginning of the UN Decade for Women in 1975, development planners, seeking to address the underlying causes of the large family norm as well as to accelerate general economic growth (4), have increasingly allocated resources to programs intended to benefit poor women.

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- 1) Sondra Zeidenstein, Learning About Rural Women. Studies in Family Planning Vol. 10, No. 11/12, Nov.-Dec. 1979 (p.310).
 - 2) Rashid Faruquee et al., Kenya: Population and Development. The World Bank: Washington, D.C., July 1980 (See chapters 5 and 6, pp 120-172).
 - 3) "Age at Marriage and Fertility," Population Reports, Series M, No. 4, Nov. 1979.
 - 4) Esther Boserup, Woman's Role in Economic Development, (St. Martin's Press: New York, 1970).

Women's income-generation projects generally have the following characteristics: they are small (30 members per group); the economic activities they support are culturally acceptable for women (see Appendix 2 for examples of typical activities); they require of participants investments of labor and small sums of money; and they utilize the assistance of an outside agency to secure credit, loans, commodities, equipment, training, supervision, and management assistance.

These programs are based on the following assumptions:

1. A major reason for the persistence of the large-family norm is parental dependence on children for labor and for old-age assistance. Low income is directly responsible for this dependence; higher income permits saving and investment that reduce the need for a large family.
2. Low status of women is directly related to high fertility. If poor women are provided with opportunities for training, employment, higher income, and community participation, their status will increase with a resulting decline in fertility.
3. Poor women lack information on factors which directly impinge on family size: child health, nutrition, pre- and post-natal care, family economics, food production, family planning. Provision of this information will ultimately affect fertility.

Integrated programs directed toward poor, usually rural, women typically offer training in traditional non-agricultural or agricultural-related skills.(1) They have tended to be marginal in terms of outside resources invested, numbers of participants, and magnitude of production.

The questions this report raises are two: what are the general results of women's programs, and what are their specific effects on participants' fertility behavior and attitudes? Although many women's programs are evaluated as a matter of course, evaluation findings are generally vague and concerned more with monitoring program inputs and outputs than with program impact and effects. We may know that 300 chickens were sold by 30 women in one year, but we do not know who these women represent or whether these sales actually constitute an increase in their real income. Few women's programs have been evaluated for their influence on fertility (2), despite the fact that the income-status-fertility relationship is an unstated principle underlying most programs. In short, virtually no reliable information exists about women's programs on which can be based policy and planning concerned with increasing the incomes of the poor and decreasing fertility.

Before undertaking the kind of evaluation necessary to provide such information, one must examine more closely the relationship between income and fertility assumed by women's programs.

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- 1) See Nadia Youssef ("Women's Employment and Fertility: Demographic Transition or Economic Needs of Mothers?" AID/PPC P.O. No. AID/OTR 147-79-27, August 31, 1979; Annex) for a discussion of skills-learning.
 - 2) Katherine Blakeslee Piepmeier, "Women's Development Projects and Fertility Change: Suggestions for Assessing Field Experience," AID/OTR-147-79-105, June 1980. See pages 26-40 for discussion of such evaluation.

A. The Problem of Increasing Income.

Income generation projects can be viewed in two ways: as a service (1) that requires a long-term dependence on a social service agency, or as a business (2) whose aims are to become self-sufficient and to expand, absorbing more of the local labor market and making greater capital investment. It is essential to categorize income-generation projects in this way for the following reason. If one attempts to determine whether these projects do increase income, the external costs of a project that is actually a service must be accounted for; while a successful project in the service category may raise incomes of actual participants, the presence of continuing outside support means that it is really redistributing wealth and not necessarily contributing to overall economic growth. Furthermore, projects supported by country governments may only represent income redistributed from the less poor to the poorer if support is financed by taxation. Thus all costs must be included in an equation that seeks to determine whether projects generate income, and it is therefore critical at the outset to define what is meant by "income generation" and to establish criteria for that definition.

After income generation has been defined, and after the obvious but necessary questions have been answered, "Do participants learn skills?" and "Do these skills have potential for increasing income?", one faces

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- 1) See Fred M. O'Regan and Douglas A. Hellinger, Assisting the Smallest Economic Activities of the Urban Poor, Part II: Case Studies, Africa; Accion International/AITEC: Cambridge, Mass, 1980.
 - 2) See John M. Page, Jr., "Small Enterprises in African Development: A Survey"; World Bank Staff Working Paper No. 363, October 1979.

the difficulty of knowing whether income has increased. Project accounts are usually minimal. Records are incomplete, and labor, in-kind contributions and opportunity costs are not accounted for. In what other activity would women have engaged had they not spent time on the project? Is group production intrinsically more profitable than individual production? (1) Using only project ledgers that contain receipts and expenditures, one cannot know whether income is actually generated. It may be that these programs are no more economically rewarding than their predecessors--homecraft courses that taught cooking and embroidery. Income-generation projects that do not increase income may, nevertheless, have effects worthy of support that relate to the benefits of the project as a service; effects on fertility, for example, could be included among these benefits.

B. The Problem of Linking Income to Fertility.

The link between women's increased income and decreased fertility remains unclear, and data often appear to support conflicting interpretations. If one assumes that employment is related to income, and if one accepts that women's programs seek to increase income by generating employment, either in the formal or informal sector, then one can examine the relationship between women's employment and fertility.

Formal sector employment for women is generally negatively related to fertility (3), but employment figures ignore economic activities in

1) O'Regan (op. cit.) believes that group effort is a crucial ingredient of income activities among the very poor.

