Achieving gender equality in learning outcomes: Evidence from a non-formal education program in Bangladesh

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A R T I C L E   I N F O

A B S T R A C T

Non-formal education (NFE) programs have been a long standing approach to educating marginalized children, especially girls, across the developing world. Though such programs provide girls with expanded access to learning opportunities, the evidence of whether enhanced access actually leads girls to achieve on par with boys remains limited. In my quantitative cross sectional study, I analyze the academic achievement of girls relative to boys in a sample of 1203 children participating in a NFE program in rural Bangladesh, known as SHIKHON which means "learning" in Bengali. I find strong correlational evidence that gender is not significantly associated with achievement; on average, girls achieve on par with boys across four subject areas including literacy (English and Bangla), numeracy, science and social science.

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1. Introduction

Educating girls has been long-standing focal priority for developing regions across the globe. There is overwhelmingly positive empirical evidence that investing in girls' education, particularly across developing countries in Asia, Africa and Latin America, leads to numerous private and social benefits that range from decreased fertility and infant mortality rates to increased economic growth and productivity (Herz and Sperling, 2004; King and Hill, 1993; Schultz, 2002; Tembon and Fort, 2008). With strong international support for investments in educating girls coupled with compelling empirical evidence of its payoffs, substantial progress in achieving gender parity in terms of access to education has become a reality. In fact, a ubiquitous "female schooling advantage" now exists throughout the developing world with girls' participation in schooling exceeding that of boys (Grant and Behrman, 2010, p. 73). However, despite mounting evidence on the educational progress that girls have achieved over the past two decades, there are two key gaps in the extant literature on the progress made toward achieving educational parity for girls.

First, the bulk of the attention on educational progress for girls has focused almost exclusively on the role of the formal education sector. In addition to the formal sector's role in promoting the educational rights of girls, non-formal education (NFE) plays an equally important and critical role in ensuring that girls are provided with a high quality and equitable education. Non-formal education programs, such as Mexico's Consejo Nacional de Fomento Educativo (National Council for Education Development, CONAFE), Complementary Basic Education in Tanzania (COBET), and the Bangladesh Rural Advancement Committee's (BRAC) non-formal education program offer a parallel track of education (Hoppers, 2006, p. 24) to the most vulnerable and marginalized childhood populations, including girls. Non-formal schools provide education that children would have received in the formal sector, but it is delivered in an accelerated format typically using child-centered approaches in multi-age one room schools led by local community women. Given that these schools have an explicit mission to educate marginalized children, including girls, they have undoubtedly played a critical role in ensuring that girls are educated in fair and equitable ways. Despite the longstanding presence of non-formal schools across the developing world dating back to the 1970s (Coombs, 1976), the evidence examining how girls academically achieve in such settings is relatively limited. In fact, there are only handful studies that have examined gender explicitly in the context of NFE programs; and among those studies, it is inconclusive whether or not females achieve at levels comparable to that of their male counterparts (Chowdhury et al., 2003; Nath et al., 1999; Sukontamarn, 2003).

Second, while it is well known that girls have achieved parity in terms of both schooling progression and participation, we have limited knowledge about whether or not that parity translates into actual learning and achievement outcomes as well (Grant and Behrman, 2010). Though Grant and Behrman (2010) do acknowledge an unequivocal "female schooling advantage" across the six

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developing regions comprising 38 countries in their study, they also note that there is, "…little doubt that gender bias remains" (Grant and Behrman, 2010, p. 87). As they acknowledge, equality in participation does not necessarily translate into equality in outcomes. This is due to differences in how girls are treated relative to boys within schools as well as the types of schools that girls attend (Grant and Behrman, 2010, p. 87). Grant and Behrman's (2010) conclusion is extremely salient given persistent and systemic discrimination against women and girls, particularly in developing country settings (United Nations Children's Fund, 2003, 2006).

My study explicitly addresses these two gaps, contributing to a deeper understanding of gender and education. First, I situate my study in the context of a unique and large-scale NFE program in Bangladesh known as SHIKHON, which means "learning" in the Bengali language. Since 2007, the SHIKHON program has educated over 155,000 children, aged 7–14, through 5180 non-formal primary education schools across rural Bangladesh. Second, I focus on achievement outcomes of girls in SHIKHON schools across a set of nationwide core grade 5 subject areas including literacy (English and Bangla), numeracy, science and social science. In my quantitative study, I analyze data collected on over 1200 SHIKHON students and ask: How do girls achieve relative to boys overall and across each grade 5 subject area?

