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IDEAS

**BACKGROUND STUDY:
GUATEMALAN GIRLS SCHOLARSHIP PROGRAM**

**FIRST PHASE:
LESSONS LEARNED FROM A PILOT PROGRAM**

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**SECOND PHASE:
ASSESSING THE EFFICIENCY AND COMPARING THE PERFORMANCE OF
GIRLS IN A PILOT SCHOLARSHIP PROGRAM WITH THAT OF OTHER SCHOOL GIRLS**

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EXECUTIVE SUMMARY

Introduction

This background study examines a pilot scholarship program – the only one of its kind – for girls’ elementary school education in Guatemala. The scholarship program was carried out over more than seven years by a Guatemalan NGO, the *Asociación Guatemalteca de Educación Sexual*, in thirteen carefully selected rural Mayan communities. The objective of the background study was to obtain information for the purpose of generating recommendations on the essential elements of a girls’ scholarship program to encourage girls’ enrollment and retention in primary school. The background study contains the following components:

- A description and critical review of the pilot scholarship program’s basic ingredients;
- An overview of the program’s key implementation strategies at both regional and community levels, including the roles played by parents, teachers, scholarship promoters and community leaders;
- An analysis of how the scholarship program has affected girls’ school retention and efficiency, and an assessment of girls’ individual and family characteristics associated with the program’s success.

The study was conducted in two phases. In the first phase, original qualitative data were collected through field-based research. In the second, quantitative analyses was conducted of a large set of scholarship girls and a similar comparative population of Guatemalan school girls.

Study Design and Methodology

A multimethods approach was selected to gather and analyze qualitative and statistical data related to the pilot scholarship program. The qualitative phase used focus-group discussions and in-depth interviews, a review of program files and documents, and limited direct observation to gather information at the community level and from the NGO’s headquarters, field offices, and program officers. Guides for focus-group discussion and in-

depth interviews were developed and pre-tested, and bilingual (Mayan- language and Spanish) interviewers were trained in their use. Two communities were carefully chosen to participate in the qualitative phase. A total of seventeen focus-group discussions and forty-two in-depth interviews were conducted. A content analysis of these data was performed. The results indicated issues for further analysis during the second phase.

For the quantitative phase a set of 950 scholarship recipients was analyzed and compared to a population of approximately 6,000 schoolgirls similar in all characteristics except participation in the scholarship program, to assess differences in school retention between the two groups. Grade-distribution and promotion indicators were defined and estimated for both populations. The statistical techniques chosen for this comparative analysis were linear trends in proportions and tests of significance. Then the school efficiency of scholarship recipients was examined using several indicators of efficiency, all based on the notion of grades successfully completed per year of schooling. Girls' individual characteristics and family background variables were explored, to establish which of these variables were determining differences in school efficiency. These associations were approached via Kruskal Wallis tests for non-parametric statistics and logistic regressions.

Description of the Scholarship Program

The pilot scholarship program is an economic contribution to girls' families. In addition, the program includes elements of academic and psychological support for students, guidance for parents, encouragement for teachers, community involvement, and a community-based social promoter who is technically competent and a role-model for program beneficiaries.

The scholarship program was designed to include much more than a cash transfer to girls' families. Although the economic support which the stipend represents is very important for girls and their parents, it is a necessary but not sufficient condition for program success. Other critical elements include personal academic tutoring for program beneficiaries, conducted in their native languages; psychological guidance and support for scholarship girls; encouragement and consciousness-raising for their parents; community support for the program obtained before implementation of activities; community involvement during implementation; and incorporation of teachers into the scholarship program.

The review of seven years of scholarship-program experience revealed that several other components also need to be strengthened in order to improve program effectiveness. First, selection criteria for scholarship recipients need to be clearly and objectively specified – especially criteria relating to economic need and family interest in girls's education – and made easily applicable. Second, community involvement should be promoted by expanding the role and responsibilities of the scholarship (selection) committee beyond tasks limited strictly to selection. Third, teachers' support of and involvement in program activities need to be strengthened. Finally, relations between teachers and parents require consistent attention and

cultivation.

Main Findings

Scholarships promote school retention among girls.

Receiving a scholarship significantly improves the chances that a girl will stay in school and be promoted to the next grade.

These chances are greatly increased when a girl is awarded a scholarship to attend preschool (nursery/kinder or *pre-primaria and párvulos*). Further, the higher the grade, the better the chances are that the girl will stay in school.

The "school efficiency" ratio of girls on scholarships is high. School efficiency is the proportion of grades successfully completed per year of school attendance. Even younger scholarship girls in lower grades show high school efficiency when they receive scholarships, although their performance is not as impressive as that of older girls in higher grades.

While on scholarships, girls complete almost a full grade (.87) in one school year. This suggests that scholarship girls could complete six grades of elementary school in 6.90 years of school. This compares very favorably to the efficiency of the elementary school system in Guatemala as a whole, which is estimated to be between 7.54 and 11.65 years to complete elementary school for the period 1980-2000. According to 1992 national figures, on average it takes a Guatemalan public-school student 9.9 years of schooling to graduate from sixth grade.

Older girls who receive scholarships in the higher grades obtain higher efficiency scores than their younger counterparts. It is important to note, however, that older girls will be more school efficient than younger girls no matter what – that is, in a given period of time, older girls will successfully complete more grades than younger girls will, even if the older girls do not have scholarships.

School efficiency improves most among younger girls who receive their first scholarships early, at or near the beginning of their schooling, when they enter preschool or first grade. The efficiency of older girls in higher grades is not appreciably improved by scholarships.

Participation in the scholarship program studied helps girls earn grades more efficiently than they did before they began receiving scholarships. The scholarship program is most effective when first scholarships are awarded to girls in the lower grades (preschool, first, and second) and in the youngest age group (six to 11 years). These girls, who are the most at risk of leaving school prematurely, are the ones able to take greatest advantage of the scholarships.

Girls in the lower grades – preschool, first grade, and second grade – have high efficiency scores if they are on scholarships, even though efficiency is typically low in these grades. Giving scholarships to girls in the lower grades helps carry girls past the heightened dangers of repeating or dropping out in preschool through second grade.

Grade at first scholarship: Girls who receive scholarships for the first time in the early grades show the greatest improvement in school efficiency compared to when they did not hold scholarships: for every grade they earn while on scholarship they only earn .772 to .867 of a grade when not on a scholarship. Since girls in higher grades are more efficient whether they hold a scholarship or not, giving a girl a scholarship for the first time in fifth or sixth grade, or in secondary school, is not likely to improve her school efficiency.

Age at first scholarship: The younger the girl is when she first receives a scholarship, the better her performance while on scholarship will be compared to her non-scholarship performance. Girls who first receive scholarships when they are six to eleven years old improve their school efficiency much more noticeably (1 to .767 grades per school year) than girls who first receive scholarships when they are between twelve and eighteen years of age (1 to .887 grades per school year). If a girl receives a scholarship for the first time when she is older than eighteen, the scholarship will not improve her school efficiency at all.

Repetition and drop-out among scholarship girls are explained by insufficient time for schoolwork at home, lack of parental support for girls' education, disillusionment with grade failure, seasonal migration, and sickness. Among older over-age girls, work for income and the onset of male-female relations are also important. Among the younger set, large class size, an unfamiliar and monolingual school environment, and lack of knowledge of the dominant language are contributing factors.

Qualitative findings suggest that grade failure and repetition among scholarship recipients are due partly to insufficient time for homework and for tutoring sessions. Grade failure and repetition are also related to parents' lack of involvement in and support of their daughters' studies. In addition, among older girls, repetition is related to a reduced interest in school due principally to older girls' desire to work for an income or to marry. Repetition among younger girls is further associated with adverse conditions younger girls encounter in the lower grades, including large class size, an unfamiliar, culturally different environment, and teachers who are not functionally bilingual.

Major reasons for program and school drop-out are disillusionment due to grade failure, a foreign, monolingual school environment, absenteeism due to illness and seasonal migration, and the onset of puberty (among over-age girls in particular).

Family background variables such as number of siblings, parental education, and religion make no statistical difference in the success of scholarship beneficiaries in terms of efficiency. The qualitative data suggest, however, that having an older sister who attended school can help a girl adapt to the school environment and help her secure her family's support.

Family characteristics do not determine the school efficiency of scholarship girls, probably because all the girls in the program live in very low economic conditions. However, the qualitative information collected suggests that having an older sister who went to school or is going to school, and whose school experience has been positive, can help a girl as she tries to adapt to the school environment, and can also help her obtain her family's support. Having an older girl attending school may also have the effect of lowering the age at which a younger sister first enrolls in school.

Community factors – a high degree of internal social cohesion, strong traditional organization, little seasonal migration, decisive community support for program activities, and good relations between school officials and townspeople – are crucial to the success of the scholarship program.

The pilot scholarship program was most effective in communities that provided clear, strong support for the program before program activities got underway. Those communities are characterized by high levels of internal cohesion and solidarity, possibly due to cultural uniformity; lack of external forces that disrupt traditional organizations; and presence of mechanisms to resolve internal conflict and mend the social fabric. In addition, the scholarship program was most effective in communities with little family seasonal migration or with predominately adult seasonal migration. Finally, the scholarship program had the most success in communities that identify strongly with their schools, and where there was strong community and school support for the program.

Recommendations

To enhance the retention of girls in elementary school:

- Scholarship programs of the kind described in this background study should be considered for adoption as effective interventions to improve girls' school retention in elementary school.
- Girls should be given scholarships to attend preschool and first and second grades, since awarding scholarships in these early grades greatly increases the chances that girls will stay in school.
- Scholarships award programs should emphasize enabling girls to attend preschool, since enrolling and retaining girls in preschool is a very effective way of encouraging

school retention in later years.

To improve the school efficiency of girls in elementary school:

- Award scholarships to girls to attend elementary school as a means of improving their school efficiency.
- Concentrate on giving first scholarships to girls who are entering preschool or first grade or are attending second grade.
- Target first scholarships to girls who are six to eleven years old.
- Focus on younger girls in the lower grades. Offer first scholarships to girls who are five and six years old to attend preschool and to girls who are seven and eight to attend first and second grades. These are the most at-risk children and are also those who can take greatest advantage of the scholarship program.
- Consider continuing to support scholarship recipients as they enter the upper grades of elementary school, but do not award first scholarships to girls who have succeeded in reaching the upper grades without scholarships.

To select communities and families to participate in scholarship programs:

- Consider selecting communities with strong traditional organizations, where cultural, religious and political strife is absent. Recognize that no community will be monolithic and conflict-free, and provide sufficient time, before program implementation, to cultivate and obtain community support.
- Select communities with little family seasonal migration.
- Give priority to villages exhibiting good school-community relations, where teachers are functionally bilingual, are preferably of the same ethnic affiliation as the majority of the population, and have a positive attitude towards their work.
- When scholarship programs cannot realistically be expected to overcome problems related to the quality of the school itself – large class size, large student-teacher ratios and monolingual teachers, for instance – programs should target carefully selected schools that have teachers willing and able to teach in a bilingual mode.
- When targeting girls from low economic strata, family background characteristics need not be considered extensively in the selection of scholarship recipients, since these characteristics will be similar for most girls.

- When two candidates are similar on all selection criteria, preference should be given to the candidate with older female siblings who have previously and successfully attended school.

To improve the chances of success and discourage repetition and drop-out among scholarship recipients, a scholarship program should have the following essential elements:

1. Economic support to girls' families: This support should be a cash stipend sufficient to overcome the opportunity costs to families of sending daughters to school, improve their chances of "buying time" at home for school work and tutoring sessions, and provide funds to cover girls' school-related expenses. How and when the cash stipend is distributed should be determined by the program's administrative requirements and the communities' needs. The stipend should be given to the girls' mothers.

2. Academic support to scholarship recipients: Academic support is needed to overcome learning problems associated with a monolingual school environment, lack of educational materials, large class size, overworked teachers, and other conditions that contribute to attention-deficit behavior in school, especially among younger girls in lower grades.

Tutoring should be personalized, individual or small-group, frequent, and in the girls' native language. When possible, tutoring should involve both scholarship program personnel and the girls' teachers. When lack of classroom educational materials is a problem, the program should provide the needed materials to scholarship girls.

3. Psychological support to scholarship recipients: Motivation of this type should be aimed at overcoming girls' discouragement with their academic performance, non-supportive home environments, problems over-age girls experience, peer pressure to leave school, cultural incentives to early marriage, and pressures on girls to become economically active.

A role model such as the scholarship program promoter should provide frequent, personalized role motivation to program beneficiaries. Both home visits and school visits should be part of this component. Individual family problems, and common concerns among girls in similar grades and age groups, should be addressed as part of this activity. The focus should be preventive rather than remedial.

4. Scholarship program promoter: A program promoter should be present daily in the community, and should be responsible for one community only. The promoter should be a Mayan woman. It is not essential that she be from the community where

she works, but she must be of the same ethnic affiliation as the majority of families in the community, and she must make her ethnic identity clear through her language, choice of dress, and demeanor. The promoter should be technically competent to fulfill the functions of her job description, and should have the personality traits, including assertiveness within a culturally acceptable mold, that will enable her to become a role model to scholarship program beneficiaries and to other girls in the community.

5. Encouragement and consciousness raising for parents of scholarship recipients to deal with parents' own limitations in trying to provide support and encouragement to girls education, and to promote parents' direct involvement in scholarship program activities.

Scholarship program personnel, teachers, and community-based organizations could provide this kind of follow-up with parents of program beneficiaries. When possible, such activities should take place outside the school building. For the most part, they should probably consist of small-group meetings to promote interaction among parents. Home visits could also be carried out as necessary. Family problems requiring remedial action should be dealt with in the context of these supportive activities.

6. Teacher involvement in the scholarship program: School principals and teachers should be encouraged to participate in all aspects of the scholarship program, including identification of candidates, selection of beneficiaries, tutoring, distribution of cash stipends, maintaining relations with parents, and providing psychological support to students and their families.

7. Community involvement in the scholarship program: Community support should be carefully cultivated from the start, allowing sufficient time for this support to develop. Internal community organization, and divisions and conflicts of interest within the community, should be recognized and dealt with. Community-based scholarship committees should be formed according to precise guidelines, and should include non-controversial community leaders. The scholarship committees should have several functions in addition to identifying and selecting program beneficiaries. The committees should be responsible for keeping community leaders, organizations and families not involved in the scholarship program informed of program goals and activities. The committees should participate in the distribution of the cash stipend. Committee members should make "preventive" visits to girls' homes to monitor the appropriate household use of the cash stipend and parents' fulfillment of other commitments to the program. The committee can help the scholarship promoter with family problems in cases where the promoter's addressing the problems alone might be culturally inappropriate. In sum, the committee should contribute to the administrative and logistical management of the scholarship program, and should

generally ensure that the scholarship program responds to both cultural and community expectations.

8. Mechanisms to promote effective relations between the school and parents of scholarship recipients: Because such mechanisms do not exist in the AGES scholarship program, there is no empirical basis for recommendations. It is reasonable, nonetheless, to suppose that mechanisms to promote school-parent relationships would include elements designed to overcome cultural and linguistic barriers to communication between school personnel and families. Ways need to be found to address the social barriers and educational, economic, and status differences that separate teachers and parents. Useful mechanisms might include extra-mural school activities, involvement of teachers in community activities unrelated to school, parent-teacher associations, parent-teacher collaboration in school-related activities such as preparation of school lunches, and school sponsorship of special community activities.

**FIRST PHASE:
LESSONS LEARNED FROM A PILOT PROGRAM**

I N T R O D U C T I O N

In Guatemala, only 75 percent of school age children enroll in primary school; of these, only approximately 54 percent graduate from sixth grade (Chesterfield, 1991). The problem of low participation rates in the elementary education system is particularly severe in rural areas and among girls. In 1987 there were more boys than girls enrolled in every grade, and by sixth grade there were nearly two boys for every girl in rural schools (Núñez et al., 1991). By 1991 the situation had not improved (Ministerio de Educación, 1992). As the Ministry of Education and USAID strive to improve the quality and efficiency of primary education through the Basic Education Strengthening (BEST) project, the search for mechanisms to increase girls' participation in primary education has become a priority.

IDEAS, Ltd. was contracted to conduct a background study for a scholarship program for girls, as part of the Basic Education Strengthening (BEST) project. The primary objective of this study is to collect information on which to base recommendations on the minimum package of components that a scholarship project should have in order to promote girls' enrollment and retention in primary school. The background study has the following components:

- **Description and review of a pilot scholarship program for girls:** The Guatemalan Association for Sex Education (*Asociación Guatemalteca de Educación Sexual/AGES*) has operated a girls' scholarship program in 13 Mayan communities since 1987, the only one of this type in Guatemala. The lessons learned from this experience are of considerable interest for future project design.
- **Overview of the implementation strategies of the girls' scholarship program at the regional and community levels:** A description is provided of the implementation strategies utilized in the AGES program, including the roles played by parents, teachers, promoters, and community leaders.
- **Analysis of the impact of the AGES program on girls' retention, promotion, and school efficiency and an assessment of the scholarship recipients' individual and family characteristics associated with program success:** Using the data available from the AGES program, this component identified key factors influencing the positive outcomes of the scholarship program. Data from a similar set of girls who did not receive scholarships are presented for comparison.

An institutional assessment of the types of organizations capable of replicating the scholarship experience was conceived as part of this background study. Such an assessment was conducted in parallel fashion and forms part of the plan of action for girls' education in Guatemala (Nieves, et al., 1992b).

The background report is organized as follows:

- The first part describes the qualitative field study and presents its major findings following this general outline:
 - 1) brief description of the AGES scholarship program's history and principal interventions
 - 2) Materials and methods
 - 3) Results of the qualitative analysis
 - 4) Lessons learned from program implementation.
- The second part of the report covers the quantitative analysis of the AGES data set and compares the performance of the scholarship recipients to that of a similar population of girls. The second part is organized as follows:
 - 1) Introduction
 - 2) Materials and methods
 - 3) Results of the quantitative analysis
 - 4) Conclusions and recommendations based on both phases of the background study.

BACKGROUND

The Guatemalan Association for Sex Education (AGES)

AGES is a private, non-profit organization established in 1978 to provide family life education to the general population. In 1986, the Association received funding from USAID to expand its activities beyond Guatemala City.

Based on their experience in rural highland communities, AGES proposed to implement a girls' scholarship program that would promote formal education for girls in order to address some of the short- and long-term problems related to low education levels and high fertility rates among Mayan women.

The AGES scholarship program funded by USAID in September 1986 had three components:

- **Scholarship awards:** This includes the formation of a community-level selection committee, the selection of girls to receive scholarships, visits by a promoter to the girls' teachers and homes, and tutoring by the promote of beneficiaries.
- **Human development and family life education:** A bilingual educator gives presentations on human sexuality and development to the beneficiary girls, their parents, other school children (both boys and girls), and interested community members.
- **Vocational training:** This component was added in 1988 to provide technical training in an income-generating skill to girls and women who had no formal education or to girls who had lost their scholarships. Once a year, the promoter organizes a training course in each community.