2) Faruquee, p.140.

3) This negative relationship may be dependent on job-status.

the agricultural and informal sectors, where the majority of women work.

(1) "A core set of methodological problems in the employment-fertility relationship center around the issue of causality and the measurement of women's work. Research to date has failed to provide a clear and consistent explanation of the relationship between the two variables and has not confirmed causality.... Do fertility levels affect women's involvement in economic activity or vice versa?" (2). Youssef recommends a careful look at the relationship between employment and fertility and at conditions under which the interaction between the two variables takes on different values and directions (3). She suggests that one task of fertility research is to identify within the population particular sectors of women already eager to limit family size. Rural women involved in small enterprises may constitute such a group.

One factor considered relevant to understanding the effect of employment on fertility is the relationship between a woman's work and her need to gain more cash income. What is the cost of that extra income in terms of increased labor and the adjustments she must make in order to fulfill other household and family obligations? Although work in the agricultural and informal sectors of developing economies is not usually thought to increase a woman's workload as long as she has access to childcare and other assistance offered by the extended family system, there seems to be some evidence that the activity promoted by income-generation projects does increase the burden of the already

1) See Youssef, op. cit., pp. 14 ff.

2) Ibid., p 18.

3) Ibid., p 24.

overworked rural woman. A greater workload could affect fertility in either of two ways. If informal sector work increases the need for extra labor at home, it could tend to sustain high fertility. On the other hand, there is anecdotal evidence from women's income-generation projects that some rural women who are heavily involved in such enterprises experience the demands of repeated childbearing as burdensome. Any study assessing the effects of income-generation on fertility should closely examine the kinds of dislocations caused by project activity in a woman's work, the adjustments she makes, and the implications of these adjustments for fertility attitudes and behavior.

A related question is among which groups of women, if any, are costs of increased labor perceived? For example, it may be that older women involved in economic activity perceive the opportunity costs of repeated childbearing more readily than do younger women. Given the influence of elders in African culture, such information would have important implications for the educational content of integrated programs, as well as for IEC campaigns in general. Or it may be that single women heading households experience less conflict between childbearing and economic production because their economic need is greater. It also may be that the opportunity to expand one's horizons through new roles in the community or other similar factors have a more important influence on fertility attitudes than income or work. These examples emphasize the importance of discovering "sub-layers" of women who are receptive to family planning.(1)

1) Ibid., p 39.

Although a purely economic view of the household analyzing the utility of additional children and making subsequent fertility decisions accordingly omits critical social-psychological and cultural influences, the notion of utility of children underlying the large family norm remains valid. Evidence from Kenya indicates that women who begin to have independent earnings also may adopt contraception. (1,2). If women's projects do increase income, what effect does additional income have on fertility attitudes? Does it, through the possibility of increased savings, reduce the immediate need for a large family? Does a woman's labor invested in group activity increase the need for children at home to do tasks she herself would ordinarily do? What dislocations are caused by project participation in a woman's primary obligations to her household? How much time does she spend on project work, what adjustments are necessary, and how do these affect her ideas about family size? All of these questions are raised when one examines the relationship between income, employment, and fertility and should be included in an investigation of the effects of integrated programs.

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- 1) Priscilla Reining et al., Village-Women: Their Changing Lives and Fertility: AAAS: Washington, D.C. 1977; pp 11-110.
 - 2) Kenya Central Bureau of Statistics, Kenya Fertility Survey, 1977-1978, First Report, Vol.I; Ministry of Economic Planning and Development: Nairobi; p. 100-102, p 141.

C. The Problem of Family Planning.

In Africa, family planning services have demonstrated low rates of acceptance, particularly in rural areas, and low continuation rates. Family planning programs are not widely available, not easily accessible where they do exist, and often inadequately organized and managed. IEC programs have not penetrated rural areas, resulting in a widespread lack of knowledge about family planning. In addition to the problems posed by lack of information and services, the large family norm, as discussed previously, is deeply-rooted in African culture. Evidence showing that traditional methods of child spacing, although still widely used, are not adhered to as strictly as they once were because of changes in the structure of modernizing societies (1,2), supports the need for family planning services as an adjunct to programs that increase economic and employment opportunities for women. Any examination of the relationship between income-generation projects and fertility must necessarily include as a central focus participants' knowledge of and attitudes toward family planning, as well as their perceptions and utilization of traditional methods of child spacing.

Focus of Proposed Study

The proposed study will evaluate the success of selected integrated women's programs in generating income and investigate the effects of participation in such programs on fertility knowledge, attitudes and

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- 1) Thérèse Locoh, La Fécondité dans une population rurale du Sud-Togo; Thèse doctoral de 3ème cycle, Université de Paris V; Juin 1980.
 - 2) Carol Hopkins Valentine and Joanne Revson, "Cultural Traditions, Social Change, and Fertility in Sub-Saharan Africa;" J. of Modern African Studies, 17, 3 (1979): pp. 453-472.

behavior. Of particular concern are those effects on fertility which are in some way attributable either to increased income or to changes in women's roles in the family and community which are brought about by the introduction of new economic activities. An attempt will be made to discern, among participants, groups of women who are more receptive than others to family planning and the reasons for these differences.

Much anecdotal information exists in the proposed project sites to confirm that integrated programs do increase women's status, and that group process and cohesion affect project success. Supplementary data concerning both increased status and group process and their effects on income and fertility will be gathered during this study.