I structure the rest of my paper as follows: in Section 2, I briefly review relevant background information on the non-formal education sector and discuss how NFE programs can promote girls' education. I also describe the context and setting for my study, the SHIKHON non-formal education program in Bangladesh, and review prior empirical evidence of the gender gap in performance within NFE programs in Bangladesh. In Sections 3 and 4, I describe my data and outline my methods. In Section 5, I present my results and in Section 6, I close with a discussion of my study limitations and the substantive implications of my findings.

2. Background and context

2.1. Non-formal education (NFE)

The term "non-formal education" (NFE) has been used broadly to describe education that is typically offered outside of the formal compulsory education sector (Coombs, 1976; Hoppers, 2006; Romi and Schmida, 2009; United Nations Educational Scientific Cultural Organization, 1997). NFE is also used to describe vocational and/or technical education focusing on skill development, adult literacy (Hoppers, 2006) as well as education that occurs throughout the life course (Rogers, 2005; UNESCO, 1997); however, in this paper I use the term non-formal education NFE as it applies to the primary schooling level in developing country contexts.

NFE is often conceived of and described as a "shadow" or "second chance" (Hamadache, 1991, p. 119) system that parallels—but is not entirely separate from (Coombs, 1976, p. 282) and often intertwines with—the formal education system (Hoppers, 2006, p. 24). Also, NFE provides children with an "alternative route" (United Nations, 2004, p. 45) to education. Though there is no one definitive or consistent definition of non-formal education, there are several features that distinguish non-formal education from the formal education system. These distinguishing features can be divided roughly into the broader goals and aims of NFE and the means through which education is managed and delivered in NFE programs.

The primary aim of NFE is to educate children that are not currently served by the formal education sector. In this respect, NFE is *compensatory*, making up for limitations inherent in the formal schooling sector (Hamadache, 1991, p. 113). In addition,

NFE aims to be *socially inclusive* (Hoppers, 2006, p. 51), by providing educational opportunities for children who have been left out the formal schooling system due to myriad factors, which can include, but are not limited to their gender, disability status, race/ethnicity, socioeconomic status and religious beliefs. Furthermore, children tend to be marginalized from the formal school sector because they live in geographically remote areas and thus lack access to school. Therefore, in contrast to the formal compulsory education sector, NFE programs often are intentionally designed to selectively target specific groups of children rather than children who are simply eligible for school due to their age (Hamadache, 1991).

Given the marginalized populations that NFE programs traditionally target, NFE seeks to offer learning opportunities that are adaptable and flexible to the specific needs and schedules of learners. For example, unlike formal schooling, NFE schools do not follow a strict schedule and classes may be scheduled around children's work needs (Ardt et al., 2005). NFE programs also tend to be directly administered by non-governmental organizations rather than the national government and often emphasize parental and community involvement (Dang and Sarr, 2011, p. 2). Though many NFE schools follow a curriculum that mirrors that of the formal schooling sector, NFE programs ensure that teachers—many who are local, female and part-time volunteers—use learner-centered approaches that engage students with materials relevant to students' own individual backgrounds and social contexts (Hamadache, 1991).

2.2. How non-formal education (NFE) programs can promote girls' education

Through the efforts of UNESCO's Education for All (EFA) movement, gender parity in education across developing the world has been a key element of policy discussions among stakeholders engaged in the educational sector, including multi-lateral aid organizations and non-governmental organizations (NGOs) (UNESCO, 2014). According to the 2013/4 EFA monitoring report, due to systematic marginalization of women both culturally and politically, gender parity will not be reached before 2086 for particular low income regions such as sub-Saharan Africa (UNESCO, 2014). However, NFE programs have been effective in improving equity in access and participation in South and Southeast Asia (Loh-Ludher, 2007) due to their ability to operate outside the constraints of formal education systems.

Importantly, the structure of NFE programs provides high leverage opportunities to support and promote girls' education. For example, given that non-formal schools are often located in local villages, the distance that girls must travel to schools is greatly reduced. This has been shown to effectively promote girls' enrollment since locating schools closer to girls reduces both the direct and opportunity costs of schooling (Gertler and Glewwe, 1992; King and Lillard, 1987; Lavy, 1996). Also, situating schools so they are more accessible can reduce the personal safety risks that girls may face while traveling to school (Sukontamarn, 2003, p. 3). In terms of NFE school staffing, NFE programs rely overwhelmingly on local females as teachers and there is compelling evidence suggesting that girls who have a female teacher tend to enroll at higher rates (Banerjee et al., 2002a,b); one reason why this might occur is that female teachers can serve as positive role models for girls (Mensch and Lloyd, 1998, p. 182). Finally, given that the NFE program curriculum is much more flexible versus that of formal schools, NFE programs have the latitude to develop and implement "girl friendly" curricula; a gender sensitive curriculum that NFE programs have the potential to provide can combat gender stereotyping typically found in a traditional school curricula (World Bank, 2012, p. 218).