Between 1987 and 1990, AGES provided approximately 1,700 scholarships to girls in primary and secondary schools. By the end of 1991, AGES was providing scholarships to girls in 13 communities. Table 1 presents the history of expansion of the scholarship program by community and department. It also shows how the program reduced its geographical scope in 1992.

Table 1
AGES Girls' Scholarship Program
Coverage and Expansion History

| Community | Department | Year the Program Began | Program Ended in late 1991 |
|-------------------|----------------|------------------------|----------------------------|
| Buena Vista | Guatemala | 1987 | |
| San José el Yalú | Sacatepéquez | 1989 | |
| Acal | Huehuetenango | 1987 | |
| Tojcail | | 1987 | |
| San Marcos Huista | | 1988 | x |
| San Andrés Huista | | 1989 | x |
| Ixmoco | San Marcos | 1988 | |
| Santa Teresa | | 1989 | |
| Pachaj | Quetzaltenango | 1988 | |
| Calel | | 1989 | |
| Chipiacul | Chimaltenango | 1988 | |
| Chamil | Alta Verapaz | 1988 | x |
| Chamisún | | 1989 | x |

Source: AGES Program Files

The scholarship consists of a monthly stipend of Q20¹ for girls in elementary school, Q50 for girls in the first three grades of high school, and Q80 for girls in higher grades, for 12 months a year, plus an additional Q25 at the start of the school year. With this money, parents can buy school supplies and uniforms, pay any enrollment costs, and if any money remains, buy other items for the beneficiary such as soap or shampoo. To receive the stipend, the girl's parents must sign a letter of agreement stating that the child will stay in school during the year and that the scholarship money will be used primarily for that purpose.

¹ Q5 = US\$1.00

Girls' Scholarship Program Activities

Community Selection and Program Initiation

In community selection, AGES looks for certain characteristics considered essential to the scholarship program:

- a) a rural, indigenous locality where AGES already has a presence
- b) the existence of a complete primary school with all six grades and one teacher for each grade;
- c) the presence of a complete PRONEBI program covering preschool and the first four grades of primary;
- d) a population of at least 400 school-age children in the community;
- e) clear evidence of community organization; and
- f) community acceptance of the program.

As part of program initiation, AGES staff, usually the promoter, contacts local leaders and authorities, including the school director, to describe the program. Once AGES obtains the community's support, they conduct a brief community study to obtain a general socio-economic profile of the population and information on available resources and facilities. Operations begin with the formation of the selection committee and the selection of scholarship recipients.

Actual program initiation at the community level did not always follow the procedure and requirements described above. For instance, not all schools attended by scholarship recipients have complete elementary schools. Although the schools may be classified as PRONEBI not all grades one through four may be bilingual. In fact, in several occasions a bilingual program may have been formally introduced to a school but in daily practice the teaching environment remained monolingual or, at best, inconsistently bilingual (de Monterroso, 1993). Furthermore, the conditions of community participation and community acceptance were "conditions in the making" in several communities, although AGES officials insisted that community support be obtained before the scholarship activities began in earnest (de Monterroso and de Monterroso, 1992).

Community involvement and approval required that school principals and teachers be informed and recruited, as their support to the scholarship program's activities was recognized as absolutely critical from the beginning (de Monterroso and de Monterroso, 1992). Their support was not always easily obtained. School teachers in villages in Chimaltenango and Sacatepéquez presented the most opposition when presented with the possibility of the scholarship program as they believed that AGES personnel would be sent to supervise them directly. Teachers in communities in Alta Verapaz were the most enthusiastic supporters of the scholarship program, probably due to individual personality traits (de Monterroso, 1993).

Some of the communities selected to enter the program last, in 1989, were chosen more on the basis of objective need rather than demonstrated interest because there were few communities to choose from in order to expand the program. It was notably difficult to obtain community support for the program in two communities, one in Sacatepéquez and another in San Marcos; in fact, the program was started in these communities before they were ready for them, according to the former director's recollections: "*Costó comenzar el programa en estas comunidades. No había mucho interés de la comunidad. Sí, costó.*" (Program start-up was difficult in these communities. There wasn't very much community interest. Yes, it was hard.) (de Monterroso, 1993).

Formation of the Selection Committee and Selection of Beneficiaries

After the initial contact, AGES field workers ask community members to form a selection committee; AGES recommends that the committee be composed of community leaders and teachers although in practice the composition of the selection committees has varied.

The selection committee, the promoter, and the school teachers meet to choose girls who will receive scholarships. Generally, AGES requires that the girls be between the ages of seven and 15, and come from families with limited economic resources but with positive attitudes towards the education of women. The processes and criteria involved vary from community to community. Generally, the promoter or a committee member visits families in their homes to talk about the scholarship program and determine parents' interest. The promoter conducts a socio-economic interview in each household.

After the selection committee has approved the program and selected scholarship recipients, it continues to assist the promoter by inviting parents of scholarship recipients to attend monthly meetings in which the stipends are distributed. The committee also assists the promoter in resolving problems that arise during the course of the school year. Girls who fail the same grade for two consecutive years lose their scholarships.

The procedures followed varied greatly from one community to another. Selection committee members were not always widely recognized community leaders, especially in situations where community cohesion and solidarity were difficult to obtain. Promoters followed their own interpretations of the selection criteria, especially the economic ones. They also differed in the degree to which they enforced the no-double-repetition rule (de Monterroso, 1993).

For instance, the villages in Alta Verapaz were notably different from the rest in the level of community interest and support they demonstrated for the program from the onset, possibly because they are traditional, cohesive Mayan communities where differences of opinion among groups are rarely seen (de Monterroso and de Monterroso, 1992). Other communities in Sacatepéquez, Guatemala and Chimaltenango, resisted the introduction of the

scholarship program initially due to internal strife. *Acción Católica* (Catholic Action), the community-based religious organization, actively resisted the scholarship program in several communities in Huehuetenango, Chimaltenango and Guatemala, but did not present a problem in others like Acal in Huehuetenango and the communities in Alta Verapaz (de Monterroso, 1993).

Follow-up with Beneficiaries

As in the selection process, the AGES promoter plays a key role in follow-up with the girls and their families. In most instances, the promoter is responsible for attending to two communities, or between 50-70 girls. This follow-up consists of three activities: a) classroom visits and conversations with teachers to determine whether the beneficiaries are attending classes regularly and promptly, and how they are performing on homework and tests; b) household visits to provide reinforcement to parents; and c) weekly academic tutoring to those girls whose grades are inadequate.

The promoter also has contact with scholarship recipients through her classroom and household visits. In these instances, the promoter provides support and encouragement to the girls to continue their efforts in school and with their homework. Finally, the promoter is administratively responsible for all community-level program activities, including the delivery and transfers of money to parents and supervision of how the stipend is used.

Sex Education and Human Development

Sex education activities were introduced to the scholarship program in 1988. The AGES bilingual educator visits the community and with the assistance of the promoter invites school children and adults to monthly or bi-monthly sex education activities. Although the emphasis is on beneficiaries and their families, other members of the community, particularly school children, are invited to participate. The specific topics covered are determined at the beginning of each year through focus group discussions with community members. Topics covered may include reproductive anatomy, courtship and marriage, and communication between parents and children.

MATERIALS AND METHODS

Data Collection Techniques and Instruments

Community level data collection was mostly qualitative. The two research techniques utilized were ethnographic or in-depth interviews with individual informants and focus group discussions with representatives of previously defined population categories. Ethnographic interviews were conducted with promoters, school teachers, community leaders, and selected members of each of the population categories covered by focus group discussions. Focus groups were carried out with selection committees, fathers and mothers of scholarship recipients and non-recipients, and with girls who received scholarships. Groups were formed with girls who were and were not promoted to the next grade, according to their grade level.

Focus group discussion guides were developed for use with the selection committees and with each category of parents and girls; in addition, ethnographic interview guides were prepared for use with promoters and teachers. In depth individual interviews conducted with community leaders not participating in the selection committees, parents, and beneficiary girls followed slightly modified versions of the focus group discussion guides prepared for these groups.

Some data were collected from the schools and from the AGES headquarters in Quetzaltenango on the scholarship program's beneficiaries. Non-systematic observational data were also collected on school conditions, availability of supplies and educational materials, and the scholarship program process for distributing funds.

Pre-testing of Instruments, and Personnel Selection and Training

The instruments and materials described above were pre-tested during the training phase, both with the field personnel and with members of the community chosen for practice training. It was not essential to obtain final versions of the instruments during the pre-test since qualitative data collection allows for minor modifications to the instruments as field work develops. The pre-test did serve to fine-tune the instruments that were used during the data collection phase.

All but one of the individuals selected as field workers had completed the equivalent of a high school education. Five of them were enrolled in technical or university-level programs. Field personnel were all bilingual in Spanish and a Mayan language, with the latter as their native language. They were knowledgeable of the regions in which they were to

work. Two teams of field workers were formed, one Kaqchikel- and one Quiché-speaking, and each was composed of two men and four women. One of the women in the Kaqchikel team was also an ethnographic interviewer in the Quiché area.

Personnel training was conducted during three full consecutive days; two of these were spent in theoretical training and role playing and the last day was spent in field practice. The field staff was mostly trained in the focus group discussion technique with limited time dedicated to ethnographic interviewing.

Buena Vista, the AGES program community closest to Guatemala City, was selected as field training and pre-testing site for logistical reasons. Nonetheless, some of the data collected by the co-principal investigators with the school teachers and the promoter in this community were included in the analysis.

Selection of Communities

Thirteen communities in seven departments have been involved in the program, and nine of these were still actively receiving interventions in 1992. (See Table 1 above.) Two of these were selected for the field work. Community selection was purposive rather than random. One Kaqchikel and one Quiché speaking community were selected, as the field personnel available on short notice spoke those languages and field work was to begin immediately. Pachaj was chosen in the Quiché area, the community with the longest involvement in the program. In the Kaqchikel region, one of the two communities participating in the AGES program was chosen as the field training site, Buena Vista, and the other, Chipiacul, was selected for field work.

Selection of Informants and Focus Group Participants

Focus group participants were selected from among community members with the assistance of the promoter. The selection committee was contacted first, and they were recruited to contact other individuals in each of the population categories pre-selected for participation in focus groups. The only recommendation given was that individuals invited to participate fit those categories. In total, seventeen focus group discussions were conducted, most in a Mayan language, and some of them in a combination of Spanish and a Mayan language.

The promoters in the three communities mentioned above were interviewed by one of the co-principal investigators. These interviews were conducted in Spanish. The director and at least two other teachers from the elementary schools in each of the two field sites were also interviewed in Spanish. Based on the recommendations of selection committee members and the promoters, community leaders who were not members of the committees were also

interviewed: alcaldes auxiliares, comisionados militares, past president of several committees, and past members of the scholarship selection committees.

Other ethnographic interviews were conducted with informants who participated in focus group discussions and were particularly knowledgeable about the subjects of the study and/or were very eloquent in expressing the views of the majority in these groups. Finally, when sufficient participants for a focus group could not be gathered, interviews were conducted with those individuals present. Forty-two ethnographic interviews were conducted in all, the majority of them in Spanish, and a few with the help of an interpreter.

Other Data Presented

Interviews were also conducted with AGES personnel in Guatemala City, and with key individuals who were involved in the AGES scholarship at its inception but are no longer with the organization. Finally, interviews were conducted with USAID staff also involved in the original program planning and responsible for its funding as well as with the past director of PRONEBI.

Some complementary quantitative information on the overall AGES scholarship program is presented in this first part of the report. These data come from AGES program documents and from the schools visited during field work. The second part of the report presents additional statistics on the scholarship program and on program participants.

QUALITATIVE RESULTS

This part of the report covers the lessons learned from the AGES scholarship program's operations at the community level. Special attention is given to the roles played by promoters, selection committees, teachers, and parents in the success of the scholarship program in keeping girls in school. This chapter summarizes the qualitative findings, focusing first on the reasons responsible for girls' repetition and drop out, and then on the factors that help girls attend and stay in school.

Overview of AGES Scholarship Program Coverage, Failure and Drop-Out Rates

In order to provide a framework for the analysis and discussion of the qualitative data collected, a few of the most recent years' program statistics are presented first (Table 1) These are limited to statistics on coverage and efficiency represented by the number of scholarships awarded and failure and drop-out rates by grade.

At the elementary school level grade failure and drop-out rates among AGES scholarship recipients have remained stable over the last three years; and drop-out rates have been kept at a low four to five percent. At the secondary (*básico*) level, however, the corresponding figures fluctuate greatly from one year to the next. These program statistics for the years 1989 to 1991 are summarized in Table 2.

In a partial effort to understand these tendencies and the differences between the program's performance at the elementary and high school levels, the views of community members, including school girls and their parents, and those of AGES personnel, were systematically analyzed. The second part of the report updates these program statistics and looks in more detail at individual and family background characteristics that may help explain success in the scholarship program.

Table 2
Selected Program Statistics by Year, 1989-1991

| Scholarships Awarded | 1989 | 1990 | 1991 |
|----------------------------------|--------------|---------------|---------------|
| Elementary School (Total) | 559 | 624 | 622 |
| Completed School Year | 529 | 604 | 596 |
| Promoted | 437 | 495 | 482 |
| Failed | 92 (17%)* | 109 (18%)* | 114 (19%)* |
| Dropped out | 30 (5%)** | 24 (4%)** | 26 (4%)** |
| Secondary School (Total) | 21 | 51 | 68 |
| Completed School Year | 19 | 47 | 55 |
| Promoted | | 37 | 45 |
| Failed | 2 (11%)* | 10 (21%)* | 10 (18%)* |
| Dropped out | 2 (10%)** | 3 (6%)** | 13 (19%)** |

* of those who completed the school term

** of those who received scholarships

Source: AGES Annual Reports

Reasons for Girls' Repetition and Drop Out

Repetition

School teachers and promoters agreed that there are two major reasons why children in general and girls in particular fail to be promoted:

- household chores and other work after school leave little time for homework and studies; and
- lack of parental support and involvement in studies reinforces students'

lack of interest and motivation, and does not create a home environment conducive to studying.

Regarding the first, promoters say that during meetings and home visits they must stress to parents the need to give scholarship recipients time to do homework. Although all children are required to do some household chores from time to time, girls are expected to help their mothers on a regular basis. This expectation conflicts with time for doing school work at home. Some of the most conservative community members expressed the view that girls in school sometimes think that household chores are beneath their literate status and may not want to do them. However, this was a minority opinion.

One of the responsibilities that parents agree to when they accept their daughters' scholarships is to allow girls time for homework. Promoters follow up on this condition through their periodic visits to the girls' homes. Also, if there are problems with school performance, girls have to make additional time to attend tutoring classes in the afternoons. The actual time demands posed by tutoring vary from one community to another according to individual progress during the school year.

Girls are expected to help their mothers with domestic and other work. This expectation conflicts with time for doing school work at home.

Time demands for school work also conflict with income-generation work by children. There is demand for children in the local *maquila* (assembly plant), weaving, and tie-dyeing industries, and in cash-cropping in one community. Recognizing this potential problem, the AGES scholarship program also requires parents to agree not to allow their daughters to work for money after school. However, other children do. In the focus groups, the high economic value of children was mentioned as a factor explaining poor school performance and repetition. Girls mentioned that their classmates become discouraged because there is not enough money to cover all the costs they incur in school, and thus they feel the need to work for income after school.

Lack of interest in school was the other reason given for school failure by teachers and by the girls themselves. The latter specifically mentioned arriving late to class or not at all, not paying attention in class, and failing to complete homework. According to teachers, unmotivated students come from homes with uninterested parents. Teachers complain repeatedly about uninvolved parents and see this as the main source of student problems. In focus group discussions, parents and selection committee members echoed this view. According to teachers, parents, and committee members alike, when children—and the twelve to sixteen year old girls in particular—want to stay home for any reason, parents are complacent and accepting. They do not require their children to attend school. Low motivation was also associated with lack of food, empty stomachs, hunger, and malnutrition, but less frequently.

Girls also mentioned factors unrelated to interest and motivation, such as family

problems, which prevent them from attending school or studying at home. Promoters often said that their home visits responded to problems the girls had at home, such as marital disruption, misuse of the scholarship money, parental illness or abandonment, and alcohol consumption.

When asked specifically about the causes for repetition in the lower grades (kindergarten and first), teachers often mentioned class size as a major problem. The lower grades are the largest in these bilingual schools. One school director said that with 75 to 85 pupils per class, teachers became child caretakers and very little learning of the kind that is supposed to take place actually does. Another director said that school overpopulation decreases the teacher's ability to teach.

Drop out

Drop out is closely tied to repetition in the minds of all groups interviewed, especially among teachers and promoters. Parents interpret repetition by young girls as a sign of incompetence, so they take them out of school. Among older girls repetition also leads to drop out, but the decision is the girls' not their parents. This view was supported by parents of girls who lost scholarships due to repetition or drop out.

School failure and repetition are tied to girls' economic responsibilities and lack of motivation while drop out is related to high absenteeism, repetition and a monolingual school environment.

The ethnographic interviews with parents, on the other hand, revealed that from their point of view the reasons for repetition and school failure are first, a foreign monolingual environment in spite of the fact that these are PRONEBI schools, and second, disease and malnutrition. Parents' perceptions are that teachers are not functionally bilingual. Teachers are able to understand a Mayan language but they cannot or will not speak it. Therefore, students entering the school system are at a disadvantage: although they can make themselves understood they cannot understand lessons taught in Spanish. Observational data are required to verify these parental perceptions.

Failure to attend school is recognized by parents as a precursor to repetition. When asked why children are absent from school, parents usually respond that children get sick often because of poverty and malnutrition. When asked about seasonal migration as a cause for absenteeism, parents in the two study communities responded that seasonal migration was common when they were growing up and was a reason for their own absenteeism. However, seasonal migration practices have changed dramatically in the communities studied over the last 20 years. Fewer and fewer families are migrating to the coastal farms for work. Children are no longer taken out of school to accompany adults to the coast with the same frequency. However, the situation may be different in other communities participating in the AGES scholarship program, especially those in Huehuetenango and San Marcos where seasonal

migration is still prevalent.

According to the former scholarship program's director seasonal migration was a problem in most of the communities in Huehuetenango and San Marcos with the exception of one community in Huehuetenango, Acal, that, traditionally, has had little outmigration to the coastal region. In that community, when parents of scholarship recipients do migrate seasonally, they leave the girls behind with friends or relatives so they can keep attending school. This practice was not evident in other scholarship communities where seasonal migration is considerable. Seasonal migration is not common in the communities in Alta Verapaz where the scholarship program operates or operated (de Monterroso, 1993).