III. PROFILE OF FOUR WOMEN'S INCOME-GENERATION PROJECTS

Four integrated women's projects have been selected as possible sites for research. All are operated by indigenous organizations and aim to train women in income-generating skills through nonformal education. Nearly all enterprises eventually undertaken by participants are agricultural or agriculturally-related (food processing and distribution). Aside from skills-training, educational content varies from project to project, and from group to group within a project, but ranges from literacy to population education. All groups have trained facilitators who are employed by the local sponsoring agencies, all undertake assessments of their own needs and problems, and many receive some kind of initial in-kind contribution (machinery, equipment) or money (loans or gifts). Family planning services have not been part of any project to date, although services will be offered by one agency beginning in 1982.

The following is a brief sketch of the projects. See Appendix 1 for more detailed descriptions.

A. The Family Life Education Programme (Ghana)

The Family Life Education Programme (FLEP) of the Ghana Government's Department of Community Development began in 1975. By 1980, 45 groups were participating in three districts of Ghana. Four of them were primarily women's groups. The Department trained community development workers in participatory nonformal education methods and in materials development. The program initially focused on literacy and

heavily stressed nutrition and population education. Under the program, groups conducted needs assessments of their communities, and each chose an income-generation project for which they received a loan and technical assistance.

B. The Association of People for Practical Life Education (Ghana)

The Association of People for Practical Life Education (APPLE), a private non-profit Ghanaian agency located in Atebubu District of Ghana, has sponsored community development and income-generation projects since 1976. In 1982, APPLE will begin eleven new women's projects which will include cottage industries and family planning services. In addition, APPLE began a mothers and daughters program in 1981 which trains 180 girls and 34 women in income-generation skills. APPLE staff assist groups to organize, conduct needs assessments, provide nonformal education, and serve as links to community resources, a critical function in the deteriorating economy of Ghana.

C. Tototo Home Industries I (Kenya)

In 1977, Tototo Home Industries, a subsidiary of the National Christian Council of Kenya, began to assist six women's groups through trained facilitators to organize income-generation projects. Evaluation of the program found that the groups had achieved their goals, and yielded other valuable data, which is, however, of only peripheral relevance to the topics of concern in this study.(1) Four of the six groups are continuing their activities.

1) Noreen Clark, Education for Development and Rural Women, Vol. II. Practice and Program Outcomes. World Education, May 1981.

D. Tototo Home Industries II (Kenya)

In 1982, Tototo will provide assistance to 10 new women's groups using the needs assessment and training methods developed in the earlier project.

Table 1 shows the components of each of these projects. All projects have received technical assistance from the local sponsoring agency, from World Education, and from government health, community development, and agricultural extension services. All projects have provided groups with in-kind contributions or small sums of seed money. Only FLEP established a revolving fund which gave groups no-interest loans.

TABLE I

Educational and Economic Components of Four Projects

<u>EDUCATIONAL CONTENT:</u>	<u>PROJECT</u>			
	<u>FLEP</u>	<u>APPLE</u>	<u>TOTOTO I</u>	<u>TOTOTO II**</u>
Literacy	X		X	
Accounting	X	X	X	
Skills Training	X	X	X	
Health and Nutrition	X	X	X	
Population Education	X	X	X	
Family Planning		X		
<u>ECONOMIC ACTIVITIES:</u>				
Food Crops	X		X	
Cash Crops	X			
Food Processing	X	X		
Animal Husbandry	X	X	X	
Soap-Making	X			
Handicrafts*	X		X	
Tailoring	X	X		
Fuel Production	X		X	
Number of Groups	45	11	6	10
Number of Participants	1350	391	134	300

* Handicrafts are manufactured for the tourist trade in Kenya.

** Tototo II content and activities have not yet been chosen by the groups.

World Education selected these four sites as potential candidates for research for the following reasons:

1. World Education has had long-standing relationships with all three sponsoring agencies and has provided technical assistance and financial support to all four programs.
2. All four programs are based on a participatory approach to nonformal education and community development.
3. Project participants represent, it is believed, the poorest sections of Ghanaian and Kenyan society.
4. Participation of women is adequate, either in women-only groups or mixed-sex groups, to insure adequate data on the research topic.
5. All four projects are integrated, providing a wide spectrum of information and skills to participants.
6. Income-generation is the major focus of all four.
7. All three organizations have either baseline data or the capacity to gather it.

8. All three agencies have the organizational capability to do on-going data collection.
9. All three agencies are interested in the research topic and wish to participate.

Under Section V, Research Plan, recommendations based upon design considerations will be made on the actual choice of projects for inclusion in this study.

IV. RESEARCH QUESTIONS

The major research objective of this study is to determine whether women's income generation projects, with or without family planning components, are effective in increasing income and increasing receptivity to and acceptance of family planning. This objective implies an examination of factors contributing to the success and failure of these programs to raise income and an investigation of the effects of income and participation in new economic activities on fertility attitudes, knowledge, and behavior. The purpose of this investigation is to provide information to planners and policy makers who wish to increase women's employment and income and who seek effective channels for family planning services.

Data will be collected in order to answer the following specific research questions:

Research Question I: Do income generation projects increase real income?*

If so, by how much and in what form? Is this increase in income significant enough to affect the way participants live (for example, nutrition, schooling, investment in and expansion of economic activities)? Could time spent on income generation projects be spent in some other more economically profitable way?

*This question implies two others which will also be answered: Do participants learn the skills offered? Do these skills really have the potential to increase income?

If income is increased, whose income? Participants with more resources or influence? Men (always shadow participants in women's projects)? Everyone?

