

Gender Differences in Schooling Experiences Among Adolescents in Malawi

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In developing countries, the school is the main learning and socializing institution outside the family. Investments in schooling are increasingly extolled as critical for poverty alleviation, the achievement of gender equity and empowerment, and economic growth. In recent years, the push for universal schooling — a goal that has been embraced by the international community through the Millennium Development Goals — has led to the elimination of school fees in many poor African countries. Malawi, one of the poorest countries in the world, was an early pioneer in eliminating school fees at the primary level and has seen an enormous increase in enrollment. With limited resources and under-trained teachers, school quality has suffered, and students in primary school are not acquiring basic competencies. Without adequate quality, the promises implicit in the achievement of universal schooling are not likely to be met.

In this paper, we will use the first wave of a longitudinal study on primary school quality and its effect on adolescents in two districts in Malawi to 1) investigate gender differences in schooling experiences; 2) explore whether such differences are associated with variability across schools in rates of both attendance and performance as measured by results on the Primary School Leaving Exam (PSLE); and 3) determine whether girls who attend schools that have participated in interventions to improve teacher quality and reduce gender based violence have more positive experiences than girls who attend schools that have not been exposed to such interventions.

Defining and Measuring School Quality

Our definition of school quality, which incorporates many dimensions of the school environment, builds on previous research in Kenya and Egypt (Mensch and Lloyd, 1998; Lloyd, Mensch and Clark, 2000; Mensch et al., 2001; Lloyd et al., 2003). It encompasses those elements that improve cognitive competencies — the focus of the school effectiveness literature — as well as those that have the potential to increase grade attainment, improve reproductive health, facilitate labor force transitions, create pro-social and gender-equitable values, enhance community participation and build agency for responsible decision-making. When operating at their best, schools have the capacity to increase young people's chances for successfully navigating all transitions to adulthood. When schooling of good quality is accessible and educational experiences are positive, disadvantaged children are more likely to acquire the skills and agency for escaping poverty and accessing a greater range of opportunities as adults.

In conceptualizing and measuring school quality, we are careful to distinguish school inputs from school outcomes. While good quality schools are sometimes defined by their results (e.g., cognitive tests or examination scores, see Hanushek and Lavy, 1994; Harbison and Hanushek, 1992) or by their material correlates (e.g., resources per student, see Schultz, 1987), our definition of quality not only encompasses elements of the educational process that are recognized in the literature as good practice, but also incorporates dimensions of the school and learning environment that are not traditionally captured, such as equitable treatment of boys and girls and gender based harassment and violence.

We define four major dimensions of school quality: (1) material inputs such as the availability and physical condition of facilities, desks, teaching manuals and text books, as well as the certification, experience and commitment of teachers, (2) classroom dynamics and pedagogical practices including teacher treatment and support of students, (3) gender treatment and attitudes including teacher attitudes and treatment of boys and girls, as well as the prevalence

of various anti-social behaviors such as harassment, intimidation and violence within schools, and (4) participation in donor and government training programs and interventions.

Data

The data come from the first round of a longitudinal study of approximately 1800 adolescents aged 14-16 attending standards (grades) 4-8, the last four years of primary school, in Machinga and Balaka districts in the southern region of the country, the area with the highest rates of HIV, teenage childbearing, risky sexual behaviors and earlier sexual initiation. Note that neither district contains classified urban areas, with the largest population concentrations located in district administrative centers or encompassing central markets. Sixty primary schools were visited in the second term of the 2007 school year, 30 in each of the two districts. The 30 schools visited in Machinga represent nearly 20 percent of the primary schools in the district whereas the 30 in Balaka represent nearly 25 percent of the primary schools in that district. The probability of a particular school being included in our study is proportional to its enrollment in 2006.¹ Note that estimates from the most recent household survey conducted in Malawi indicate that 76, 71, and 46 percent of those aged 14, 15 and 16 in the southern region are in primary; the remainder being predominantly school dropouts (National Statistical Office and ORC Macro, 2003).² The prominence of older students in primary school is due to late entry, grade repetition, and intermittent attendance.

At each school we interviewed 30 students, the head teacher and all teachers in standards 4 through 8.³ In addition to collecting detailed information on school quality, the adolescent instrument included an extensive set of questions on household and family characteristics in order to assess household resources and vulnerabilities. At the community level, an instrument was administered in a random selection of villages that serve as the primary catchment area for the primary school visited, which captured information on health facilities, the location of the nearest secondary school, religious and civic groups and productive resources, e.g. maize mills, roads, and markets.