The causes mentioned by girls for dropping out of school are similar to the reasons why they fail their classes. The older girls commented that their classmates sometimes drop out of school because they have boyfriends or are interested in marriage or because they prefer to earn money, either for themselves or to help their families make ends meet. Some girls also stated that their classmates drop out of school because they do not understand their lessons, sometimes failing classes, and feel that it would be too difficult to make up the work. Finally, the girls mentioned that family problems such as parents not permitting their daughters to attend school or illness may lead to a girl leaving school.

They also recognized the importance of parental support in keeping girls in school, commenting that girls may leave school because their parents do not communicate with teachers, nor do they offer moral support, supervise homework, or allow them enough time for their studies. These views echo those of teachers discussed previously.

The comments of the adults in both focus groups and interviews corroborated the reasons for drop out given by girls: early adolescence, loss of interest, attraction of paid work, and discouragement due to grade failure. One parent lamented, "*Hay muchas que tejen aquí. Les atrae la oportunidad de ganar dinero...*" (There are many here who weave. The idea of earning money is attractive to them...). However, the parents analyzed the situation more carefully and also suggested that girls lose interest in their studies because they do not value the importance of education in their lives. For example, in one focus group participants commented that girls do not recognize that education can be a means to alleviate poverty.

According to several focus group discussants, teachers, promoters, and community leaders alike, girls who are older than their classmates are embarrassed to go to school, and may eventually leave school for this reason. The age discrepancy occurs because their parents enroll them in school too late and/or because they repeat grades. When asked specifically about age at first enrollment for girls and boys, parents, teachers, and promoters agree that there is a marked tendency for parents to keep girls at home until they consider that it is safe to send them to school. Six and seven year old girls

Parents delay sending their girls to school for the first time until they are certain that they are physically capable of withstanding the demands of school.

are deemed too little, weak, and vulnerable for the school environment. Boys can defend themselves at this age, but girls cannot. Therefore, parents delay sending their girls to school for the first time until they are certain that they are physically capable of withstanding the demands of school. Late entry and grade repetition combine to produce discrepancies of two to five years between some girls and the rest of their classmates.

As they grown older, the data suggest, girls become interested in obtaining clothes, jewelry, and other material things not essential for their well-being. Parents adopt the attitude that girls—and boys for that matter—will have to work for these pleasures. The attraction of work for income as a means of acquiring adult status is reinforced by the desire to earn money to buy objects that are important for girls and their peers.

Age may influence promotion and retention in another manner. As girls reach puberty, they are more likely to drop out of school because they are interested in boys and marriage. If girls enter school at a later age, this will occur earlier, "*Entran muy grandes en la escuela y encuentran novio.*" ("They enter school when they are very big and they find boyfriends.") Interest in boys and marriage was perhaps the most common reason discussed in focus groups and by teachers for girls discontinuing their studies. Parents noted that this factor, unlike age of school entry, is out of their control. If a girl is no longer interested in studying because she wants to marry, parents suggest that there is no way to obligate her to continue. Drop out at younger ages is the parents' decision; among adolescent girls dropping out is their own decision.

There is some qualitative evidence showing the importance of peer group expectations and pressure in explaining drop out among adolescent girls. When most girls their age are no longer in school, and when their friends in particular are out of school, adolescents find many more reasons to leave school rather than to stay. They do not want to be seen by their girlfriends and by potential boyfriends walking to school or in the schoolyard at recess times. Friends are experimenting with male-female relationships out of the school context, and schoolgirls are impatient to do so as well. For example, one parent said, "*Las muchachitas a veces se animan unas a otras a casarse porque no saben las consecuencias.*" ("The girls sometimes encourage one another to get married because they don't know the consequences.")

The results of the quantitative data analysis presented in the second part of the report corroborate many of the points made by focus group participants and interviewees, especially those made by girls themselves. The most common reasons for dropping out of the scholarship program after program discontinuation, were lack of interest on the girls' part, repetition, completion of elementary school and lack of parental interest (see Figure 3 in the second part of the report).

Factor Determining Girls' Retention

The data presented in the first section, "Overview of AGES Scholarship Program Coverage...", and in Table 2 suggest the program is successful in keeping girls in school. In this section we analyze those elements of the scholarship program contributing to this success. We also address other factors not directly related to program interventions that enhance the probabilities of girls' school permanence. In the second part we examine girls' individual and family background characteristics which also contribute to program success.

The factors identified emerged from the analysis of the community level data and from the views of AGES personnel. The qualitative data were used to formulate the hypotheses that follow. When the AGES data set permitted, these hypotheses were tested quantitatively in the second phase of the background study. The chapter on conclusions and recommendations gives specific suggestions for enhancing and improving upon those factors that do indeed help girls enroll and remain in school.

The factors that we hypothesize determine girls' permanence in school can be divided into six critical areas:

- 1) Female parity and age at first enrollment
- 2) Academic support
- 3) Economic support
- 4) Motivation and moral support
- 5) Consciousness raising and support for parents
- 6) Strengthening of the educational system.

The AGES scholarship program has components that address the areas of academic, economic, and psychological support to girls, and consciousness raising among parents (see the background chapter for a description of these components). It indirectly affects age at first enrollment by providing economic support for younger girls to go to school, but has no sustained capacity nor was it designed to introduce changes to strengthen the educational system in which the girls are placed. The AGES scholarship program also includes a component of community support for its activities; community approval and support enhance the success of these activities in keeping girls in school.

The great majority of the tasks required to provide academic, economic, and moral support to girls and their parents are performed by the AGES promoter in the three communities studied. This is also true in two other communities in the Mam speaking region of Huehuetenango, according to an interview with the promoter that covers these areas.

Female Parity and Age at First Enrollment

Having an older sister who is in school or has been to school seems to be a factor that

influences girls' school attendance and retention. If the family has already gone through the experience of sending an older sister to school and it has been a positive one, the decision to send a younger one will be easier. Younger girls can accompany their sisters to school if the latter are still attending. Small girls receive moral support from their female siblings, and view them as role models. The expectation of female education is present at home when girls have older sisters who are or have been to school.

Furthermore, older girls can pressure parents to send their sisters to school at the appropriate age. On several occasions, parents and girls recounted that older sisters who were still in elementary school when they reached puberty due to late enrollment told their parents not to make the same mistake with the younger ones. Teachers alluded to the same situation. The quantitative analysis presented in the second part of the report indirectly assesses the relation between school attendance by an older sister and younger girls' school enrollment by examining how scholarship girls' school efficiency is related to having older siblings who attend school.

Academic Support

The promoter is the only source of academic support outside of the classroom environment for the girls who receive scholarships. She identifies which girls are having problems with their studies on the basis of talks with their teachers and monthly or bimonthly reviews of their grades. She invites girls who are having problems to attend tutoring sessions after school. Some promoters tutor all grades at the same time, others assign different times to each grade level, depending on how many communities they serve. However, they do not provide this support to girls at the secondary level.

The girls are expected to attend tutoring sessions until their grades improve. Some, however, keep attending these extra classes even after they stop needing them. Girls and teachers state that these classes are essential for girls' academic standing. During tutoring sessions the promoters have a chance to give personal attention, help resolve individual problems, explain material the girls do not understand, review material before exams and assist in special projects and assignments. More important, these classes are conducted in a Mayan language. Girls feel comfortable with the female promoter, and are not afraid to ask questions. They sometimes are afraid to ask questions of the male teachers or in large classroom situations. Role socialization may have something to do with this kind of behavior. Mothers stated that they and their daughters will remain quiet or give a short positive answer when asked if they understand something, even if they do not, because this is the way women are.

All of those interviewed identified the support of the promoter as key in assisting girls to obtain passing grades and stay in school. The promoters know that were it not for these tutoring sessions many scholarship recipients would not be promoted.

Academic support is one of the reasons for the success of the AGES program in maintaining the high global promotion rates described in their annual reports. Nonetheless, AGES promotion rates must be compared on a grade-by-grade basis to the promotion rates of a similar group of girls not participating in the scholarship program. Phase two of the background study does precisely this; the results are reported in the second part of the report.

Economic Support

The economic contribution provided by the AGES scholarship program is an important source of support to beneficiary families. The overarching theme emerging from the focus group discussions and interviews is that the economic support is necessary but not sufficient to cover all direct and opportunity costs involved in sending girls to school. Parents expressed gratitude for the scholarship and stated they use the money to cover their daughter's school and basic needs. Both parents and scholarship recipients said that the stipend allows girls to stay in school, especially when the family has other children to support and send to school. It was not infrequent for parents and beneficiaries to state that the money from the scholarship allowed them to solve serious economic problems that otherwise would have been insurmountable. The donation allows families to resolve conflicting needs. Girls say that the scholarship gives them the opportunity to stay home and study rather than have to go out and work to contribute to their households' budgets.

Other community members frequently expressed doubts regarding the proper use of the stipend. Promoters and selection committee members mention that sometimes there are problems with the misuse of the money, but that these problems are not difficult to correct. It was not possible to obtain data regarding the actual prevalence of these problems.

How parents and scholarship recipients can use the money varies from one community to another. Some promoters are more flexible than others in their interpretation of what is permissible, and allow parents to buy food for the whole family with the monthly stipend, if this expense is justified in their view. They may also allow the money to be shared with other siblings attending school. Several parents of beneficiary girls say the money is not a source of conflict among siblings because they all benefit from it.

The economic contribution is an important stimulant to send girls to school who otherwise would not have been enrolled, according to promoters and teachers. The promoters know of several cases in which girls who were not supported for lack of funds could not go to school until the following year. Likewise, teachers stated that they try to identify girls of school age who are not enrolled through the census of school-age children they perform at the end of every school year. These girls become their candidates for scholarships for the next term. If the promoter and the selection committee agree they should be offered the scholarship, these girls have a much better chance of attending school than if no economic support were offered.

At another level, both selection committees agreed that the scholarship money was instrumental in getting girls out of sixth grade and into secondary school. If it were not for this economic incentive, these girls would not have been able to continue their education past elementary school, regardless of grades or educational opportunities.

Motivation and Psychological Support

The Role of the Promoter

The qualitative evidence strongly suggests that the promoter plays a critical role in motivating the girls to continue studying. The verbal support and encouragement she provides through her frequent contacts with the scholarship recipients in school, during tutoring sessions, and during home visits is one way she motivates them. Another is the example she sets for the girls, as a Mayan woman who speaks their language and wears native clothes, effectively interacts with teachers and community leaders, is involved with their community, and has a professional job. The promoter is a role model to the girls who receive scholarships and to other girls as well.

One of the tasks the promoter performs is to verify the girls' school attendance and punctuality and whether or not they are completing their homework. In addition to the tutoring itself, the promoter chides those who are not performing well and insists that they improve. Motivational talks stress the importance of education in improving economic possibilities and contributing to the development of their communities. According to both parents and girls, the promoter counsels those with personal or family problems and helps find solutions to these problems. As stated above, the promoter occasionally asks individual members of the selection committees to become involved with problematic households.

The Role of the Sex Educator

The talks provided by the AGES bilingual educator on human development, gender roles, sexual relations, reproduction, and contraception also play a motivational role, according to the comments of both girls and their mothers. The issues of boyfriends and marriage come up frequently in these talks, and the bilingual educators counsel the girls and their parents on the desirability of delaying marriage to complete school. Age at first union is early in these communities, according to school teachers, promoters, and girls themselves. It is not unusual for fifteen year olds to form a union and want to be married by eighteen. Thus, the counseling that takes place in the sex education talks may serve as an additional motivator to stay in school.

Many of the girls and their parents mentioned that girls and boys have the same rights to education. This notion appears to come from the sex education talks and its references to women's rights in the context of reproductive rights. Girls' rights to education on an equal

footing with boys is not a traditional value in these communities.

In several focus groups with parents, participants mentioned that teachers should also provide this type of counseling. A typical comment was that teachers should give talks to their students so that they will be, "...*conscientes en sus decisiones de casarse pronto.*" ("...responsible in their decisions to marry young.") Another parent said, "*Deberían orientarlas en decirles que no deben de tener novio...lo que deben hacer es estudiar para que sean unas mujeres listas [e] inteligentes que no sufran.*" ("They should offer them advice, tell them they shouldn't have boyfriends... what they ought to do is study to become smart and intelligent women who won't suffer.")

The Role of the Parents

Parents identified a number of functions that they should fulfill in order to help their children succeed in school. These functions include:

- a) assist with homework;
- b) supervise homework;
- c) allow time for study;
- d) supervise school attendance and punctuality;
- e) motivate their daughters to continue studying;
- f) make appropriate use of scholarship money; and
- g) attend meetings and other events related to the scholarship program.

In individual interviews, scholarship recipients repeatedly mentioned that they rely on their parents to legitimize their attending school and performing homework instead of chores. This legitimation is expected to come both as verbal expressions of support and through behaviors that demonstrate that parents believe that their daughters are doing the right thing.

Parental trust in the girls' behavior is also required if the girls are to feel supported at home. Here is the experience of an older scholarship recipient who is about to become a teacher: "*mi mamá...me decía que para qué estaba estudiando si perdía el tiempo en hacer los trabajos con los compañeros, y como nos dejan trabajos en grupos mi mamá hasta me pegaba porque decía que solo me iba a pasear y que no hacía nada.*" ("My mother...used to ask why I was studying because [she thought] I wasted time working on projects with my classmates, and since we had group projects to do my mother would even hit me because she said I was out walking around and I didn't do anything.")

In these patriarchal societies the fathers' support is demonstrated in the form of permission or authorization to attend school. If a father expresses doubts or displeasure with his daughter's school involvement, it is tantamount to withdrawing this blessing. In this regard, the support and recognition of brothers also becomes important. Mothers, on the

other hand, are expected to provide the more day-to-day psychological hand-holding that girls need to continue making the effort to perform well in school. Mothers are the ones who must find ways to provide girls time to do homework, even if it means doing more housework themselves or placing additional burdens on other household members. Mothers must also make sure that the scholarship money is spent in ways directly useful to the girls.

Consciousness Raising and Support for Parents

Despite the importance of parental support, not all parents know what kind of help to give or feel that they are capable of providing such support to their daughters. The comment of one father was typical, "*Ella perdió....creo que tiene razón al perder porque nosotros no la podíamos ayudar ya que no sabemos leer ni escribir; solita ella se esforzaba en la primaria.*" ("She failed...I think there was a reason for her failing because we could not help her since we don't know how to read and write; she was alone in her efforts in elementary school.") Some of the parents commented that they could not help their daughters with their homework because they did not know how to read and write. These parents said that someone else should help their daughters, "*Alguien que sepa porque nosotros no sabemos leer.*" ("Someone who knows because we don't know how to read.") In addition, some fathers stated that because they work in the fields or outside of the community they are not aware of how their daughters are progressing in school. Mothers feel particularly impotent with regard to providing assistance with homework.

While the promoter fulfills many of the functions often attributed to parents with respect to supervision of academic progress, she also provides assistance to the parents to teach them how to fulfill this role themselves. The contacts that promoters have with parents, both in formal meetings and during home visits, according to their own reports, are mostly to motivate them to keep their daughters in school, tell them what school involves, why homework is necessary, and to raise their consciousness regarding the value of education, both in terms of economic and personal fulfillment. One problematic area, based on the frequency it was mentioned in both focus group discussions and ethnographic interviews, is that the parents must make time on a regular basis for their daughters to go to school and do their homework. One outspoken father of a scholarship recipient and president of a selection committee put it very eloquently: when for some reason the girls want to stay home or run an errand instead of going to school, mothers are complacent, accommodating, and almost passive in responding "*Vaya hija, ya no te vayas.*" ("That's all right, girl, don't go.")

"...we could not help her because we don't know how to read and write."
Father speaking about his daughter's school failure

The comments of the mothers suggest that much of the promoter's efforts are directed at the parents rather than at the girls. During the household visit, in particular, the promoter talks more to the mother than the girl, explaining how her daughter is progressing in school and advising

her what she should do to help her daughter. As one mother said, "the promoter teaches us to look out for the well-being of our girls." Beneficiary girls who were individually interviewed frequently mentioned that they do not know the promoters very well because they are doing well in school and do not need tutoring or counseling; however, their mothers have more contact with the AGES promoter.

A common theme in the ethnographic interviews with both mothers and fathers was their desire for their children, including their daughters, to improve themselves through education. They compared themselves to their daughters, saying that they did not want their girls to be like them, illiterate, uneducated, and easily fooled by others when they leave their communities. Education, the parents said, is a form of defense.

The role of the selection committee in raising parents' awareness and support of education in the community is limited. Committee members claim that they dedicate themselves to this task, and that it is one of their most important functions. However, their approach to the issue is very formal and restricted to the monthly meetings where the scholarship funds are distributed. Occasionally committee members will make home visits of a remedial nature. Real awareness raising, parent training, and support is still in the hands of the AGES promoters.

Strengthening the Educational System

Girls, parents, committee members, community leaders, teachers and promoters all identified weaknesses in the educational system as factors that cause repetition and drop out. This was not a surprising finding, but it was an important and timely reminder that the quality of the education offered cannot be ignored in a background study focusing on ways to improve the demand for education among girls.

The girls rarely discussed what could be done to improve the system, simply mentioning that their schoolmates failed because of "bad" teachers or because they did not understand the material. However, their parents and teachers did make specific suggestions on school improvement.

In the first place, parents believe that bilingual teachers are extremely important, in particular during the first two years of school. A recurrent complaint in the interviews was that students fail because they do not understand lessons when given in Spanish. Although the schools visited are in the PRONEBI system, parents are not

Four themes emerged from the qualitative data regarding strengthening of the elementary school system in rural, indigenous settings:

- The need for functionally bilingual teachers
- Teacher training and curriculum reform
- Class size commensurate with teacher capabilities, and
- Educational materials for students and teachers.

satisfied that teachers are truly bilingual.

Parents complain about teacher absenteeism, lack of punctuality and motivation, as well as poor teaching techniques. In general, especially in one community, parents felt that teachers are irresponsible and lack commitment to the betterment of the community and their students. In one focus group in particular, mothers were very critical of teachers. "*Como los maestros son ladinos talvez no quieren que superemos, que sólo aprendamos a leer, escribir, hacer nuestra firma y no les importa si los niños en la escuela ya son novios y se casan a una edad temprana.*" ("Since the teachers are *ladino* maybe they don't want us to improve ourselves, just to learn to read, write, how to sign and they don't care if children in school get involved with each other and marry at an early age.")

School directors admit these are serious problems and request additional and consistent supervision from the regional PRONEBI headquarters. Improved teacher training and in-service training courses were requested as a means to alleviate some of the deficiencies. In particular, certified teachers are unhappy with the practice of sending uncertified bilingual individuals with four to six months training to teach kindergarten and first grade. According to one source, PRONEBI uses bilingual promoters to cover pre-primary education only. According to community sources, PRONEBI promoters are not limited to pre-school education.