If income is increased, how is it spent? What are the implications of these expenditures for fertility? Do expenditures support or weaken the large family norm? Who decides how this income is spent?

IA. Who takes advantage of income-generation projects?

If participants are self-selected and if groups are self-selected, what socio-economic stratum do they represent? What are the differences between this group and other members of rural society? Does this group exhibit certain characteristics that make them more able to profit from project participation? If so, what are the implications of these differences for fertility and family planning programs? Do these differences also represent differences in family planning receptivity?

IB. If groups do generate income, why?

What factors are preconditions for success: leadership, participation of certain social strata, resources invested, environmental factors, group size, age, length of group effort, relationship of participants to each other, type or quantity of technical assistance, project design and feasibility, analysis of local markets, other factors?

Are there differences in success rates between women-only groups and mixed groups? If so, why? What role do men play in groups?

If projects do not increase income, why not? What are the differences between projects that succeed and those that do not?

Research Question II: Does success or failure of groups to increase real income have an effect on fertility attitudes, knowledge, or behavior?

IIA. Do participants with increased income change fertility attitudes as a result of the project? Are groups with the most success in increasing income also those who change attitudes, knowledge, or behaviors relating to fertility?

IIB. How do women reorganize their time to accommodate the new activity? Who does child care? Does participation increase role incompatibility or have no effect? Does participation increase or decrease the utility of children?

IIC. Are family planning services a necessary complement to or component of integrated programs in order to effect changes in fertility attitudes and knowledge? Are there differences among participants' fertility attitudes, knowledge, and behavior that are related to the presence or absence of family planning services? Is population or family life education effective without family planning

services? Does the way in which family planning information is offered affect participants' receptivity (for example, teaching materials, position of teacher in project as a whole, position of teacher in group if group member, etc.).

IID. What sub-groups among participants are most responsive to family planning information? Who responds, who resists, and who influences others? Is there any difference in responsiveness between women-only groups and mixed groups? Does the time at which family planning is introduced to group activities affect its acceptance?

IIE. What is happening now to traditional child-spacing practices in project areas? If there are changes, what are the reasons? How do participants perceive those changes and explain their causes? What events or conditions are likely to increase or decrease the birth interval in the near future?

Research Question III: What are critical components in the program that increase income and decrease fertility or increase family planning receptivity?*

Real increase in income, credit, level of outside investment, level of participant investment (money, labor), male participation, family participation, socio-economic status of participants, group size, educational content, length of time the group has been to-

*The importance of the participatory approach cannot be differentiated because all projects use this method.

gether, level of involvement, educational approach, perceptions of sponsoring agency, program management by sponsoring agency, group leadership, type of economic activity, other factors.

Research Question IV: What external events or conditions are necessary for success or lead to failure ?

Social services (MCH, family planning, agricultural extension, etc.), other development activities in the geographical area, other development-related events during the life of the project.

V. RESEARCH PLAN

A. Design

The problems of designing research capable of yielding conclusive data on program effects that may be generalized to other populations are severe in community-based development projects. The very nature of the philosophy of participation--where participants are self-selected and as a group define their own needs and determine their own program--conflicts with the fundamental necessity of research to control variables and to discount alternative explanations of program effects. In such a setting, randomization of treatments (programs) and subjects (individual participants or groups), while theoretically possible, is not only undesirable but may prevent the achievement of program goals.

Aside from this basic conflict between program goals and research control, other characteristics of these projects limit the researcher's ability to discount alternative explanations. Numbers of participants are very small so that observations are few. To provide services to greater numbers exceeds, in most cases, the financial and managerial ability of sponsoring agencies. It is also difficult to define the treatment, because there is no set program. Both content and method vary according to group needs. Definition of groups is equally difficult. Groups have sometimes existed as self-defined entities for years before being able to take advantage of program opportunities. Group membership is fluid and can change substantially in size and structure during the life of the program. Programs are often concen-