Interventions to Improve School Quality in Sampled Communities

In Machinga, there has been significant donor and government investment in primary education to address issues of quality. From August 2003 through December 2005, as part of a broad USAID multi-country initiative entitled Educational Quality Improvement Program (EQUIP), the Malawi Education Support Activity (MESA) focused on teacher professional development through training programs designed to improve the continuous assessment of pupils, enhance the pedagogical practice of teachers, and integrate lifeskills and HIV education into the social studies curriculum. These teacher and school-based initiatives were supplemented by community level outreach to promote the value of schooling (particularly for girls), the importance of effective schools, and enhanced awareness and response to HIV risk.⁴

¹ The number of schools in each district was based on estimates of (1) the proportion of students in the age group attending primary school, (2) estimated attendance rates (3) estimated attrition rates, (4) estimates of transitions to secondary school and school dropout (Appendix 5).

² We did not sample from the estimated 4% of 14-16 year olds attending secondary school.

³ The overwhelming majority (93%) of 14-16 year olds attend standards 4-8 (National Statistical Office and ORC Macro, 2003).

⁴ According to a USAID monitoring and evaluation report (USAID/AIR 2004: 64), teacher training activities in Machinga district reached all 158 primary schools and 80% of teachers (947 of 1,180) in 2004; of Machinga's total population of 369,014, approximately 12,300 (3%) participated in community-based activities directed toward village chiefs, school committees, parent-teacher associations and the general population. MESA also broadcasts a weekly radio program.

Machinga is also the site of the “Safe Schools” Project, a USAID funded pilot intervention designed to reduce gender-based violence (GBV). The implementation of the Safe Schools Project began in late 2006 in a random selection of 30 of the district’s primary schools. The Safe Schools program of activities includes pre-service and in-service gender training for teachers, institutional support and referral mechanisms to services for GBV victims, and integration of GBV and gender issues into the curriculum (DevTech, 2004). Our Machinga sample of 25 schools includes 10 of the experimental schools in the Safe Schools Project. These schools were not selected purposively; rather they ended up in our sample fortuitously through a process of random selection. By conducting our project prior to and concurrently with the Safe Schools intervention, we have an opportunity to assess whether this particular effort has had an impact on the attitudes and behavior of students and teachers, and whether such activities improve girls’ attendance and academic performance, as well as encourage healthier sexual and reproductive behavior among adolescents.

Unlike Machinga, Balaka has not had a broad history of donor support and will serve as a comparison district to Machinga. Although we would expect considerable variance in quality across schools and over the course of our panel in Machinga alone, drawing on a sample of schools in Balaka provides additional leverage for assessing and evaluating investments in school quality. Thus Balaka serves as a contextual baseline for the provision of schooling in rural Malawi without significant donor involvement or intervention.

Assessing Gender Attitudes, Practices and Violence with ACASI

To obtain more accurate reporting from students and teachers on issues of gender-based attitudes, practices and violence — key dimensions of our school quality conceptualization — and other sensitive issues, we employed audio computer-assisted self-interviewing (ACASI). The computerized administration of questionnaires — an interview technique developed in part to address concerns about the influence of interviewers in surveys — takes as a given that the more private and standardized the interview the better the quality of the data. With ACASI, the respondent hears both the question and the response categories through headphones connected to a laptop, or for this study, a handheld computer. The respondent answers each question by pressing a number on the computer screen. The advantage of ACASI over face-to-face interviews is that the respondent is afforded greater privacy and confidentiality when answering questions. Computerized interviewing has been used successfully by the investigators in household-based surveys in Kenya and Malawi (Hewett, Mensch, and Erulkar, 2004; Mensch, Hewett, and Erulkar, 2003). Results from these studies have shown significantly greater reporting of socially stigmatizing sexual behaviors with ACASI.

Analysis

For this paper we will first develop indicators of school quality that will be aggregated at the school level and evaluate these separately for girls and boys. We will investigate whether gender differences exist in a variety of dimensions of quality, controlling for community and aggregated household characteristics that potentially affect the quality of schooling and then determine whether these gender differences are correlated with aggregated attendance rates and average scores from 2006 on the PSLE. Given that the data are cross sectional, for this analysis we are assuming that quality remain unchanged between 2006 and 2007, which may be a questionable assumption, particularly for the 10 Machinga schools exposed to the Safe Schools Project. Our analysis will thus give us a lower bound estimate of the association between school quality and these two outcomes. Finally, we will explore whether the quality indicators for the Machinga schools exposed to the Safe Schools Project are higher than those without any donor investment.