The need to make the educational content relevant to rural life and sensitive to cultural differences was identified by both students and parents. In one focus group, parents suggested that the curriculum is not meeting the needs of their children. For example, "*No las orientan, solo les enseñen a leer...no les hablan de la vida real.*" ("They don't counsel them, they only teach them to read...they don't talk to them about real life.") A slight contradiction in community perceptions was identified on this matter. Community leaders, and especially fathers, argued that teachers do not want to teach what the school programs require of them; instead they want to take the children on field trips whenever possible. Some adults insist that students should go to school to learn, to read, write, add, subtract, read maps, etc. Other community members however, believe that current school programs are too traditional and irrelevant to their lifestyle.

Teachers see it differently. Curriculum reform has caught them unprepared. They feel they receive enough guidance on how to change educational content and methods. They believe that these reforms are passing educational fads that will change with the next Minister of Education. They see no serious planning and information efforts at the ministerial level, and resent having to be left to their own resources to implement curricular changes which they do not understand well. They have the additional problem of parental misperception of their attempts to implement curricular reform. Some teachers say parents and community committees have applied pressure for them to continue teaching the same subjects in the same way that people have come to expect.

Class size was also brought up as a factor which made it difficult for teachers to attend to the needs of their students. School directors are very aware of this problem, as was discussed earlier. They claim that PRONEBI requires them to accept all students that seek enrollment. Not all teachers interviewed recognized this as an important problem, but students and parents certainly did. PRONEBI schools have tried to solve it by dividing large grades into sections, but even the sections are sometimes too large. More classrooms and more bilingual teachers are required to solve this problem, as it is primarily in the early grades that it occurs.

Class size varies perceptibly in the seven departments in which the AGES scholarship program was implemented. While the average number of children per classroom in rural public elementary schools in Guatemala was 36.9 in 1991, Alta Verapaz reported an average of 29.5 and Quetzaltenango an average of 43.3 students per classroom. The student/teacher ratio also varies greatly from one department to another. Table 3 summarizes these data for the six departments where the AGES program was implemented.

Table 3
Average Number of Students per Classroom, Teacher and Department
for Public Rural Elementary Schools, 1991

| Department | Students per Classroom | Students per Teacher |
|------------------|------------------------|----------------------|
| Guatemala | 46.1 | 22.7 |
| Sacatepéquez | 36.9 | 36.2 |
| Huehuetenango | 31.3 | 33.1 |
| San Marcos | 40.7 | 44.4 |
| Quetzaltenango | 43.3 | 44.7 |
| Chimaltenango | 29.7 | 35.9 |
| Alta Verapaz | 29.5 | 32.0 |
| national average | 36.9 | 38.7 |

Source: *Ministerio de Educación*, 1992.

Teachers and girls repeatedly mentioned the scarcity of educational materials for students and teacher, and material preparation instruments and facilities for teachers as a source of school problems. Observations in the classrooms and directors' offices confirmed this situation. Although the PRONEBI schools are supposed to be better equipped than other schools, both in terms of furniture and teaching materials, teachers in the communities visited

stated strongly that what they get is inadequate. Some say they buy teaching materials with their own money. Others say they have to ask students to bring additional materials to school for projects, and even paper on which to take exams. Teachers readily provided long lists of educational materials and instruments that they require, and recognize the links between their availability of materials, improved teacher performance, and students' academic success.

LESSONS LEARNED FROM PROGRAM IMPLEMENTATION

The qualitative data collected in the first phase of the background study was also helpful in identifying lessons learned from the AGES experience in implementing a pilot scholarship program for girls in Mayan speaking communities. Six major lessons were identified, dealing with issues from community support and involvement in the scholarship program to the need for operational criteria for the selection of beneficiaries.

One lesson on program results is presented (number 6), based on the perceptions of parents, teachers, and beneficiaries regarding the effects of the program in their communities. This lesson should not be interpreted as a measure of program impact in the scientific sense. Nonetheless, the impressions of community members on the changes brought about by the scholarship program are valuable inputs into the design of future projects.

- | | |
|-----------|--|
| LESSON 1: | Selection of scholarship recipients requires clear, objective criteria. |
| LESSON 2: | Election of selection committee is controversial; committee functions are limited. |
| LESSON 3: | The teacher's presence in scholarship activities gives these seriousness and legitimacy. |
| LESSON 4: | Relationships between teachers and parents need to be cultivated. |
| LESSON 5: | Community participation and support are critical. |
| LESSON 6: | There are perceptible changes at the individual and community levels due to the program. |

Selection of Scholarship Recipients

Committee members and other community leaders and parents, whether program beneficiaries or not, were asked to comment on the criteria and procedures for the selection

of scholarship recipients. Several salient issues emerged from this discussion:

1. *What criteria should be used to select scholarship recipients?*

The focus group and interview data suggest that selection should be based on three factors: 1) economic need; 2) interest of the girl; and 3) interest of her parents. Family commitment to education needs to be assessed more carefully than at present. Economic need requires more careful assessment than current procedures allow for. Parents and committee members mentioned several indicators that they would take as evidence of economic need: children with widowed parents, orphans, those coming from large families, and those with unemployed parents or tutors. The identification of candidates for scholarships must follow clear and precise guidelines that permit discrimination between families with extreme need and those who have more resources, and between candidates who are truly motivated and those who are not. Current guidelines are vague and non-discriminatory.

2. *Who should select scholarship recipients?*

This issue is closely related to that of selection criteria. Answers to this question depended on whether or not the respondent was a beneficiary of the program. Some parents felt that the selection process had been fair, others (usually but not exclusively non-beneficiaries) felt that scholarships had been awarded on the basis of friendship, kinship, or privilege.

In essence, the results of the focus groups suggest that the current method of selection which is based on the opinions of the committee, teachers, and promoter is appropriate. In most groups, participants commented that the committee should be involved in the selection because they know the needs of the community and which families are most needy. However, most participants, in particular those who did not receive scholarships, felt that scholarships should not be awarded solely on the basis of need. They cited examples of needy girls who were not interested in studying and dropped out of school or got married, thus "wasting" the scholarship. Therefore, parents suggest that the teachers be involved in the selection process. Although they are unaware of the economic situation of the families, teachers can comment on the interest of the students. However, since teachers do not know which families are in greatest economic need, they should not make the decision alone. Focus group participants felt that it was appropriate that the promoter participate in the process as well. In some groups, participants mentioned that community leaders, such as the mayor or clergy, should also be involved because they know which families have the most need.

In general, focus group participants commented that committee members should be responsible, impartial, and honest.

Election and Functions of Selection Committee

As was reported earlier there is a discrepancy between the initial model of community and selection committee involvement in the scholarship program and the way the program has been implemented. There are also differences among communities in how selection committee members are chosen. In some they are chosen from an assembly of community leaders, in others from among parents of scholarship recipients. In practice, the sets of people that belong to both categories of population intersect frequently. With each additional year that the scholarship program is present in any given community, community leaders may become indistinct from beneficiaries, and beneficiaries may become community leaders. It becomes quite difficult to keep the two criteria for selecting committee members separate.

Committee selection procedures is one area where the promoters have had to be flexible and accommodating to community dynamics. However, there are pros and cons to either selection mechanism, and some members of the community will always be dissatisfied. If the committee is elected from among community leaders, they will not feel committed to the program, because they will not have any personal interest in it. If they are elected from among parents of scholarship recipients, then the danger of exclusion of new families and corruption are evident. In fact, community leaders and non-beneficiary parents were quite vocal in the ethnographic interviews on the issue of corruption in selecting girls for scholarships when the girls' parents were involved in the selection committee.

The committee members who participated in the focus groups stated that their functions consist of the following:

- identify candidates for scholarships, help conduct socio-economic studies, and participate in the selection process of scholarship recipients;
- monitor the household use of scholarship funds;
- supervise the attendance and academic performance of the scholarship recipients;
- detect and resolve family problems (e.g., health problems or inappropriate use of funds);
- call meetings;
- inform teachers and parents of the girls' progress; and
- ensure that the parents fulfill their commitments to the program.

This list represents the ideal behavior of the committee. Although the original design of the program called for the promoters to assume these tasks during the first year of community involvement and to turn over gradually many of these responsibilities to the selection committees as the program unfolded, this has not happened. According to the past director of AGES who participated in the original conceptualization of the scholarship program, it should have been possible for a promotor to monitor community level activities through periodic visits and to run things by "remote control." In reality, the promoters continue to carry the major burden, even performing tasks that could easily be delegated to

others.

The involvement of selection committees in program activities is limited to formal meetings in which scholarship recipients are selected (thus the name selection committee), and in which the scholarship money is given to parents. Promoters request individual members of the selection committees to follow-up on difficult problems by performing home visits, but only in those cases they cannot resolve by themselves. Committee members do not assume program activities beyond those described of their own initiative; they wait for the promoters' cues. For instance, committee members do not review scholarship recipients' grades with the teachers in order to identify candidates for tutoring sessions. The promoters still perform this function, as well as that of providing the actual tutoring. The title of selection committee reinforces their limited domain of activity.

There are several reasons why the initial model was not implemented as planned. The selection committee probably should not have been given that name, although the reasons for doing so made sense at the time. AGES personnel made a strategic choice when faced with resistance to the formation of yet another community committee in some of the villages. In order to overcome these objections, they called it selection committee to circumscribe its activities to a very clearly defined task. This proved to be a double-edged sword. Another reason is that committee members are volunteers who have other responsibilities, including farming. Their time is limited and although they may want to become more involved, they cannot. Finally, the promoters themselves are not adept at delegating or transferring program responsibilities to others, lest they lose control or obtain less than desirable outcomes. The promoters are highly motivated individuals, identified with their job and with the cause of girls' education. They are also responsible for their communities standing vis-à-vis others in the program. No information is currently available on whether the current AGES program staff or the promoters themselves have any knowledge of the original plans.

Committee members suggested that the program would be more effective if they visited the girls' families more frequently. However, they stated that it would be difficult for them to do so, "*No podemos hacer visitas domiciliarias. Es importante, pero nuestro trabajo no nos da suficiente tiempo.*" ("We cannot make home visits. It's important but our work doesn't leave us enough time.") They also mentioned that they lacked preparation to fulfill some of the functions of the promoter.

The Role of the Teacher

During the focus groups, parents and committee members identified several functions of the teacher in the scholarship program. The most important functions are to teach the children well, correct their work, and demand punctuality and good work. They also mentioned that teachers inform the promoter and parents of the girl's progress. In addition, parents and girls suggested that teachers should counsel the girls on the importance of

education.

Promoters and the director of the AGES scholarship program agreed that teachers are requested to make a special effort to help the scholarship recipients in the classroom. Teachers are asked to pay attention to the recipients' needs, to make certain they pay attention, understand lessons, and turn in their homework. The teachers receive a Q20 monthly stipend from the scholarship program intended to cover this extra effort. Teachers, however, could not agree on the appropriateness of this extra effort. Some said they try to give scholarship recipients special attention in class; other said they do not, in some instances because they cannot and in others because it is not appropriate to show favoritism among students.

The presence of the teachers in the formal meetings with the selection committee to choose scholarship recipients at the beginning of the school year and during the monthly meetings with parents is very important to the community and to the promoters. For all the dissatisfaction with teacher performance and the cultural differences between Ladino teachers and the community, the teachers are still recognized as important status and authority figures, and their presence lends seriousness, formality, and credibility to events related to the scholarship program.

Relationship between Teachers and Parents

There is very little contact between parents and teachers in general. Parents of scholarship recipients tend to have a little more contact with their daughters' teachers, but only on formal occasions. Teachers say that parents are not interested in their daughters' school performance and rarely come to school. Teachers recognize that their communication with parents of scholarship recipients is more frequent than with other parents, but say it is still not enough. Teachers also remain skeptical about the parents' stated reasons for not visiting the schools more frequently.

On the other hand, teachers rarely take the opportunity to seek out parents, visit their homes, or make the schoolhouse more accessible. Cultural, ethnic, linguistic, economic, and status differences create a social distance that both parties are hesitant to breach. The promoter sees her role as an intermediary between parents, other community members including selection committee members, and teachers as one of the challenging aspects of their work. Promoters also think that no one else could perform this mediating role. The results of the focus groups suggest that community members also recognize the crucial role of the promoters in providing linkages between the school, the parents, and the selection committees.

Implicit in the comments made by parents during the focus groups was the understanding that it is important for them to visit their daughters' teacher to find out how they are progressing. The parents stated that they should communicate frequently with the teacher in order to find out how their daughters are doing with their academic performance,

homework, and attendance. This may have been a message of the AGES team. However, virtually none of the mothers and only a handful of fathers who participated in the focus groups stated that they visit the school regularly to check on their daughters. Most of the parents knew their daughters' teacher from enrollment or meetings at the school to distribute the scholarship money, and less frequently they met the teacher during social events in the school.

Why don't the parents visit the school? In general, mothers stated that they do not have time to go to the school because of responsibilities at home, illness, or work. Fathers most frequently stated that they work outside of the community or in the fields and do not have time to visit the school. In individual interviews with mothers, they obliquely stated that they are afraid to approach teachers because they do not know how to speak Spanish and cannot read and write. This is an allusion to the same social distance discussed earlier.

Future projects of this nature must address ways to strengthen communication between teachers and parents, and must carefully consider whether the promoters' role in this should be substituted.

Community Participation and Support

If the community does not want to become involved in a scholarship project, or factions within the community cannot agree on their involvement, the project is not likely to succeed. According to AGES personnel including promoters, work with community leaders to form consensus and recognition of the heterogeneity to encourage community involvement are all components of a process that takes place over two or three years. In the experience of the AGES pilot program, critical contacts with the community were first made by AGES authorities, but the daily negotiations and persuasion efforts fall on the shoulders of the promoters. The promoters interviewed feel that this kind of work is never done. For this and other reasons discussed earlier, promoters think that they should only be responsible for one community.

When asked what factors have influenced the acceptance of the scholarship program, committee members explained that the participation of community leaders such as the mayor and religious leaders has been important. They also felt that the formation of a committee was key. In addition, the preliminary process of organizing the committee and soliciting community support was very important. AGES staff accomplished this through meetings with leaders and a community meeting.

One of the committee functions that was brought up several times was that of representing the scholarship recipients and their families to the community and informing community leaders about the program in order to avoid misunderstandings. As one parent said, "*...por medio de ellos (el comité) tenemos voz y voto.*" ("...through them (the committee) we

have a voice and a vote.")

Both program recipients and non-recipients participating in the focus groups appeared to have a very positive opinion of the AGES girls' scholarship program, stating that it had been a great help for the community. While some beneficiaries participating in the focus groups commented that their neighbors sometimes criticized them or questioned the source of the money, they recognized that these comments were made out of jealousy and they ignored them. Significantly, no negative comments were made regarding AGES or the scholarship program. It is probably unrealistic to expect that there will be no negative comments resulting from jealousy or misunderstanding. More information to community members not involved in the scholarship program, increased visibility and interaction of the selection committee with other community groups, and additional contacts between parents and teachers would tend to reduce these problems.

Even though there was overall satisfaction with the program, the issue of scholarships for boys was brought up several times, particularly by parents without school-age daughters. In almost every group, someone mentioned that they would prefer the program to include boys as well as girls. Despite these comments, the issue does not appear to have created conflict in the communities studied. While community members would undoubtedly prefer that scholarships be given to both boys and girls, these comments seemed to be related mostly to the fact that some families are not eligible for a scholarship because they have no girls. However, in general, none of the focus group participants or those interviewed individually felt that there are unequal enrollment rates between boys and girls. In fact, many felt that there were more girls than boys in school. Thus, they might not perceive the need for a program targeting girls. Only one person interviewed expressed the concern that if scholarships were made available to boys and girls alike, the boys would end up with most of them.

Effects at Individual and Community Levels

Community perceptions were explored regarding changes brought about by the scholarship program. Although it is impossible to determine whether the changes described can be attributed to the program itself, or to a combination of other factors including secular change and modernization in general, the opinions of community members and program beneficiaries are important indicators of program success and impact.

Girls, parents, and committee members were asked in focus group discussions whether they noted any changes in their community as a result of the AGES program. During the course of ethnographic interviews, beneficiary girls, their parents, and teachers were asked to comment on changes in the scholarship recipients and their classmates.

Respondents identified changes among the scholarship recipients, other students, and

at the school and community levels.

As was stated elsewhere, the economic aid provided by the scholarship program has enabled girls to stay in school. In conjunction with other program interventions the stipend has resulted in more girls reaching higher grades and even high school: "*Ya están estudiando en Xela, antes no se miraba esto...*" ("They are even studying in Quetzaltenango. This was never seen before..."). Several of the girls who participated in the focus groups stated that without the scholarship they would not have continued studying. While these responses are to be expected, given that the community desires the program to be continue, parents and girls also mentioned examples of boys and girls who dropped out of school because there was not enough money to keep them in school.

When asked if their daughters had changed since receiving the scholarship, some parents replied affirmatively, indicating that they demonstrated greater interest in their studies, more responsibility, and obedience. However, other parents stated that the scholarship had not made any impression on their daughters. Teachers have noticed that scholarship recipients in general are more punctual and consistent in attending school than they were before entering the program and than their classmates. Girls in the scholarship program are more motivated, participate more in class, and are eager to ask and answer questions. Further, they arrive in school clean, well groomed, and with their hair brushed. In short, they look different.

Teachers also reported a halo effect in their classrooms. Scholarship recipients positively motivate other girls, and sometimes even boys, through their own involvement in classroom activities and their evident interest in learning. Girls with scholarships pull other girls along, and stimulate them to be less indifferent and slow. Sometimes students wait for their teachers at the classroom door to give them their homework and have it checked. Some students are striving for achievement and competing for the best grades.

At the community level, people have noticed that the gap between male and female school enrollment is closing or has disappeared. "*Antes veía más niños que niñas en la escuela, ahora nivelados.*" ("Before I used to see more boys than girls in school, now they are more even.") The scholarship program appears to have had an impact on adults as well as girls and to have accomplished a real change in community attitudes towards women and education. Women in particular say that they place a higher value on education for girls than they did before, "*Ahora valorizamos el estudio, cosa que antes no hacíamos.*" ("Now we value education; before we didn't.") Women in one of the focus groups summarized it by stating: "*...estamos despertando de una vida conformista...*" ("...we are waking up from a conformist life-style...") and "*...hemos perdido la timidez.*" ("...we have lost our shyness.")

SECOND PHASE:
ASSESSING THE EFFICIENCY AND COMPARING THE PERFORMANCE OF GIRLS
IN A PILOT SCHOLARSHIP PROGRAM WITH THAT OF OTHER SCHOOL GIRLS

INTRODUCTION

The first part of this report presented the findings of the field-based research on how scholarship girls, their parents and other community members view the AGES scholarship program. It presented some lessons learned on program operation and advanced some hypotheses on factors that may be associated with program success and scholarship girls' academic performance.

Scholarship girls' performance is further explored in this second part of the report in a more quantitative manner. Performance is treated in three different ways: grade distribution at the elementary school level, promotion from one grade to the next and school efficiency. Promotion is one way of measuring school retention, as it shows whether and how students are able to move along the educational system from a lower to a higher grade.