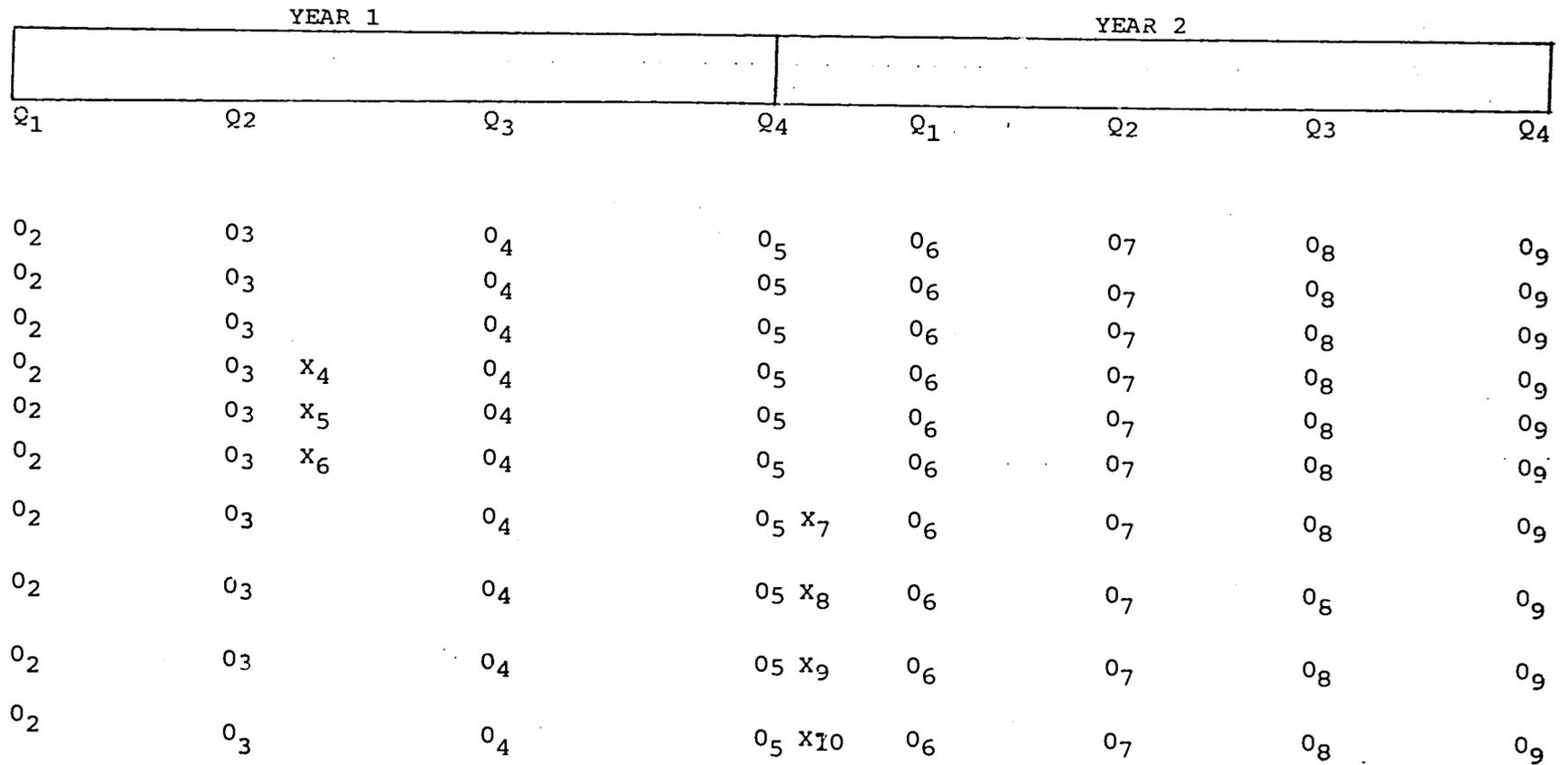
trated in one geographical area, which weakens a research design. When comparing participants to nonparticipants, how can the researcher be assured that the nonparticipant population is sufficiently comparable to program participants and at the same time is not influenced to some degree by the program?

In short, the structure and purposes of small-scale community-based projects present a primary obstacle to research: they generally prevent the use of an experimental design, where individuals are randomly assigned to experimental control and conditions in order to test the effects of a standardized treatment through pre- and post-treatment observations. The result of this constraint is that research results have limited internal and external validity.

Given this structural difficulty, how can evaluation of such projects be designed to eliminate competing explanations of program results? We recommend the use of a quasi-experimental design using time-series data and nonequivalent control groups. While this design does not guarantee research results that can be generalized to other populations, it does insure internal validity; that is, one can be relatively confident that the results observed are due to the program and not to anything else. This design increases the number of observations both before and after the introduction of the program, and it permits groups in different stages of program activity to be compared to each other. Furthermore, it fits the realities of program management and does not impose too great a research burden on the agency responsible for the program. See Diagram 2 for a schematic representation of this design.

DIAGRAM 1

Quasi-Experimental Design Using Time Series Data and Nonequivalent Control Group



Legend: O= observation or measurement; O₃ for example, is the third measurement taken of a group.
 X= introduction of integrated program.
 Q= Quarter; i.e., Q₂ of Year 1 is the end of the second three months of Year 1. of the research.

Using this design for a two-year investigation of one integrated women's program comprising ten separate income-generation projects, survey data on income, fertility, and other background variables are collected from program participants before the introduction of the program (O_1). Data on family planning service utilization in the area are also gathered, as well as information on income generation activities that program groups already do before they join the program.

During the first quarter, the local agency begins working with three of the ten groups (X_1, X_2, X_3). At the end of the first (O_2) and second (O_3) quarters, family planning and group income data are again collected for all ten groups.

During the third quarter, three more groups, for whom data have already been gathered, join the program (X_4, X_5, X_6). Family planning and income generation data from all ten groups are collected at the end of the third and fourth quarters (O_4, O_5).

During the first quarter of the second year, the last four groups join the program (X_7, X_8, X_9, X_{10}). Family planning and income generation data on all ten groups are then collected at the end of the first (O_6), second (O_7), third (O_8) and fourth (O_9) quarters of the second year. The final observation (O_9) also includes a post-program survey of participants on income, fertility, and socio-economic variables.

In addition to allowing comparison between groups, increasing the number of observations and providing information on program activity at

various stages, this design has the additional advantage of collecting data in a relatively unobtrusive manner through the use of family planning service statistics and group financial records. This is a less reactive as well as a less costly method of data collection.

B. Research Sites

It is essential, in evaluating programs, to be able to link participant outcomes to the program and to provide assurance that the results observed are not caused by some other factor. The mechanisms through which the recommended design provides this assurance are group comparison and sufficient pre-program measurements.

While pre-program measurements, or baseline data, exist for the FLEP and Tototo I programs, these data do not provide enough complete information on topics of concern to this study, nor were they gathered in a way that allows group comparison. While FLEP and Tototo I groups represent a mine rich in qualitative data about income-generation programs, one cannot either determine changes in fertility occurring during the program or link fertility in any causal way to program participation. For this reason, we recommend that FLEP and Tototo I not be included in the case studies.

APPLE and Tototo II are scheduled to begin operation in March 1982, which could permit pre-program measurement. Because the sponsoring agencies are interested in participating in the research, it is likely that they will be willing to adjust their timetables to accommodate the research design. We recommend APPLE and Tototo II as excellent candidates for case study inclusion.

C. Instruments

1. Survey questionnaire. Survey questionnaires should be developed, translated, tested, and revised at the research sites. These questionnaires can be administered through a random sample survey of 50 percent of female program participants. A random sample of nonparticipants will also be surveyed. Interviews should gather data on family income and expenditures; fertility history; knowledge, attitudes and practice of family planning, age and socio-economic status; division of labor for household tasks; perceptions of the program and of the sponsoring agency.

2. Survey of women's partners. A small proportion of participants' husbands should be interviewed at the time of the pre- and post-program surveys as a reliability check. This interview should be developed in conjunction with the general survey questionnaire.

3. Family planning records. Records from family planning services, whether part of the project or offered by some other agency, should be examined and a form developed to allow quarterly monitoring of first visits, revisits, visits by place, client characteristics, increment of clients, and information on the service itself.

4. Income generation records. Forms should also be developed for quarterly monitoring of groups' ledgers and account books and group facilitators' log books. These forms record income, expenditures, labor, technical or material assistance from nonprogram sources, and

program staff time, as well as information on project design and implementation. Participants themselves will be trained to keep some of these records.

5. Mini-surveys. Monthly short interviews of a small sample of participants (for example, 100 women) should be taken on income and expenditures. These questionnaires should also include items on socio-economic status, age, and program participation. Women will be trained to keep some income and expenditure records themselves.

6. Facilitators' records. In addition to quarterly monitoring of facilitators' log books for income-generation data, quarterly assessments should also be taken of these records for educational content, intensity of group work, and other information that helps to define program activities.

7. Supplementary data. At the time of the pre- and post-surveys, analyses should be made of family planning services in the area and other social services, as well as other environmental factors that could affect program outcomes.

8. Qualitative data. In order to collect data on participants' work and the effects of project participation on the way women organize their time, an anthropologist will be attached to each research site. She will observe the progress of selected groups and follow selected participant households over time in order to gather information of time and work allocation and the process experienced by participants in

integrated programs. The length and periodicity of these observations will be determined during the initial design phase of the project.

D. Data Analysis

Periodic data analysis should be done on-site to monitor reliability and to resolve problems. The final data analysis should be done in Kenya for the Kenya project and in Ghana for the Ghana site if facilities are easily available there.

VI. INSTITUTIONAL REQUIREMENTS

A. Present Agency Capabilities

Tototo Home Industries and APPLE are well-established, competent providers of integrated women's programs, and both organizations understand the purposes of this research and wish to participate in it. Both organizations have staff who can collect data, supervise the timely implementation of a workplan, and manage the additional logistical tasks imposed by an adjunct research study. However, neither organization has staff trained in research methods and capable of conducting research independently.

World Education has collaborated with Tototo and APPLE for six years on nonformal education and women's income-generation projects. World Education staff include an evaluation researcher and a sociologist both with long experience in family planning and population education and both of whom have worked in Ghana and Kenya. Both individuals,

however, have continuing commitments to other World Education programs and could not devote sufficient time to the case studies to insure adequate supervision of research as well as careful design, instrument development, and data analysis. Furthermore, it is World Education's philosophy to use local resources wherever possible.

B. Model for Institutional Collaboration

The following model is proposed for an institutional collaboration that will enable timely and competent instrument design, data collection, and data analysis.

It is proposed that World Education serve as project manager for this two-country study. Management tasks would include the following:

- to identify research and anthropological consultants to assist APPLE and Tototo;
- to work with these consultants to insure as much methodological standardization as possible between the two sites;
- to work with these consultants on the design and testing of instruments;
- to provide periodic supervision of data collection;
- to work with the host agencies to monitor implementation and solve problems;
- to supervise data analysis;
- to write a report and distribute the findings;
- to provide financial and administrative support to the host agencies.

Each host agency would utilize its own staff as much as possible for data collection and would identify and hire part-time surveyors and sponsor their training. World Education, the research and anthropological consultants, and senior host agency staff would train surveyors and agency staff responsible for data collection.

C. Personnel Needs

1. APPLE

APPLE has at present:

- staff to manage the research project;
- post-graduate senior staff to work directly with senior research consultant;
- junior staff capable of quarterly monitoring of data;
- junior staff capable of supervising part-time surveyors.

APPLE will need:

- a senior research consultant to help develop instruments, assist with training, periodically analyze data for reliability; assist with final data analysis and interpretation of results;
- an anthropologist;
- ten part-time surveyors for pre- and post-surveys and mini-surveys;
- questionnaire translators.

World Education and APPLE have identified:

- a Ghanaian expert on fertility research;
- community nurses to serve as part-time surveyors;
- teachers for translation of questionnaires.

2. Tototo Home Industries

Tototo has at present:

- staff to manage the research project;
- junior staff capable of quarterly monitoring of data;
- junior staff capable of supervising part-time surveyors;
- senior staff able to translate questionnaires.

Tototo will need:

- a post-graduate consultant to work with agency and research consultant in monitoring research implementation;
- a senior research consultant to help develop instruments, assist with training, periodically analyze data for reliability, assist with final data analysis and interpretation of results;
- an anthropologist;
- ten part-time surveyors for pre-and post-surveys and mini-surveys.