Efficiency is another indicator of school performance commonly used in educational research. It is usually understood as the number of school years it takes a student to successfully complete one grade. It is arithmetically defined as the number of grades successfully completed divided by the number of school years it took to achieve those grades, and expressed as a proportion. An efficiency value of 1.0 is the commonly accepted standard: one school year to complete one grade. An efficiency value of less than one (expressed as a decimal) means that it takes the student more than one school year to successfully complete a grade. For example, an efficiency of .5 would mean that it took two school years to complete and pass one grade. In theory, efficiency could have a value greater than one, meaning that more than one grade can be successfully completed per school year.

In this study the efficiency indicator is operationally defined in a slightly more complex fashion in order to better apply it to the circumstances of the girls' scholarship program being studied. The resulting definitions are further explained in the next chapter.

First, the school performance of a large group of girls who have received AGES scholarships is assessed by comparing their grade distribution with that of another population of girls attending similar schools but not participating in the scholarship program, as a means to evaluate school retention. Secondly, the promotion rates of these two groups are also compared. Then the school efficiency of scholarship recipients is analyzed; differences in

efficiency among scholarship girls are examined by characteristics of the girls' home environment and length of participation in the scholarship program, and by village.

Originally the second phase of this background study was conceived of as an impact study, comparing retention, promotion and graduation rates of scholarship recipients with those of girls attending similar bilingual schools in the PRONEBI¹ system. Then school and community characteristics associated with positive impact would be identified, to the extent the small sample size and paucity of data permitted. These findings would be used to select PRONEBI schools and rural communities with similar characteristics in which the pilot scholarship program could be replicated.

Unfortunately, the PRONEBI data were not accessible for the same years for which the AGES Program had collected data, and the Ministry of Education 1990 data on school characteristics were available only on individual data collection forms. Further, some of the indicators were not comparable between data sets.

Instead, a similar population of school girls, known here as the reference population, was used to compare the grade distribution of scholarship recipients and their promotion rates. This reference population is made up of girls attending schools classified as bilingual by Ministry of Education statistics, although not necessarily participating in the PRONEBI program, in the same *municipios*² in which the AGES Program operates or operated in the years for which data were analyzed.

The quantitative findings are then interpreted in the light of the findings of the first phase of the background study.

This part of the report is organized as follows: the next chapter describes the materials used for the study, including the AGES data set and the construction of the reference population, spells out the overall analytic approach and defines the indicators used in the analysis. Then follows a chapter that presents the main results of the quantitative analysis. The final chapter presents conclusions and recommendations based on both phases of the study.

¹ PRONEBI is the national bilingual (Spanish and a Mayan language) education program. Public elementary schools in predominately indigenous regions participate in this program. Depending on the duration of participation, bilingual curricula are implemented in grades from kindergarten to 4th, and educational material is provided. The bilingual education program is a main component of the Basic Education Strengthening Project, under which this study was carried out.

² *Municipios* are geographical and administrative units, one level down from the departmental level.

MATERIALS AND METHODS

Two different samples of school-age girls were used in the analyses presented in this phase of the study: the AGES data set, also referred to as the AGES sample, consisting of girls who participated in the scholarship program in 1991 and 1992, and a reference population of girls from similar schools in the same regions, constructed to serve as a comparative sample.

The AGES Data Set

Every year AGES promoters are required to fill out a form for each scholarship recipient, specifying her demographic and household characteristics and describing her progress in the program, including grade at first scholarship and last grade completed with a scholarship. However, the original form used between 1987 and 1991 does not allow the collection of specific data on repetition or promotion by grade.

In early 1992 the form was partially redesigned by IDEAS, Ltd. in order to obtain some of the information previously lacking. The new form was submitted to AGES authorities and was approved with some revisions. In March 1992 all AGES field offices were requested to fill a form for each girl who received a scholarship in 1991 for whom a previously filled form was available or who was participating in the program in 1992. The data generated with this form are the subject of the analyses described in the following sections.

It is important to note that since the original form did not ask for current grade or whether the previous grade had been passed or failed, the information for 1991 does not allow us to directly determine whether a girl was promoted or not. For girls who were in the program in 1991 and in 1992 we can determine what grade they were in during 1991 because the form asks for current grade. The data collection form is presented in Appendix A to this report.

Using the new form, information was collected during the first trimester of 1992 on 994 girls who were scholarship recipients in 1992 or had been the previous year. The forms were filled by field offices' personnel on the basis of prior records and by promoters in villages where the scholarship was active in 1992 on the basis of their records and interviews with girls and their parents. Thus we were able to obtain up-to-date information on girls who were program participants in 1992, including girls who were receiving scholarships for the first time, and on girls who had participated in the program in 1991 but were no longer active. The working sample, after data cleaning, contains 950 girls, with some variables containing slightly

fewer cases due to missing or outlying information. Smaller subsamples of girls were used for some specific analyses described further along in this report.

All variables generated by applying the form previously described (see Appendix A) were included in the analyses performed except date of mother's birth and first union, father's birth date and parental educational expectations for their daughters ("*Hasta qué grado desea que curse su hija?*"). Parents' birth and union dates were not relevant to the issues being explored and parental expectations on educational attainment provided no variation in responses.

The Reference Population

The reference population was defined as all girls attending bilingual schools operated by the Ministry of Education in the same *municipios* in which the AGES Program was operating in 1991. Bilingual schools were chosen as substitutes for the PRONEBI schools that were originally intended to serve as points of comparison.

The ten *municipios*¹ to which the 13 AGES communities belong (see Table 9 in the next chapter for a list of these communities) were first identified, and the Ministry of Education grade-specific data for girls in all elementary schools in each were aggregated for grades nursery/kinder through sixth, including those data from schools attended by scholarship recipients. Approximately 6,000 girls make up the reference population for 1991.

Data were analyzed for 1991 for two reasons. First, it is the only year for which a grade-specific promotion measure could be constructed for the AGES data set; second, it is the most recent year for which complete data were available from the Ministry of Education's Computer Center at the time the analyses were being defined.

The Ministry data base, from which the reference population was taken, has several limitations that should be noted. Not all schools in all *municipios* are clearly identified as bilingual or monolingual, most notably the ones in Huehuetenango and Quetzaltenango. Nonetheless, these *municipios* are known to have indigenous populations, so it was assumed that their schools are bilingual. Also, the drop-out figures are not reported in a standard fashion by all school principals, and they sometimes are not congruent with promotion, repetition and end-of-the-year registration figures; thus drop-out rates are not considered in the comparative analysis.

¹ San Pedro Sacatepéquez (in the Dept. of Guatemala), Sumpango (Sacatepéquez), San Idelfonso Ixtahuacán, Santa Bárbara and Jacaltenango (Huehuetenango), Comitancillo (San Marcos), Cantel and San Carlos Sija (Quetzaltenango), Patzún (Chimaltenango) and San Juan Chamelco (Alta Verapaz).

Analytic Approach

Two levels of analysis were performed. First, the girls in the AGES program were compared to the girls in the reference population: the grade-by-grade distributions of girls in both populations are related, and their grade-specific promotion rates are presented. This comparative analysis was performed only for girls at the elementary school level for 1991. Then the girls in the scholarship program were compared among themselves in terms of school efficiency to understand how and why this measure of school performance varies.

Grade Distribution

In order to compare the grade distribution of girls in both populations an analysis for linear trend in proportions was chosen. This technique is used to compare the distribution of a phenomenon or condition in a population that has received a particular "treatment" or "intervention" (AGES) and a "control" population that has not received it (the reference population). In this analysis a point of reference is chosen to compare the distribution of the condition under study, since it examines linear trends and requires an "anchor point" or point of departure from which to establish the trends (Schlesselman, 1982). In this case two different points of reference were chosen, nursery/kinder and first grade, and two different analyses were performed each in relation to a different anchor point.

The results of the analysis for linear trend in proportions performed is expressed as an odds ratio related to the reference point. The odds ratio can be interpreted as saying, given the actual distribution of girls by grade in a given year, what the chances (or odds) are that a particular girl in one or the other population will continue on from the reference point to a specific grade.

Promotion Rates

Differences in promotion between the AGES sample and the reference population were assessed applying the z statistical test of significance to compare two proportions (Vogt, 1993). The intention was to determine if the differences observed between the two groups of girls were significant from a statistical point of view and could be reflecting real differences due to status of participation in the scholarship program instead of random findings. A level of significance (labeled the P-value) of 0.05 was chosen, meaning that it was the highest value accepted in the statistical test in order for the observed differences to be interpreted as significant². Only promotion rates for 1991 were examined since the AGES data set does not permit grade-specific comparisons for other years.

² By convention, social science research usually accepts as *significant* a relationship between two factors or conditions that is not likely to occur by chance more than five times in a hundred samples. This is referred to as the 0.05 level of significance. The 0.01 level is interpreted as very significant and the 0.001 level as highly significant (Bernard, 1988). The more significant a relationship, the least likely it is to occur purely by chance.

The next section of this chapter and Table 5 present the definitions of the promotion indicators used.

Relation Between Individual and Household Characteristics and AGES Girls' Efficiency

For the second level of analysis, the AGES data set was examined to determine if there were statistical associations between the individual and household level variables collected via the instrument described previously and the efficiency indicators developed. This was done to test the explanatory power of girls' individual and household characteristics with regard to variations in scholarship recipients' school efficiency. In these analyses the efficiency measures were held as dependent variables—the ones we are attempting to explain—influenced or determined by the girls' characteristics, which were considered independent variables (Bernard, 1988; Vogt, 1993). Community of residence was also introduced as an independent variable in these statistical analyses. Table 4 in the next section presents definitions of the efficiency indicators developed for this analysis. Table 11 in the following chapter lists the individual and household characteristics included in the analysis.

The Kruskal Wallis statistical test was used to examine the relation between each of the categorical independent variables and the distribution of the first two efficiency measures (grades successfully completed while on scholarships and years with scholarships). Kruskal Wallis is the non-parametric equivalent of analysis of variance (ANOVA), which is the statistical technique utilized when comparing means for three or more groups or populations. Kruskal Wallis compares the distributions of three or more groups or populations (Conover, 1980). The median was used as a point estimate of the distribution of each indicator.

Kruskal Wallis was also applied to the analysis of the relation between the categorical independent variables and scholarship efficiency and comparative efficiency indicators. Since the distributions of these indicators are not necessarily normal, and it could not be assumed that their variances were equal, these observations were weighted with the inverse of their variance in the analytical models developed. This statistical procedure is an acceptable remedial measure applied when the data do not have equal variances; it does not require the true population parameters (Neter et al, 1990).

The relation between categorical and continuous independent variables and the efficiency group indicator (a binomial variable) was explored through logistic regression. This is a statistical method used to examine the relation between one or more independent variables and a dependent or response variable which is dichotomous and expressed as present or absent. Logistic regressions are called for in analyses that attempt to predict whether something will happen or not, such as promotion, participation in a group or any other condition that can be expressed as event/non-event. This kind of analysis can account for the different effects of several independent variables at once by applying a technique that "controls" for the effects of one when determining the effect of another (Vogt, 1993).

Since the grades the girls were in during 1992 or whenever they left the scholarship program and the number of years they received scholarships both were found to be associated with scholarship efficiency, comparative efficiency, and efficiency group indicators, they were always included as confounding variables in all other analyses. In all tests a P-value of less than or equal to 0.05 was considered statistically significant.

The findings and insights derived from the qualitative part of the study, summarized in the first part of this report, were used to interpret and discuss the results of the quantitative analyses performed on the two samples of school girls.

Definition of Promotion and Efficiency Indicators

As was written in the introductory chapter, grade promotion and school efficiency are two of the indicators used in this study to assess scholarship recipients' school performance. In this section we describe the manner in which efficiency and promotion indicators were conceived and constructed. Definitions of efficiency indicators are presented first because they were used to construct the 1991 promotion indicators for the AGES data set. However, in later chapters the order of presentation is reversed because promotion comparisons are the most global measures.

Efficiency

For girls participating in the AGES scholarship program efficiency can be considered in two ways:

- the number of grades successfully completed divided by the number of school years it took to complete them while the girl was not receiving a scholarship
- the number of grades successfully completed divided by the number of school years it took to complete them while the girl was a scholarship recipient

It appears useful and important to compare their efficiency scores when they were receiving a scholarship and when they were not. This comparison will allow us to determine whether participation in a scholarship program permits girls to become more efficient or, in other words, complete more grades in fewer school years.

It also seems worthwhile to compare the efficiency of girls in the scholarship program to the efficiency of girls in the reference population for the same school year. This comparison will give us an additional measure of the difference that a scholarship program can have on the efficiency of elementary school girls in Guatemala.

The first comparison relates girls to themselves at two points in time while the second relates scholarship girls to other girls of similar background attending similar schools but not receiving a scholarship, at the same point in time.

Based on this reasoning, the following indicators were developed from the variables "*grado que cursa actualmente*", "*grado que cursaba cuando recibió la primera beca*", "*grado que cursaba cuando se retiró del programa*", and "*año en que desertó o se retiró*", in the data set.

Table 4
Definition of Indicators to Assess Efficiency of AGES Sample

| Indicator | Definition |
|---|---|
| grades successfully completed while on scholarships | total number of grades successfully completed while receiving scholarships |
| years with scholarships* | total number of school years covered with scholarships |
| scholarship efficiency: grades completed/ years with scholarship | grades successfully completed while on scholarship divided by years with scholarship, expressed as a proportion of 1 |
| comparative efficiency: non-scholarship efficiency/ scholarship efficiency | girl's efficiency when not receiving scholarships divided by her scholarship efficiency, expressed as a proportion of 1 (in order to compare efficiency when not receiving a scholarship with efficiency while on a scholarship, a non-scholarship efficiency indicator was also estimated for each girl) |
| efficiency group | high efficiency group = all girls whose efficiency while in the scholarship program was higher than their efficiency when not receiving a scholarship low efficiency group = all girls whose efficiency while in the scholarship program was the same or lower than their efficiency when no receiving a scholarship |

* A girl who dropped out the same year she received her first scholarship was given a value of 1.

The first four measures are individual measures. The first two are necessary measures to construct the scholarship efficiency indicator. The scholarship efficiency indicator is then compared with the corresponding efficiency indicator while not participating in the

scholarship program for each girl, in order to obtain the indicator labeled comparative efficiency. This indicator gives us the comparative view of efficiency outside and inside the scholarship program discussed previously. By definition this comparison can only be performed for those girls in the AGES data set who had, at any time, attended school without a scholarship.

The manner in which the comparative efficiency indicator was constructed controls for the grade the girl was in when she started receiving a scholarship. This is necessary because efficiency in general is correlative with grade, that is, the student's grade influences her/his efficiency, independent of other factors such as scholarships. The lower grades in the elementary school system are less efficient than the higher grades. Stated differently, it usually takes a student longer to complete a lower grade than to complete a higher grade.

For any girl, a comparative efficiency value of less than one means that she was more efficient while in the scholarship program than when she was not receiving a scholarship (a larger denominator) while a value greater than one indicates she was more efficient when she did not hold a scholarship than when she did (larger numerator). A value of one means that her efficiency was identical when she had a scholarship and when she did not.

The last indicator, efficiency group, is an aggregate indicator, in contrast to the previous four. It arranges all girls considered in the comparative efficiency analysis into one of two categories based on their individual comparative efficiency scores. The high efficiency group, given a value of 1, is made up of girls whose efficiency while in the scholarship program was higher than their efficiency when not receiving a scholarship. The low efficiency group, given a value of 0, is made up of girls whose efficiency while in the scholarship program was the same (that is, participation in the program had no effect on their efficiency) or lower than their efficiency when not receiving a scholarship.

Promotion

Promotion rates for the AGES population for 1991 had to be obtained in an indirect manner since the data collected for that year do not specify whether the girls approved or failed the grade they were in. The data set does contain information on current grade for 1992 (but not 1991), number of grades completed with scholarships, number of school years with scholarships and number of times a grade has been failed.

From these data two different promotion indicators were constructed: the first assumes that every girl who had a scholarship efficiency value of 1 was promoted in 1991 and every girl who had a scholarship efficiency of less than one was not promoted in 1991. This indicator probably underestimates the actual promotion rate for 1991. The second assumes that girls who had been in the program for at least three years and only failed one grade, failed that grade in a previous year but were promoted in 1991. This indicator probably overestimates the actual promotion rate for that year. Therefore a third promotion indicator

was also estimated based on the average of the previous two. The following table presents these promotion indicators.

Table 5
Definition of Indicators to Measure Promotion in the AGES Sample

| Indicator | Definition |
|--|---|
| Grade-specific Promotion Rate 1 | <p>Percentage of girls enrolled in each grade who successfully completed that grade for grades first to sixth</p> <p>(assumes that all girls with scholarship efficiency equal to 1 were promoted in 1991 and all girls with scholarship efficiency less than 1 were not promoted)</p> |
| Grade-specific Promotion Rate 2 | <p>Percentage of girls enrolled in each grade who successfully completed that grade for grades first to sixth</p> <p>(assumes that all girls with scholarship efficiency equal to 1 were promoted in 1991 and all girls who had failed only one grade and had been in the scholarship program for at least three years were promoted in 1991)</p> |
| Grade-specific Average Promotion Rate | <p>The mean of Promotion Rate 1 and Promotion Rate 2 for grades first to sixth</p> |

The analysis on promotion rates only considers those girls in the AGES data set who were in the program in 1991 and in 1992 and for whom complete data were available.

RESULTS

This chapter presents the main results of the quantitative analyses. First, the comparative analysis of the AGES data set and the reference population is explained in terms of school retention, grade distributions for 1992 and grade-specific promotion rates for 1991. Then it describes the individual and family characteristics of the girls in the AGES data set. Thirdly, the findings on the school efficiency of these girls are presented, using the five indicators defined in the previous chapter. The last section discusses the associations found between the efficiency indicators and the scholarship population's family and community characteristics.

To interpret the results of this chapter it is useful to keep in mind two factors that distinguish the Guatemalan educational system at the elementary level. Children in the lower grades are most at risk of failing and repeating a grade than children in higher grades. This is especially true for girls (Nieves et al., 1992a). Promotion rates vary by grade and between male and female students. There is a self-selection process that increases the chances that a girl will remain in school with each grade she completes: the higher the grade the better the chances that a girl will successfully complete that grade and return to school the next year to attend the following one. Thus, girls in upper primary grades have an advantage over girls in lower grades, independent of other factors that may be affecting their school performance. The self-selection process responds to a number of different reasons, some of which were touched upon in the first part of the report. Others are described in existing assessments of girls education in Guatemala (Núñez et al., 1991; Nieves et al., 1992a).

The second point to consider is that an important proportion of children are over seven years old when they attend first grade for the first time. This over-age phenomenon is more common among girls than boys, and particularly among rural girls. The combination of over-age at first enrollment, high repetition rates and the self-selection process mentioned above that produces many drop-outs in the lower grades, results in fewer, older girls reaching fifth and sixth grades, and successfully completing elementary school.