World Education and Tototo have identified:

- a junior Kenyan faculty member of the University of Nairobi to work directly with the research consultant and the agency to monitor research implementation;
- a Kenyan expert on research in rural development and nonformal education;
- ten part-time surveyors for pre- and post-surveys and mini-surveys.

E. Training Requirements

The following training is necessary for both agencies:

1. One-day orientation of all agency staff to the study, including research objectives, design, data collection methods, and timetable.
2. One-week training for 10 surveyors and three supervisors before baseline survey and final survey.
3. Two-day training for 10 surveyors and three supervisors before each of mini-surveys.
4. Two-day training of agency staff for quarterly monitoring (nine sessions over two years).

VII. APPROXIMATE COSTS OF RESEARCH

The approximate cost of a two-year research project using ten women's groups in each of two countries is \$350,000. This includes the following:

- Coordinating agency salaries, overhead, supplies, etc.	.107,096.
- Consultants	46,652
- Travel	58,971
- Data Analysis	3,000
- Local transport	40,000
- Subgrant to local agencies (salaries, administrative costs, training, etc.)	82,492
- Publication and dissemination of report	<u>9,000</u>
	\$347,211

VIII. USES OF THE RESULTS

The results of this research will be presented as a monograph on the relationship of income-generation activities and fertility. In addition to specific research findings, this report will include a discussion of the implications of the studies for policy formulation, funding, planning, and evaluation of integrated development projects.

The purpose of the report will be:

- to assist development planners and funders in making policy decisions pertaining to nonformal education and family planning among the rural poor;
- to define for program planners critical requirements and target groups for integrated women's programs;
- to elucidate for those concerned with family planning how best to utilize the opportunities offered to family planning agencies by women's nonformal education programs;
- to suggest to program planners, funders, and practitioners effective methods of evaluating the impact of women's income-generation projects.

Because a principal problem for those who plan, fund, and carry out women's programs is the inaccessibility of information, World Education will disseminate the final version of the report to government agencies, foundations, and private development organizations in the U.S. and Africa.

APPENDIX I

Descriptions of 4 Integrated Programs

1. Community Development Staff Training for Human Resource Development in Rural Ghana (Family Life Education Programme)
2. Leadership Training for Rural Women (APPLE, Ghana)
3. Research on Innovative Nonformal Education for Rural Adults (Tototo Home Industries I, Kenya)
4. Higher Income for Women in Kenya (Tototo Home Industries II)

"Community Development Staff Training for
Human Resource Development in Rural Ghana"
(Ghana/OPG)



In Ghana, a developed infrastructure and a rich potential for agricultural development has not overcome slow rates of productive growth, and high rates of inflation. In 1978; population was growing at over 3 percent per year, adult literacy rates were 30 percent of the total adult population, life expectancy was 48 years and approximately 29 percent of the eligible population was enrolled in secondary school. A Civilian Government is implementing a new development plan.

NEED

There is a need to expand integrated training of field staff of community service agencies that will link delivery of services to the rural population. World Education, through extension of the OPG Grant, maintains a technical support role to the Ministry of Community Development in expanding literacy and self-help programs to rural communities.

OBJECTIVES

To assist the Ministry of Community Development in institutionalizing a functional training program for field staff that will support innovative approaches to community-based NFE/self-help activities, so that rural populations have a functional involvement in local development.

ACTIVITIES

World Education, in cooperation with the Ministry of Community Development, has implemented a program of field staff training, secured production resources and assisted in development of functional learning materials, carried-out needs assessment and evaluation procedures with department staff and provided support to self-help activities of local community groups in the three districts of the pilot program.

Target group: 45 field staff of Ministry of Community Development, select senior staff, and rural participants of over 30 community groups engaged in adult education, self-help and income-generating activities in three pilot districts.

Funding: USAID/Bureau for Africa.

Budget: \$397,000 of which \$138,750 is a sub-grant.*

Host Agency: Ministry of Community Development.

Time Frame: A three-year project, January 1978-January 1981, now extended to June of 1981.

Location: Three rural districts in Ghana.

*An amendment to this grant (for the 1980-81 program period) will bring total budget to \$450,000.

"Leadership Training for Rural Women"
(Ghana/Matching Grant)

GHANA



Self-help rural development efforts are a priority of the Ghana Development Plan. Women have traditionally played a key role in community activities in Ghana, and leadership training provides additional resources for bringing a major population, rural women, into the mainstream of rural development.

NEED There are active local women's groups in Ghana that require additional organizational resources to maximize their contributions to progressive rural development. Through functional training of group leaders, and nonformal learning opportunities for members, the self-help initiatives of rural women in health practices, family agricultural activities and income-generating schemes will be supported in the Brong-Ahafo Region of Ghana.

OBJECTIVES To provide training in organizational leadership to 50 local women leaders, and functional nonformal education opportunities to approximately 800 rural women, so that local self-help initiatives are realized in the areas of family health and agriculture practices, and that income-generating opportunities are enhanced for rural women in the Brong-Ahafo Region of Ghana.

ACTIVITIES World Education in collaboration with the Association for People's Practical Life Education (APPLE) - a Ghanaian PVO - is prepared to provide technical assistance to the training/NFE activities of the host agency, and has allocated sub-grant resources to the community self-help projects of local women's groups.

Target group: 50 local women leaders in the Brong-Ahafo Region of Ghana, and approximately 800 rural women of the region, who are engaged in community development activities and self-help projects.