Comparing the Performance of the AGES Program with that of the Reference Population

As mentioned before, performance was assessed as school retention measured in terms of grade distribution and grade-specific promotion rates for elementary school girls in the AGES program in comparison with girls in the reference population. The reference

population totaled approximately 6,000 girls in 1991.

The original intent was to compare the promotion rates between the AGES population and the reference population at two point in time, 1989 and 1991. However 1989 grade-specific data for the reference population were not available when the analyses were being performed. Further, the AGES data set has several limitations described previously. Given that promotion comparisons are valid only on a grade-by-grade basis, the comparative analysis is presented only for 1991.

School Retention

In order to assess school retention in the scholarship program the grade-by-grade distribution of girls in the AGES data set was compared with that of the reference population for 1992. The grade distributions were visibly different as Table 6 shows.

Notice that girls in the AGES program have a grade distribution that appears to resemble a bell-shaped curve with its highest point corresponding to fourth grade, whereas the grade distribution of girls in the reference population is a straight declining line with its lowest point at the highest grade. AGES shows higher percentages of girls enrolled in the upper grades than the reference population. This distribution corresponds exactly to that reported in previous analyses of rural school girls (Nieves et al., 1992a).

The reference population behaves in the expected manner, according to the characteristics of the school system described in the introductory section to this chapter: girls are at most risk of school failure in the lower grades and a self-selection process results in fewer girls in the upper grades.

To determine if these differences in grade-by-grade distribution between the AGES sample and the reference population are statistically significant an analysis for linear trend in proportions was performed (Schlesselman, 1982). This analysis compares the proportions of girls of both populations by grade and gives the odds ratio score. As explained previously, this analysis needs to be "anchored" on a reference or starting point since it examines the trends in each population.

Two different anchor points were chosen in this analysis, nursery/kinder and first grade, as the percentage of girls with preschool experience differs greatly between the AGES and the reference populations. The resulting odds ratios are presented in the next table.

Table 6
Grade Distribution of Girls in AGES Program and in Reference Population, 1992
Percentages and Frequencies

| Distribution by Grade | Population | |
|-----------------------|---|------------------------------------|
| | AGES Scholarship Recipients* (n=386) | Reference Population** (n=7321) |
| nursery/kinder | 6.0% 23 | 30.7% 2245 |
| first | 17.1% 66 | 21.6% 1583 |
| second | 17.6% 68 | 16.5% 1028 |
| third | 17.9% 69 | 11.5% 839 |
| fourth | 20.5% 78 | 9.0% 657 |
| fifth | 12.2% 47 | 6.2% 452 |
| sixth | 9.1% 35 | 4.6% 337 |

* Includes only girls who were in the AGES program in 1992.

** Girls in bilingual elementary schools in municipios where the AGES program operated in 1992: San Pedro Sac., Guate., Sumpango, Sac., San Idelfonso Ixtahuacán, Huehuetenango, Santa Bárbara, Huehue., Comitancillo, San Marcos, Cantel and San Carlos Sija, Quetzal., Patzún, Chimal.

Independent of which reference point one chooses, nursery/kinder or first grade, given the grade distributions shown in Table 6, the chances that a girl who is in any one grade will continue on to the next are always greater for the AGES population. The odds are greatest in favor of the AGES girls when the reference point is preschool. Scholarship girls in first grade have a four-fold greater chance than girls in the reference population of continuing in the fifth grade. The odds that a girl in fourth grade will enter fifth are almost 12 times greater for an AGES scholarship recipient than for a girl in the reference population.

Table 7
Odds Ratio of Girls in AGES Program compared to Reference Population
Based on Grade Distribution Using Two Different Reference Points

| Grade | Odds Ratio Related to Nursery/Kinder | Odds Ratio Related to First Grade |
|----------------|--------------------------------------|-----------------------------------|
| Nursery/Kinder | 1.00 | |
| First | 4.07 | 1.00 |
| Second | 5.49 | 1.35 |
| Third | 8.03 | 1.97 |
| Fourth | 11.59 | 2.85 |
| Fifth | 10.15 | 2.49 |
| Sixth | 10.14 | 2.49 |

$P < 0.0000$ for trends

Although the odds are not as spectacular when the reference point is first grade, they are still significant and favor the scholarship recipients. For example, the odds that a girl in fourth, fifth or sixth grades will enter the next grade are almost three times greater for scholarship recipients than for the reference group of girls. Thus, the differences in grade distribution between the two populations clearly determine two different trends in the chances of staying in school and promoting to a higher grade.

Promotion Rates

The 1991 grade-by-grade promotion rates for the AGES data set were compared to those of the reference population using the z statistical test. As described previously, three different ways of defining the AGES promotion indicator were developed (see Table 5). All are presented below, yet only the values obtained for the average promotion rate are compared to those of the reference population. Table 8 presents the results of the comparative analysis.

The great difference between the absolute numbers of AGES girls promoted in 1991 and those enrolled in 1992 is due to the fact that the scholarship program was terminated in four communities in 1991; consequently, the total number of scholarship girls reduced considerably.

Comparison of grade-specific promotion rates show similar trends to those found in the odds ratio analysis. They are, however, less consistent. Promotion rates are higher for

AGES girls in fourth, fifth and sixth grades, which compares favorably to the greater odds these girls have of being promoted. At the lower grades, however, the reference population has higher promotion rates for the comparison year, which is inconsistent with the data suggesting that the odds of promotion are greater. It must be pointed out that none of these differences are significant.

These findings must be interpreted with caution for three different reasons. First, they only consider one year. A time-series analysis comparing promotion rates for 1989 through 1991 would have been more appropriate. Second, the manner of constructing the promotion indicator for the AGES sample is less than ideal. Although an average promotion rate was defined to compensate for the overestimation and underestimation of the other two measures obtained, it is the most indirect measure of grade-specific promotion rates for the AGES program. Third, the results of the analysis for linear trend in proportions presented above very strongly demonstrate the positive effects of the scholarship program on girls' school retention. If the chances are greater for AGES girls to stay in school and be promoted to a higher grade then their promotion rates should also be higher.

Table 8
Grade-Specific Promotion Rates for AGES Scholarship Recipients
and Reference Population for 1991
 (Percentages)

| Grade | AGES | | | | Reference Population | | Difference Percentage Points** | P Value |
|--------|------|-----------------|--------|--------------|----------------------|----------------|--------------------------------|---------|
| | n* | promotion rates | | | n* | promotion rate | | |
| | | rate 1 | rate 2 | average rate | | | | |
| first | 84 | 57.1 | 57.1 | 57.1 | 3130 | 59.8 | -2.7 | 0.6230 |
| second | 128 | 50.0 | 73.4 | 61.7 | 2132 | 69.9 | -8.2 | 0.0512 |
| third | 136 | 57.4 | 84.6 | 71.0 | 1449 | 73.7 | -2.7 | 0.5472 |
| fourth | 117 | 67.5 | 93.2 | 80.4 | 971 | 77.4 | 3.0 | 0.4767 |
| fifth | 92 | 81.5 | 94.6 | 88.5 | 594 | 80.0 | 8.5 | 0.0393 |
| sixth | 80 | 83.8 | 98.8 | 91.3 | 420 | 90.0 | 1.3 | 0.7303 |

*n's reflect enrollment figures; for AGES they only include girls in the program in 1991

**AGES average promotion rate - reference population promotion rate

Description of AGES Scholarship Recipients

Information is available for 13 villages where the AGES program was operating in 1991. The program began in 1987 with elementary schools in three villages in the departments of Guatemala and Huehuetenango. In 1988 it added five more villages in Huehuetenango, San Marcos, Quetzaltenango, Chimaltenango and Alta Verapaz. Finally, in 1989 it expanded to include five additional villages in several departments. All 13 communities participated in the program for a full three years. In late 1991 the program was terminated in four communities, two in Huehuetenango and two in Alta Verapaz. The main reason for the program's cut-backs was reductions from the funding agency.

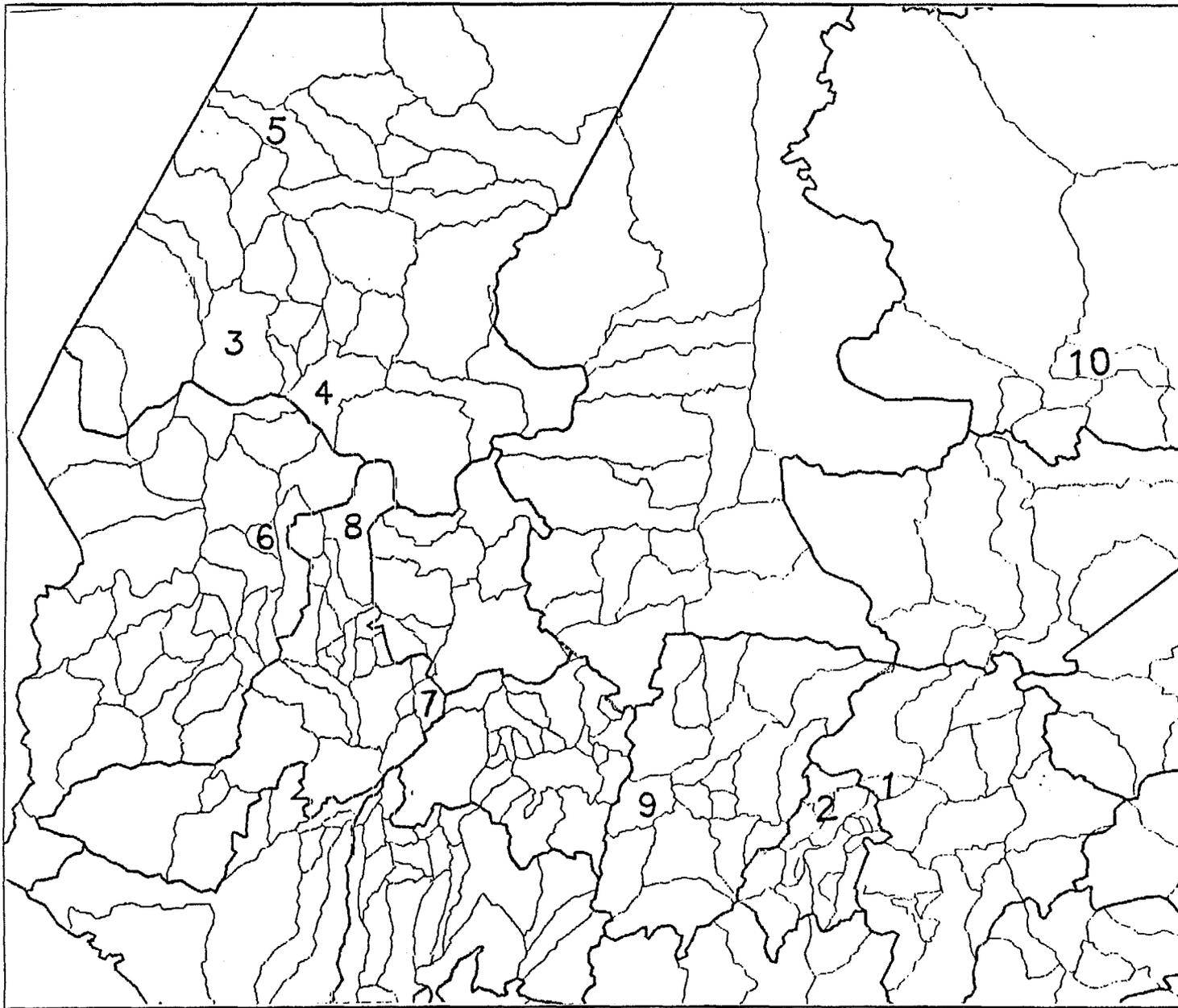
Table 1 in the first part of this report summarizes the program's history of expansion and retraction. Figure 1 shows the location of the *municipios* and departments in which the AGES communities are found. All communities are very small agricultural villages, predominately Mayan. Non-traditional export cropping and *maquila* industries are significant sources of income and employment in villages in Guatemala and Chimaltenango.

The three communities in which the program started have remained in the program to the present date. Nineteen ninety-two was the sixth year that girls in those communities were receiving scholarships to attend elementary or secondary school. In contrast, two communities which were late joiners and early leavers only participated for a total of three years. Not surprisingly, the greatest proportion of project beneficiaries (> 10 percent of the total number of beneficiaries in 1992) came from two of the oldest communities—Buena Vista and Acal.

Most of the girls in the AGES program come from Catholic families (77.8 percent). In the great majority of households the father is the recognized head (78.2 percent) and 83.3 percent of parents are either married or cohabitating. Widows constitute close to 14 percent of the mothers. Fathers' educational attainment is very low (59.1 percent had no education and 29.5 percent only had one to three years of elementary education), but mothers' educational attainment is extremely low (82.7 percent and 13.3 percent with no education and one to three years of education respectively).

Girls range in age from six to 20, with very few outliers being as old as 25. The scholarship recipients were divided into 3 age groups, 6 to 11, 12 to 18, and 19 to 25, corresponding to the appropriate ages for elementary, secondary, and post-secondary education respectively. Girls 12 to 18 make up the largest group, approximately 54 percent of the sample. These age groups were used in all subsequent analyses. Table 9 presents these data.

Figure 1
Municipios and Departments where AGES Program Operated in 1991



| <i>MUNICIPIOS</i> | <i>DEPARTMENTS</i> |
|----------------------------|--------------------|
| 1 San Pedro Sacatepéquez | Guatemala |
| 2 Sumpango | Sacatepéquez |
| 3 San Idelfonso Ixtahuacán | Huehuetenango |
| 4 Santa Bárbara | Huehuetenango |
| 5 Jacaltenango | Huehuetenango |
| 6 Comitancillo | San Marcos |
| 7 Cantel | Quetzaltenango |
| 8 San Carlos Sija | Quetzaltenango |
| 9 Patzún | Chimaltenango |
| 10 San Juan Chamelco | Alta Verapaz |

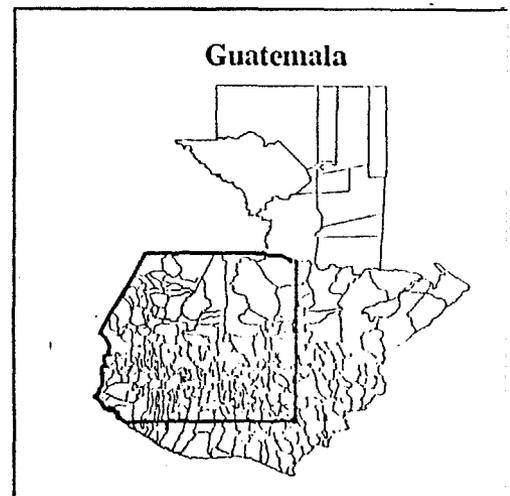
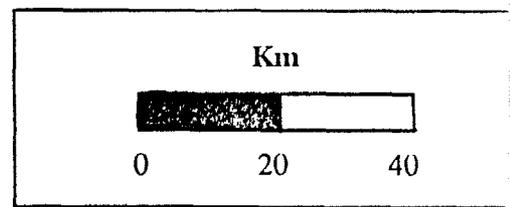


Table 9
Frequency Distributions for Main Variables in Data Set, 1992
(n=950)

| Variable | Values/Categories | Percentages |
|--|-------------------------------|-------------|
| religion | Catholic | 77.8 |
| | Protestant | 17.6 |
| | other (including no religion) | 4.6 |
| father's education | no education | 59.1 |
| | 1st to 3rd grade | 29.5 |
| | 4th to 6th grade | 11.5 |
| | and secondary | |
| mother's education | no education | 82.7 |
| | 1st to 3rd | 13.3 |
| | 4th to 6th | 3.9 |
| | | |
| age of scholarship recipients | 6 to 11 | 39.2 |
| | 12 to 18 | 53.9 |
| | 19 to 25 | 6.9 |
| birth order of scholarship recipient | 1 to 3 | 62.2 |
| | 4 to 6 | 28.7 |
| | >6 | 9.1 |
| number of living children in family | 1 to 4 | 33.5 |
| | 5 to 7 | 49.3 |
| | >7 | 17.2 |
| number of living children > 7 years old | 1 to 4 | 62.0 |
| | 5 to 7 | 29.4 |
| | >7 | 8.6 |
| number of living children > 7 ever attended school | 1 to 4 | 71.1 |
| | 5 to 7 | 20.3 |
| | >7 | 8.6 |
| educational level of scholarship recipients | primary | 86.2 |
| | secondary | 13.8 |

Scholarship recipients tend to be among the older children in any household. Twenty-seven percent of the sample are the oldest child, the modal frequency in the distribution. Girls

with birth order one to three make up 62 percent of the sample. Half the sample (49.3 percent) come from families with 5 to 7 living children whereas another third (33.5 percent) come from smaller families (one to four living children). These and other descriptive findings are also summarized in Table 9.

Figure 2 presents the grade distribution of girls when they first started participating in the scholarship program. Most girls received scholarships to begin elementary school (nursery/kinder or *preprimaria/párvulos* and first grade). In important proportions of cases, girls were also given scholarships for the first time to attend second and third grades.

When one compares the distribution of girls by grade at first scholarship with the grade distribution of scholarship recipients in 1992 (Table 6) the differences are very apparent. The AGES scholarship program awarded first scholarships to girls in higher numbers in the lower grades. The curve of the grade distribution at first scholarship is very similar to the curve of the grade distribution of girls in the elementary school system in Guatemala and of the reference population. Yet the grade distribution of scholarship girls in 1992, which includes both new girls and girls with more than one year of scholarship, has changed perceptively. This is another way of showing that participation in the scholarship program clearly affects their trajectory through elementary school.

Of the girls in the sample, 493 were receiving scholarships in 1992, 86.2 percent to attend elementary school and 13.8 percent to attend secondary school. The remaining girls had received scholarships during 1991 but had dropped out, lost their scholarships, or were forced to withdraw because the program ended in their communities. The latter was the case among 43.5 percent of the girls in this subsample; the other important reasons for program drop-out, in order of descending frequency, were lack of interest on the part of the recipient (15.2 percent), grade repetition (9.6 percent), lack of schools beyond the elementary level (6 percent), lack of parental support for girls' schooling (5.6 percent), and seasonal labor migration (4.2 percent). Grade repetition is a reason for dropping out of the program when the girl or her parents refuse to repeat a grade. These findings are summarized in Figure 3.

As the first part of the report describes, program beneficiaries receive a monthly cash stipend. This money is or was given to the girls' mothers in most cases (64.4 percent), and to the fathers and other family members with less frequency (30.1 percent and 3.9 percent, respectively). This finding coincides with the perception of selection committee members and program promoters summarized earlier.

Figure 2
Grade Distribution of Scholarship Recipients
Upon Entering AGES Program
(1987-1992)
Percentages (N=950)

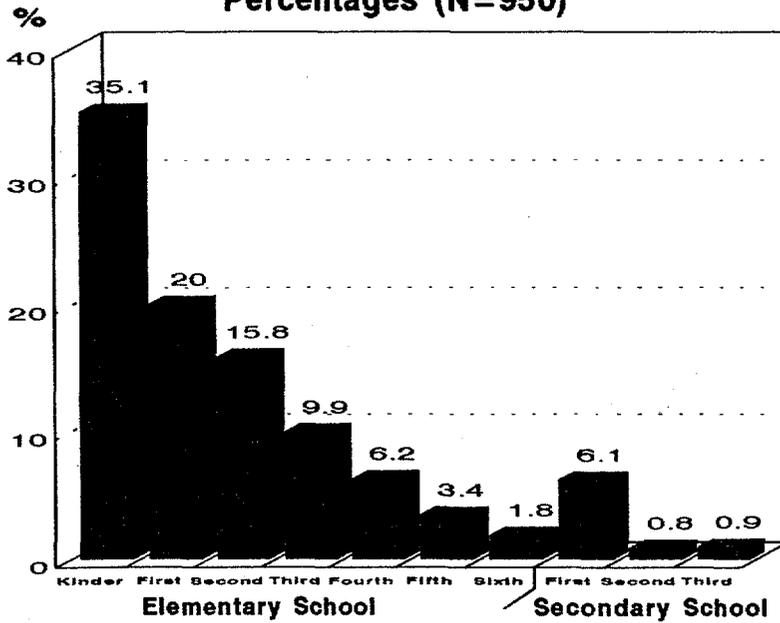
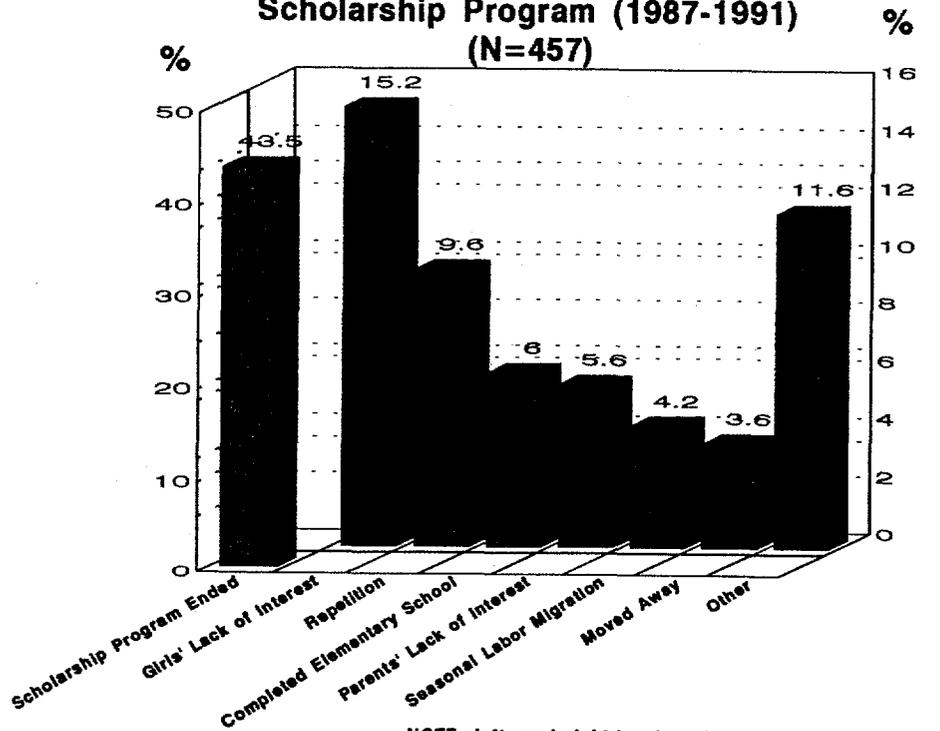


Figure 3
Reasons for Leaving the AGES
Scholarship Program (1987-1991)
(N=457)



NOTE: left- and right-hand scales are not comparable.

Efficiency of AGES Scholarship Recipients

The AGES scholarship program has kept a global yearly record of how many girls are awarded scholarships, how many of these are promoted or retained in the same grade, and how many drop out of school and the program. Table 2 in the first part of the report presented program statistics to 1991. Table 10 presents the updated figures to 1992.

Table 10
AGES Program Yearly Statistics: Promotion, Repetition and Drop-Out Rates
Elementary School

| | 1989 | | 1990 | | 1991 | | 1992 | |
|------------------------|------|------|------|------|------|------|------|------|
| | n | % | n | % | n | % | n | % |
| scholarship recipients | 559 | | 628 | | 622 | | 396 | |
| promoted | 437 | 78.2 | 495 | 78.8 | 482 | 77.5 | 336 | 84.8 |
| not promoted | 92 | 16.5 | 109 | 17.4 | 114 | 18.3 | 50 | 12.6 |
| drop-outs | 30 | 5.4 | 24 | 3.8 | 26 | 4.2 | 10 | 2.5 |

Source: AGES Program Annual Reports

The table shows that promotion and repetition rates were maintained fairly constant between 1989 and 1991 but in 1992, when the scholarship program was reduced in geographical scope and coverage, the promotion rates improved and the repetition and drop-out rates decreased. Yet, although these comparisons are interesting if one is concerned with the evolution of the AGES scholarship program, they don't say much about its effectiveness or efficiency. In order to assess these matters one must consider the efficiency indicators defined in the previous chapter (see Table 4).

Analyses on AGES girls' school efficiency were performed on a sub-sample of 718 cases that had complete information. For the assessment of comparative efficiency the sub-sample used included 465 girls who had been in school without a scholarship at some point in time.

Table 11 presents the summary values for grades successfully completed while on scholarships, school years with scholarships, scholarship efficiency and comparative efficiency. Means or averages, standard deviations and median values are presented.

Scholarship recipients earned an average of 2.14 grades in an average of 2.52 years of scholarship. Their average scholarship efficiency was .87, meaning that for every year-long scholarship received AGES girls were able to successfully complete almost a full grade. Stated

differently and extrapolating from the efficiency values obtained, girls in the AGES program could complete the six grades of elementary school, without counting preschool, in 6.90 years of schooling. Grade repetition is accountable for this finding. As the first part of the report shows, grade repetition among scholarship recipients is acceptable as long as no grade is repeated twice.

The overall efficiency of the Guatemalan elementary school system is poor. Estimates performed for the years 1980-1989 and projections for the years 1990-2000 show that a student will earn six grades and graduate from elementary school in 7.54-8.54 years of schooling (Newman, 1989). The extrapolated scholarship efficiency for girls in the AGES program compares very favorably with the efficiency values of the elementary school system.

The median value for the scholarship efficiency measure is one because the value of the observation that divides the frequency distribution in half is one, and not because there were girls with scholarship efficiency values greater than one.

The mean comparative efficiency of the sub-sample of AGES girls considered is .86; this value reflects the fact that, on average, girls are more efficient when participating in the scholarship program than when they are not receiving a scholarship. It should be kept in mind that a comparative efficiency value of less than one means that a girl was more efficient while she participated in the scholarship program than when she was not receiving a scholarship.

The construction of this indicator controls for grade at first scholarship since efficiency lower grades are less efficient. Even with this control AGES girls obtain high scholarship efficiency scores although the great majority of them received their first scholarships in preschool, first and second grades as Figure 2 illustrates.

Table 11
Summary Values for Efficiency Indicators of AGES Scholarship Recipients
(n=718)

| Indicator | Mean | Standard Deviation | Median |
|-------------------------------|------|--------------------|--------|
| grades successfully completed | 2.14 | 1.10 | 2.0 |
| years with scholarships | 2.52 | 1.17 | 2.0 |
| scholarship efficiency | 0.87 | 0.20 | 1.0 |
| comparative efficiency* | 0.86 | 0.40 | 0.75 |

* n = 465

For the remaining efficiency indicator, efficiency group, 22.8 percent of the sample (106 girls) fell in the low efficiency group and 77.2 percent (359) in the high efficiency group, meaning that the great majority of girls (more than three quarters) in this sub-sample of the AGES population were more efficient when they were receiving a scholarship than when they were not. The confidence interval for this measure is 73.06-80.98 percent, which tells us that the percentage of scholarship girls falling in the high efficiency group in the whole population of scholarship recipients (not just the sample considered) falls somewhere within this range.

Relationship Between Girls' Efficiency and Individual, Family and Community Characteristics

All the individual and family variables described in Table 9 were considered as independent factors in the analysis of each efficiency indicator in order to explain differences in efficiency among girls in the AGES scholarship program. The girls' communities of residence were also treated as independent variables and included in the analysis.

Table 12 presents the results of these analyses. As described in the previous chapter, the Kruskal Wallis statistical test was applied to the first four efficiency indicators: grades successfully completed with scholarships, number of school years with scholarships, scholarship efficiency and comparative efficiency. The relation between individual, family, and community characteristics and the group efficiency indicator was explored via logistic regressions. The table shows sample sizes for each analysis and the P- values only for those independent variables that were found to be significantly associated with one or more of the efficiency indicators.

Five independent variables were found to be associated with one or more efficiency indicators: grade at first scholarship, age group of scholarship recipient, community of residence, educational level of scholarship recipient (elementary or secondary), and religion.

The following individual and family characteristics did not show any significant association with the efficiency indicators ($P > 0.05$): scholarship recipient's birth order, number of living children in the family, number of living children over seven years old, number of living children over seven who ever attended school, father's education, mother's education, which family member regularly receives the monthly stipend, and gender of the household head. In other words, these family background characteristics are probably not influencing girls' scholarship efficiency or comparative efficiency nor their participation in an efficiency group.

Table 12
Relationships between Individual, Family and Community Variables
and Efficiency Indicators

| INDEPENDENT VARIABLES | EFFICIENCY INDICATORS | | | | | | | | | |
|--|-------------------------------------|-----|---------------------------|-----|---------------------------|-----|---------------------------|-----|---------------------|-----|
| | Grades Successfully Completed | | Years with Scholarship | | Scholarship Efficiency | | Comparative Efficiency | | Efficiency Group | |
| | P value | n | P value | n | P value | n | P value | n | P value | n |
| Grade at First Scholarship | 0.000 | 718 | 0.000 | 718 | 0.0001 | 718 | 0.0001 | 465 | 0.0093 | 465 |
| Age Group of Scholarship Recipient | 0.000 | 718 | 0.000 | 718 | 0.0272 | 697 | 0.0052 | 456 | | |
| Community | 0.000 | 718 | 0.000 | 718 | 0.0001 | 718 | | | | |
| Educational Level of Scholarship Recipients (1992) | | | 0.042 | 493 | | | | | 0.0003 | 283 |
| Religion | 0.030 | 718 | | | | | | | | |

Comparative Efficiency

Comparative efficiency is the most global indicator, as it tells us how the same girls perform in school when they have scholarships and when they do not. The comparative efficiency of the AGES girls is related in a highly significant way to two of their individual characteristics: the grade they were in when they first obtained an AGES scholarship and their age group. Comparative efficiency is not related to other factors such family background (their parent's religion or education, their birth order or number of siblings, whether their school-age siblings have attended school, or gender of household head) and community of residence.

It is important to keep in mind that the lower the comparative efficiency score the greater the scholarship efficiency compared to the non-scholarship efficiency (larger denominator). Girls who have comparative efficiency scores that approximate one are those whose efficiency while on scholarships was almost identical to their efficiency when not receiving a scholarship. See the section on definition of efficiency indicators in the previous chapter.

Girls who were the most efficient when they held a scholarship compared to when they did not were those who attended first grade when they first received an AGES scholarship. Their comparative efficiency was .772, meaning that for every grade they successfully completed in one school year when they were on scholarships they only completed three quarter of one grade in one school year when they did not hold a scholarship. These girls had started school by attending nursery or kinder (*pre-primaria/párvulos*).

Girls who were in the second grade when they first received a scholarship also have very high comparative efficiency scores (.867), although lower than that of girls who were first awarded a scholarship to attend first grade. The comparative efficiency of girls decreases with each successive grade at first scholarship, meaning that the higher the grade at first scholarship the more similar scholarship efficiency becomes to non-scholarship efficiency. However, scholarship efficiency is always greater than non-scholarship efficiency whether a girl receives a scholarship for the first time while in first through fifth grades.

The comparative efficiency scores is greater than one among those girls who first received a scholarship when they were in sixth grade or in secondary school (1.07). This means that girls who first entered the scholarship program when they were completing elementary school or entering secondary school were more efficient while **not** covered by a scholarship. Differences in comparative efficiency by grade at first scholarship are highly significant at the .0001 level. Figure 4 presents these results.

The comparative efficiency of girls in the AGES program was also better among the younger girls than among the older ones. Three age groups were considered: six to 11, 12 to 18 and 19 and over. The findings show that efficiency of girls six to 11 was the highest while on a scholarship; their comparative efficiency score was .767. As scholarship girls become older their scholarship efficiency approximates and, eventually, equals their non-scholarship efficiency. Among girls 12 to 18 mean comparative efficiency was .887 and in the oldest group it was 1.002.

The younger the first-time scholarship recipient the better her efficiency performance will be while on scholarship compared to her non-scholarship efficiency. Older first-time scholarship recipients will be no more successful than when they did not hold a scholarship. Young women over 18 will receive no benefit from first scholarships. The differences in comparative efficiency by age group are significant at the .005 level; they are very significant.

Thus, girls who are the youngest and who receive their first scholarship in the lower grades (preschool, first and second) are the ones who will perform the best while on a scholarship, in terms of the number of grades they can successfully complete in a given period of time compared to their performance prior to receiving a scholarship. Older girls who first enter the scholarship program in the upper grades will perform no better than they did before.

Scholarship Efficiency

Because the scholarship efficiency indicator (grades successfully completed while on scholarships/years with scholarship) was used to define and construct the comparative efficiency indicator (see Table 4 in the previous chapter), it was also significantly associated with grade at first scholarship and with age group. It was also significantly associated with the girls' community of residence, independent of grade at first scholarship and age group.

Scholarship efficiency was not found to be related to any of the other individual and household characteristics considered in the analysis. That is, AGES girls' scholarship efficiency was not influenced by their parents' education or religion, their birth order, number of siblings, number of siblings of school age, number of siblings of school age who had attended school or gender of household head.

Scholarship efficiency was highest among girls who first received a scholarship when they were in the fourth (.930) and fifth (.950) grades than when they were in any other grades. On average, girls who received a scholarship for the first time while in fourth grade were able to successfully complete .930 of any grade in one school year while they participated in the scholarship program; first-ever scholarship recipients in fifth grades were able to complete, on average, .950 of any grade in one school year while they were covered by a scholarship. Both scores are very near one, indicating that all first-ever scholarship girls in fourth and fifth grades were able to earn almost one full grade per every school year that they received a scholarship, which is the standard.

Girls who were in second, third, sixth or in any secondary-school grade when they first received a scholarship had scholarship efficiency scores of between .895 and .921, not as high as those girls who first received scholarships while in fourth and fifth grades, but still high. The least scholarship-efficient girls were those who first received a scholarship when they were in preschool (.847) or in first grade (.821). Considering these are the most at-risk grades for student drop-out and repetition, these values are still quite high, although the scholarship money and other interventions of the AGES package apparently did not totally neutralize the difficulties of being a new student in an unfamiliar school system.

These differences are highly significant at the .0001 level. The difference in scholarship efficiency between the least efficient first graders at first scholarship and the most efficient fifth graders at first scholarship is .129 grades per school year, which is equivalent, in real terms, to a little more than one month of school. Figure 5 presents these results.

The above findings may appear a bit confusing at first, given the previous report on the relation between comparative efficiency and grade at first scholarship. They are not contradictory. What these two findings together show is that the school efficiency of girls improves the most when they receive their first scholarship in the lower grades although they may not be as efficient when holding a scholarship as are girls who receive their first

scholarships when they are in fourth and fifth grades. These findings show that grades in the upper grades who have achieved high school efficiency without scholarships will probably not improve their performance if they are awarded scholarships to complete elementary school.

Scholarship efficiency is also statistically related to the age group of the scholarship recipient. Girls in the youngest age group (six to 11) were significantly less scholarship-efficient than their older counterparts. These girls had a mean efficiency value of .845, while girls 12 to 18 had a mean efficiency value of .880 and the older group of .895. The older the girl, the more efficient her school performance while on a scholarship.

Yet, as stated above, older girls will probably have similar efficiencies when they are not covered by scholarships. As was seen in the previous section, their comparative efficiency is close to one, meaning that entering the scholarship program does not improve their school efficiency at all, probably because they have achieved high school efficiency already. When compared to their younger counterparts their scholarship efficiency is highest, but when compared to their younger counterparts when they hold and do not hold scholarships, they show the least effects.

Finally, scholarship efficiency was found to vary by village or community of residence. The girls in the AGES data set for 1991 came from 13 different villages in seven different departments (Table 1 in the first part of the report). The community with the highest average scholarship efficiency score (.959) is Chamisún in Alta Verapaz, while the one with the lowest (.757) is San José el Yalú in the department of Sacatepéquez. The difference between the two is equivalent to .200 grades per school year with a scholarship. The remaining 11 communities fall in a middle group, with scholarship efficiency values between .809 and .912. These differences are highly significant at the .0001 level. These differences are independent of the differences by age group and grade at first scholarship reported above. Figure 6 presents these findings in graphical form.