Funding: USAID, The Hewlett Foundation and other private sources.

Host Agency: APPLE (Association for People's Practical Life Education)

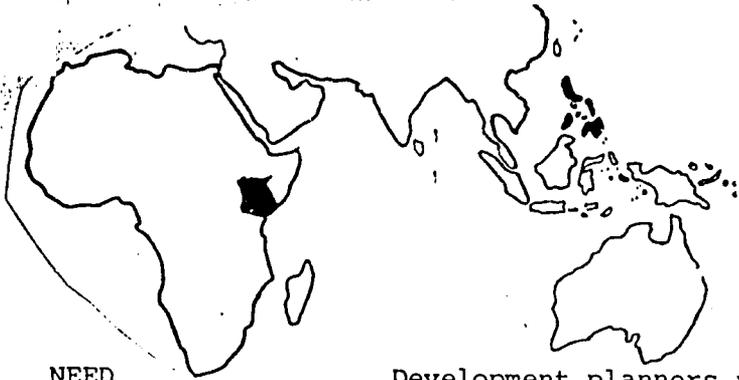
Budget: \$316,160 of which \$260,150 is a sub-grant.

Location: APPLE is expanding its community development activities to the West-Central, Brong-Ahafo Region of Ghana, which is farming, mining and timber area of the country with a majority low-income, rural population.

Time Frame: Three years beginning April, 1981.

(NFE Project)

Development organizations, for 25 years or more, have been offering educational programs in Third World countries but there has been little change in the way people live. Rural adults drop out of these programs at a very high rate.



NEED

Development planners need to know more about the factors that cause people to stay in—or drop out of—educational programs. We need to understand how to create programs that present new information about health, nutrition, agriculture, and so on, in such a way that rural adults will change their current practices and make lasting improvements in their standard of living.

OBJECTIVES

To test the premise that rural adults themselves know best what they need to learn. If education focuses on concerns that the adults themselves identify, will they be more enthusiastic about the programs? Will they work toward the same development goals that planners identify—longer life, better health, increased production, higher income, smaller families?

To discover if this approach will help people learn ways to solve their own problems. Is it more effective in lowering dropout rates than traditional programs? Is literacy a prerequisite for such learning?

ACTIVITIES

Our two host agencies helped us find test sites and our staff and consultants have held workshops in both countries. We have trained village women to be group leaders and have trained staff members of the local agencies. The leaders we have trained are now helping village groups to select activities they want to carry out and to marshal the resources (money, technical help) they need. Very careful records are kept by project staff and sent back to us in New York to analyze, and our technical staff visits the projects to assess the results and deal with problems as they arise.

Target group: Professionals in the development community, through the publication of two monographs on our findings.

Funding: USAID/Bureau for Development Support

Host agencies: The Philippine Rural Reconstruction Movement (PRRM), and Tototo Home Industries of the National Christian Council of Kenya

Budget: \$350,000. Sub-grant: Kenya: \$19,700 Philippines: \$46,700

Location: Six rural communities in Kenya, outside of Mombasa; and six in the Philippines near Nueva Ecija

Time Frame: A pilot project was conducted successfully in 1975. This phase runs for two years, September 1977 to September 1979; extended through May 1981.



The villages and communities within the area of concentration need, according to priorities they have indicated: increased income ranging from standard employment opportunities to the undertaking of small enterprises; knowledge of the availability of resources, primarily from government sources, and of ways to take advantage of the services they offer as well as to seek outside assistance when necessary.

NEED The women want greater opportunity to take part in group income-generating enterprises, and training to develop the skills necessary for participation and to foster attitudes necessary for taking responsibility and assuming roles of leadership.

NCCK requests assistance in training those staff and the social service extension agents with whom they will be working in technical skills related to program planning, implementation, documentation, and evaluation.

OBJECTIVES To foster a sense of cooperation among participants (primarily women) in groups working to bring about change in the areas of concern they have identified.
To train potential leadership capable of stimulating and coordinating the activities identified in these communities.

To increase the participants' ability to identify and seek available resources.

To help participants gain skills needed to carry out activities they have already identified (i.e., income-generating skills).

ACTIVITIES World Education provides assistance to NCCK in: training of coordinators, whenever possible, in a series of workshops and on the job sessions; training of participants in rudiments of basic numeracy, for simple bookkeeping and record keeping; developing appropriate materials for routine use in the groups and replication for future groups; refining an evaluation system to be used to monitor the project on a continuing basis in order to modify and improve courses of action and evaluate progress made; documenting the project, disseminating information about what has been learned to the collaborating and funding agencies, and to the development community.

Target group: 10-20 extension workers and 300-400 women (75-100 men).

Host Agency: The National Christian Council of Kenya (NCCK)

Location: Three distinct districts in the coastal region of Kenya, covering 18 villages.

Funding: USAID, The Hewlett Foundation, and other private sources.

Budget: \$348,680 of which \$179,730 is a sub-grant.

Time Frame: Three years beginning April, 1981.

APPENDIX II

Economic Activities Undertaken By 4 Integrated Projects
1975-1981

<u>AGENCY</u>	<u>ACTIVITY</u>
APPLE (Ghana)	Bakeries Pepper processing Garden egg preservation Fish preservation Garri production Infant weaning food Shea butter extraction Beer brewing and distribution Tailoring Pig farming
Tototo I (Kenya)	Bakery Poultry and egg production Handicrafts Firewood sales Nursery school
FLEP (Ghana)	Cash cropping Food cropping Food processing Animal husbandry Handicrafts Soap-making Charcoal production