Figure 4
Comparative Efficiency
 by Grade at First Scholarship

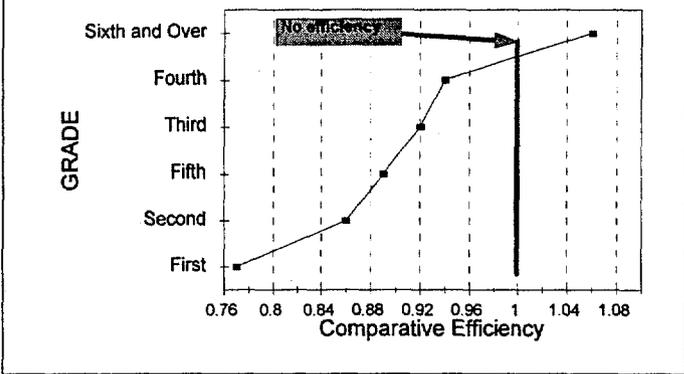


Figure 5
Scholarship Efficiency
 by Grade at First Scholarship

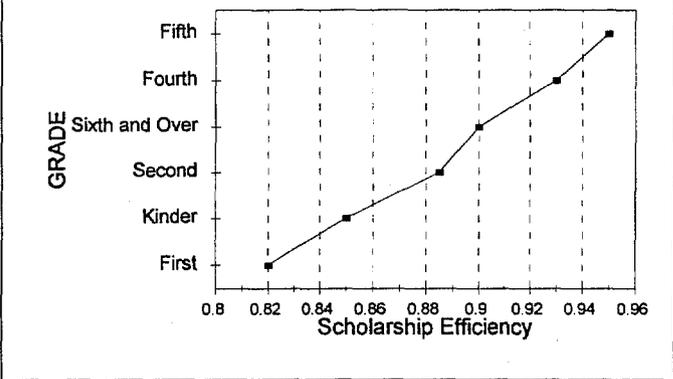
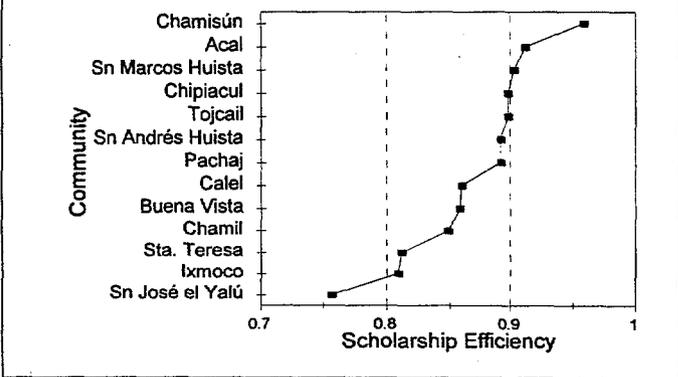


Figure 6
Scholarship Efficiency
 by Community of Residence



Efficiency Group

The last outcome measure, efficiency group, divides the girls into two categories, a high efficiency group and a low efficiency group. In the high efficiency group fall all those girls in the sample whose efficiency while in the scholarship program was greater than their efficiency when they were not receiving a scholarship. The girls in the low efficiency group are those who were more efficient when not receiving a scholarship than when they were. As reported earlier, 77.2 percent of the subsample considered in this analysis form part of the high efficiency group and 22.8 percent constitute the low efficiency group.

This measure was significantly associated with grade at first scholarship and with the educational level of scholarship recipients (elementary or secondary). Both grade at first scholarship and whether a girl was attending elementary or secondary school play important roles in determining which efficiency group she will belong to. As with other efficiency indicators discussed previously, girls' family background characteristics were not found to influence their membership in an efficiency group.

Girls who were in fifth grade when they received their first scholarship show the greatest participation in the high efficiency group (85 percent), followed by girls who were in sixth grade or secondary school (81 percent), fourth grade ((80 percent), second and third grades (78 percent and 77 percent respectively). Girls who were in first grade when they first participated in the AGES program present the lowest rate of participation in the high efficiency group (73 percent) although it is still very high since almost three out of four first-graders belong to the high efficiency group. The differences among fifth graders, on the upper end of the scale, those in the middle group of grades (second, third, fourth, sixth and secondary school) and first graders on the lower end of the scale are significant at the 0.01 level.

However, it is important to note that older girls in the higher grades have an advantage over the younger girls in lower grades because they received scholarships for the first time when they were already at a high-efficiency grade level, since students in the upper grades are more efficient than students in the lower grades, regardless of other factors. It is also worth noting that all grade-at-first-scholarship categories have a majority of girls participating in the high efficiency group, and the overall mean, 77.2 percent, is also very high.

The educational level of scholarship recipients (elementary or secondary) is a determinant of the proportion of girls who qualify for the high efficiency group. Girls who were in secondary school in 1991 or 1992 have an 81.4 percent rate of participation in the high efficiency group compared to girls who were in elementary school, who have a participation rate of 73.8 percent. The difference is highly significant ($P < 0.001$).

Discussion

Family background factors were found not to influence the three efficiency indicators considered. Although other studies have shown that parental education is associated with girls' access to education and educational attainment (Nieves, et al., 1992), neither father's nor mother's education were found to be significantly associated with scholarship recipients' efficiency within the program. It is possible that because the scholarship intervention purposely selected the girls from poorer, needier families, which were also the ones with lower parental education, the relation between the latter and girls schooling was obscured.

Contrary to the expectations created by the qualitative findings of the first phase, the quantitative analysis shows that efficiency was not related to girls' birth order, nor to family size or the number of school age children in the household. For reasons that are not clear, close to two-thirds of the girls in the AGES Program were either first-borns or among the three oldest children in the household, so the possible effects of birth order and family size were not significantly different due to the differences in sample sizes among age categories.

The AGES data set did not permit an analysis of the relation between having an older sister who attends or attended school and age at first enrollment in school or in the scholarship program, a relation which was hypothesized based on the results of the qualitative data collected in the first phase of the background study. The association between number of children over seven in the household who had ever attended school and the efficiency of scholarship recipients was the closest to the hypothesized relation which was possible to explore. However, no association was found between these variables. Nonetheless, it should be noted that this lack of association neither proves nor disproves the association between a girl's age at first enrollment and her family's history of girls' school attendance.

There are significant differences among communities with respect to scholarship efficiency. The most efficient communities are in Alta Verapaz and Huehuetenango. These departments appear in the list of the five departments with the worst problems of girls' school enrollment and retention in the country, according to 1991 data (Nieves et al., 1992a). Both are among the most isolated departments. By comparison, San José el Yalú in Sumpango, Sacatepéquez, the community which was found to be the least scholarship efficient, is considerably less isolated: it is located near Guatemala City and close to the Pan American Highway (see Figure 1).

The first part of this report documents that there was considerable degree of variation among communities in the way the program was started, and the manner the selection committees and program promoters operated to choose and supervise scholarship recipients, and to solve problems. Moreover, the qualitative information provided by former scholarship program officers (de Monterroso and de Monterroso, 1992; de Monterroso, 1993) reported in the first part of the report points to some important community differences that were not program related. These community-level variables as well as the manner in which the program

was initiated and managed in each community are contributing explanations to the relative success of the scholarship program in communities like Chamisún and Acal and the low scholarship efficiency of communities like San José el Yalú, Sacatepéquez.

As summarized in the first part of the report, teacher support was hard to obtain in Sacatepéquez and Chimaltenango; yet it was not only easily obtained but very successfully so in the communities in Alta Verapaz, including Chamisún. Both Chamisún and San José el Yalú entered the scholarship program in 1989 so length of participation cannot be responsible for differences in scholarship efficiency between these communities. However, San José el Yalú was one of two communities where the program entered before community support was completely obtained. Finally, internal cohesion is characteristic of the traditional communities in Alta Verapaz such as Chamisún, but not of other communities participating in the AGES scholarship program, especially those in Huehuetenango (with the exception of Acal), Chimaltenango and Sacatepéquez.

The first part of the report hypothesizes that class size, availability of educational materials in the classroom and teachers' bilingual abilities may have influenced scholarship girls' school performance. Unfortunately, the AGES data set does not contain information on these variables to test quantitatively. In the first part of the report we present departmental means for two measures of class size available for 1991 (see Table 3 in the first phase.) Mean number of students per classroom in public rural schools in the departments of Alta Verapaz and Huehuetenango were 29.5 and 31.3 respectively, while the comparative figure for Sacatepéquez was 36.9 (see Table 3 in the first phase). The number of students per teacher also differs among these three departments. Alta Verapaz and Huehuetenango exhibited smaller student-teacher ratios in public rural schools, 32.0 and 33.1 respectively; in contrast, the corresponding ratio for Sacatepéquez was 36.2 (*Ministerio de Educación, 1992*).

It was not possible to obtain data on the comparative availability of educational materials in the classroom in the schools of Chamisún, Acal and San José el Yalú for 1991. Likewise, no reliable data were available on the actual language of instruction in these schools in that year, although all schools are reported as bilingual in the Ministry's records.

CONCLUSIONS AND RECOMMENDATIONS

This chapter presents conclusions and recommendations for program planners based on the joint results of the first phase of the background study, lessons learned from a pilot program, and the second phase, assessing the efficiency and comparing the performance of girls in a pilot scholarship program with that of other school girls.

School Retention

Conclusion:

Scholarships promote school retention among girls. Receiving a scholarship significantly improves the chances that a girl will stay in school and be promoted to the next grade. These chances are greatly increased when a girl is awarded a scholarship to attend preschool (nursery/kinder or *pre-primaria and párvulos*). Further, the higher the grade the better the chances of staying in school.

Recommendation:

- Consider scholarship programs of the kind described in this background study as effective interventions to improve girls' school retention in elementary school.
- Girls should be given scholarships to attend preschool, first and second grades, as this greatly increases their chances of staying in school.
- Special efforts should be made to award scholarships to girls to enable them to attend preschool as this is a very effective measure to promote school retention.

Scholarship Efficiency

Conclusion:

Girls who receive scholarships obtain high efficiency scores in school. They complete almost a full grade (.87) in one school year, which suggests they could complete six grades of elementary school in a little under seven years of school. Their school efficiency while on scholarships compares favorably to the efficiency of the elementary school system in Guatemala where it usually takes a student between 7.54 and 11.65 years of schooling to graduate from sixth grade (Newman, 1989).

Scholarships reduce but do not totally overcome the high risks of failure and repetition associated with the lower grades of elementary school. Girls in the lower grades—preschool, first and second—have high scholarship efficiency scores although efficiency is typically low in these grades. Giving scholarships to girls in the lower grades helps them overcome the risk of repeating or dropping out in these most difficult grades.

Older girls in higher grades show better scholarship efficiency than younger girls in lower grades but those girls will be more school efficient (successfully complete more grades in a given period of time) than younger girls in lower grades even if they do not have scholarships.

Recommendation:

- Award scholarships to girls to attend elementary school as a means of improving their school efficiency.
- Give preference to girls who are entering preschool or first grade or are attending second grade.
- Consider continuing to support scholarship recipients as they enter the upper grades of elementary school but do not award first scholarships to girls who have succeeded in reaching the upper grades without scholarships.

Comparative Efficiency

Conclusion:

Scholarships improve girls' efficiency in school. Participation in the scholarship program described in this study helps girls earn grades more efficiently. Girls become more efficient when they receive scholarships in comparison to when they do not.

Grade at first scholarship: Girls who receive scholarships for the first time to attend the early grades of elementary school show the greatest improvement in school performance compared to when they did not hold scholarships. The lower the grade the greater the improvement in their efficiency. Girls in higher grades are more efficient whether they hold a scholarship or not so giving them a scholarship for the first time to attend fifth or sixth grades or to attend secondary school does not appreciably improve their school efficiency.

Age at first scholarship: The younger the girl is when she first obtains a scholarship the better her scholarship performance will be compared to her non-scholarship performance. Girls who first receive scholarships when they are six to 11 years old improve their school efficiency much more noticeably than girls who first receive scholarships when they are 12 to 18 years; if a girl receives a scholarship for the first time when she is older than 18 it will not help improve her school efficiency at all.

A scholarship program will be most effective when first scholarships are awarded to girls in the lower grades (preschool, first and second) and in the youngest age group (six to 11 years). These girls, who are the most at risk of leaving school prematurely, are the ones able to take greatest advantage of the scholarships.

Recommendation:

- Concentrate on giving first scholarships to girls who are entering preschool and first grade.
- Target first scholarships to girls who are six to 11 years old.
- Focus on the younger girls in the lower grades. Offer first scholarships to girls who are five and six years old to attend preschool and to girls who are seven and eight to attend first and second grades. These are the most at-risk children and are also those who can take greatest advantage of the scholarship program.

Family Background

Conclusion:

Family background variables make no statistical difference in the success of scholarship recipients in terms of efficiency. This is a result of the similarity of the characteristics of the families of the girls in the program, who are all living in very low economic conditions. However, the qualitative information collected suggests that having an older sister who attended school can be of assistance to a girl in her adaptation to the school environment and in obtaining her family's support.

Recommendation:

- Scholarship programs targeted for low economic strata girls need not consider family background characteristics extensively in the selection of the scholarship recipients, as these will be similar for most girls.
- When two candidates are similar on all selection criteria, preference should be given to the candidate with older female siblings who have previously and successfully attended school, if possibilities of success/efficiency are to be maximized.

Community Background

Conclusion:

The AGES scholarship program was most effective in communities that were capable of providing clear and strong support. These communities are characterized by a high level of internal cohesion and solidarity, possibly due to cultural uniformity, lack of external forces that disrupt traditional organizations and presence of mechanisms to resolve internal conflict and mend the social fabric. In addition, the scholarship program was most effective in communities with little family seasonal migration or with predominately adult seasonal migration. Finally, the scholarship program had the most success in communities with schools that identify with the community and provided support to the program.

Recommendation:

- Consider selecting communities with strong traditional organizations, where cultural, religious and political strife are absent. Recognize that no community will be monolithic and conflict-free, and provide sufficient time, before program implementation, to cultivate and obtain community support.
- Select communities with little family seasonal migration.
- Give priority to villages exhibiting good school-community relations, where teachers are functionally bilingual, are preferably of the same ethnic affiliation as the majority of the population, and have a positive attitude towards their work.
- When scholarships programs cannot realistically deal with factors related to the quality of the school itself (large class size, large student-teacher ratios and monolingual teachers, for instance), they should choose to operate in carefully selected schools that have teachers willing and able to teach in a bilingual mode.

Repetition and Drop-Out among Scholarship Recipients

Conclusion:

Repetition: Qualitative findings suggest that grade failure and repetition among scholarship recipients are associated with insufficient time to do school work at home and to attend academic tutoring sessions. They are also related to lack of parental involvement in and support of their daughters' studies. In addition, among older girls repetition is related to a reduced interest in school due principally to their desire to work for an income or to get married. Among younger girls repetition is further associated with the adverse conditions and handicaps they encounter in the lower grades, including large class size, an unfamiliar, culturally different environment, and teachers who are not functionally bilingual.

Drop Out: Major reasons for program and school drop out are disillusionment due to grade failure, a foreign, monolingual school environment that discourages girls from attending school, absenteeism due to disease and seasonal migration, and the onset of puberty, especially among over-age girls.

Recommendation:

- Scholarship programs should be designed to include components to effectively address certain conditions that encourage repetition and drop-out among girls:
 - **economic incentives** to counteract the opportunity costs to families of sending girls to school and to improve their chances of "buying" time at home for school work and tutoring sessions;
 - **academic support** to overcome the learning problems associated with a monolingual school environment, lack of educational materials, large class size, overworked teachers and other conditions that contribute to attention-deficit behavior in school, especially among younger girls in lower grades;
 - **psychological orientation and motivation** to address the obstacles created by discouragement with academic performance, home environments not supportive of girls' education, over-age, peer pressure to leave school, cultural incentives to early marriage and girls' desire to become economically active;
 - **consciousness raising** for parents and teachers to deal with their own limitations when trying to provide support and encouragement to girls education and to obtain their direct involvement in scholarship program activities.

Essential Elements of a Scholarship Program

Conclusion:

The review of the AGES scholarship program revealed that it contemplates the following essential elements: in addition to economic aid to girls' families, a component designed to provide academic assistance to scholarship recipients and another to give them encouragement and psychological support. It also includes an element of teacher and parental involvement to obtain school-based and family-based support for girls' education, such as time for homework and tutoring sessions. The work and presence of a Mayan woman who speaks the local language and dresses in Mayan fashion is another important element of the program, not only in terms of the functions she performs for the scholarship program but also in terms of the example she sets for Mayan girls. Community support and involvement are critical elements present in those villages where the program was most effective.

The qualitative analysis of the AGES scholarship program also showed that there are some elements missing or that require strengthening in order to improve its effectiveness: selection criteria for scholarship recipients need to be clear, objective and operational; community involvement should be promoted by expanding the role and responsibilities of the scholarship (selection) committee beyond strictly selection tasks; teachers' support of and involvement in program activities need to be strengthened; and relations between teachers and parents require consistent attention and cultivation.

Recommendation:

A scholarship program should have the following essential elements:

1. Economic support to girls' families: This support should be in the form of a cash stipend in amounts sufficient to overcome the opportunity costs to families of sending daughters to school, and to provide funds to cover girls' school-related expenses. How and when the cash stipend is distributed should respond both to the program's administrative requirements and to the communities' felt needs. The stipend should be given to the girls' mothers.
2. Academic support to scholarship recipients: Tutoring should be personalized, individual or in small groups, frequent and in the girls' native language; when possible tutoring should involve both scholarship program personnel and the girls' teachers. When lack of educational materials in the classroom is a problem, academic tutoring should provide means of dealing with this limitation.
3. Psychological support to scholarship recipients: A role model such as the scholarship program promoter should provide this type of motivation to program beneficiaries on a personalized and frequent basis. Home visits as well as school visits

should be part of this component. Individual family problems as well as issues common to girls in similar grades or age groups should be dealt with through this activity. The focus should be primarily preventive rather than remedial.

4. A scholarship program promoter: This promoter should be present in the community on a daily basis and be responsible only for one community. The promoter should be a woman. It is not essential that she be of the same community where she works, but is absolutely essential that she be of the same ethnic affiliation as the majority of families in the community, and that her ethnic identity be clearly stated through her language, choice of dress and other demeanor. The promoter should be technically competent in order to fulfill the functions of her job description and, at the same time, should have the personality traits, such as assertiveness within a culturally acceptable mold, that will enable her to become a role model to the beneficiaries of the scholarship program and to other girls in the community.

5. Encouragement and consciousness raising for parents of scholarship recipients: Scholarship program personnel, teachers and community-based organizations could provide this kind of follow-up with parents of program beneficiaries. When possible these activities should take place outside the school building; when necessary they should be carried out through home visits; mostly they should be carried out in small groups to promote interaction among parents. Family problems that require remedial action should be approached in the context of these supportive activities.

6. Teacher involvement in the scholarship program: School principals and teachers should be invited and encouraged to participate in all aspects of the scholarship program, including identification of candidates, selection of beneficiaries, tutoring, distribution of cash stipend, relations with parents and psychological support to students and their families.

7. Community support of and involvement in the scholarship program: Community support should be carefully cultivated from the start, allowing sufficient time for this support to develop. Internal community organization, divisions and conflicts of interest should be recognized and dealt with. Community-based scholarship committees should be formed following clear and precise guidelines, and should include non-controversial community leaders. Their functions should include, in addition to identification and selection of program beneficiaries, keeping community leaders, organizations and families not involved in the scholarship program informed of program goals and activities, participate in the distribution of the cash stipend, make "preventive" visits to girls' homes to monitor the household's appropriate use of the cash stipend and parents' fulfillment of other commitments to the scholarship program, help the scholarship promoter with specific family problems when they arise and it is culturally inappropriate for the promoter to deal with alone, contribute to the administrative and logistical management of the scholarship program, and generally

ensure that the scholarship program responds to both cultural and community expectations.

8. Mechanisms to promote effective relations between the school and parents' of scholarship recipients: Such mechanisms are lacking in the AGES scholarship program so there is no empirical basis for recommendations. Nonetheless, these mechanisms should include elements to overcome the cultural and linguistic barriers to communication between directors and teachers on the one hand and families on the other. They should also consider the need to address the social barriers of differences in economic standing and educational opportunities between teachers and parents. Mechanisms that could be tried include extra-mural school activities, involvement of teachers in community activities not related to the school, parent-teacher associations for school-related activities such as preparation of school lunches, and school sponsorship of special community activities.

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