POLICY BRIEF:
GIRLS’ LEARNING AND EMPOWERMENT - THE ROLE OF SCHOOL ENVIRONMENTS
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Introduction

Despite major increases in girls’ access to education and improvement in girls’ learning outcomes over the past decade, gender inequalities persist, and are particularly stark in many low-income countries. Given the developmental benefits of education – for individual girls, their families and communities, and wider society – these inequalities represent significant lost opportunities. In addition to its effects on economic development and public health, education contributes to women’s empowerment through the following pathways:

- Developing skills and capabilities such as critical thinking, literacy and numeracy, and communication skills, which lay the foundations for decent livelihoods and equitable relationships in adulthood.
- Increasing girls’ self-confidence, agency, and ability to express their hopes and make decisions about their own lives.
- Increasing women’s likelihood of obtaining better-paid work.
- Developing gender-egalitarian attitudes among girls and boys.

Although these pathways are widely recognised, there is little synthesised knowledge on how schooling can be organised to maximise empowerment. This review therefore brings together evidence on two key questions:

- What kinds of school environments and pedagogical approaches are most effective in promoting girls’ learning?
- How does school-based learning contribute to girls’ and women’s empowerment, and are there minimum levels of education necessary for empowerment processes?

Methodology and overview of evidence

The review draws on 150 studies identified through structured searches of key journals and institutional websites, as well as recommendations from experts in the field. All studies identified were assessed for quality and relevance. Table 1 shows the distribution and emphases of the literature examined.

Although we found at least 10 studies that discussed each thematic issue, many of these were overviews that did not delve into issues in any depth. Few studies contained evidence on the impact of improvements in the physical school environment on learning outcomes. Most evaluations focus on the impact on enrolment, attendance and dropout rates.
Key findings

Impact of school environments on girls’ learning outcomes

PHYSICAL ENVIRONMENT
Studies from West Africa provide some indications that improved infrastructure (particularly water and sanitation) contribute to increased exam pass rates for girls (Kazianga et al., 2013; Dumitrescu et al., 2011). By contrast, a study of 30 government secondary schools in Bihar, India, found that the quality of school infrastructure (buildings, toilet facilities, drinking water, classroom furniture, playgrounds and electricity) had no impact on learning outcomes for boys or girls (Santhya et al., 2015). There are no studies that have probed whether a better environment for menstrual hygiene management, such as toilets for girls or running water, has any impact on girls’ learning outcomes. This is probably because examining any such impacts is methodologically challenging, given the relatively small number of days per month that girls are affected (Hennegan and Montgomery, 2016). However, some studies reviewed by Hennegan and Montgomery have found positive effects of menstrual health management initiatives on girls’ attendance, which is a prerequisite for improved learning outcomes.

Residential schooling. Qualitative evidence suggests that boarding schools can reduce girls’ work burden and allow them to study more. They can also help girls form stronger relationships with teachers, which can build self-confidence and commitment to study (Shah, 2011; Jones et al., 2015a; Willemsen, 2016). Boarding schools can also help allay parents’ concerns about long journeys to school, fatigue and vulnerability to violence en route, particularly for girls from poor, rural families. Quantitative data from the Moroccan National Government Programme to provide dormitories and scholarships to enable girls to attend secondary school found that they contributed to a 20% improvement in national end-of-year test scores (Muskin et al., 2011). However, these benefits need to be weighed against additional costs and, in some cases, heightened vulnerability to violence from teachers and other pupils in boarding schools.

SOCIAL ENVIRONMENT

Having a same-sex teacher. There is evidence that this increases girls’ school attendance, retention and sometimes learning, but only in strongly gender-segregated societies. Elsewhere, the evidence is mixed, with some studies stressing that the overall quality of teaching is more important. There is also some evidence that having a female role model in their school has positive impacts on girls’ aspirations and self-confidence.

Co-educational versus single-sex schools. There is mixed evidence on whether single-sex or co-educational schools offer more conducive learning environments for girls. A group of studies that compares girls’ exam results in specific subjects in different kinds of schools shows positive impacts on learning outcomes for girls in single-sex schools. However, an extensive review of education and gender equality (Unterhalter et al., 2014) points out that these studies may not be generalisable or comparable because they were typically carried out in elite or other atypical schools, which are often better resourced. Qualitative studies show that co-educational schooling is associated with more equitable gender attitudes.

School mentors and counsellors. A small body of literature suggests that school-based mentors or counsellors can play an important role in helping girls develop self-confidence and encouraging positive attitudes towards study and resilience (Willemsen, 2016; Shah, 2011). For example, a midterm evaluation of a girls’ education project implemented by Camfed International (2016) in Tanzania and Zimbabwe finds that Learner Guides – young women from participating communities trained as life skills programme facilitators and teacher supporters – contributed to greater commitment to studying and improved exam results for girls.
Life skills clubs. An increasing number of studies suggest that extra-curricular life skills clubs—whether targeted at girls or open to boys too—can help girls develop the confidence and attitudes they need to succeed in school (Mhando et al., 2015; Jones et al., 2015a; Jones et al., 2015b). For example, studies of the Transforming Education for Girls in Nigeria and Tanzania (TEGINT) programme found that taking part in such clubs was associated with improved study skills and reading and writing (Mascarenhas, 2012; Para-Mallam, 2012). A study of the Creating Healthy Approaches to Success (CHATS) project in Malawi found that girls’ clubs had helped improve girls’ school performance by enhancing their study skills and building their confidence, so that they were more assertive in class and able to ask for help from teachers or peers. Girls had also formed study circles to work together on subjects they found difficult (Sidle et al., 2015). There is also growing evidence of positive impacts of extra-curricular clubs on girls’ learning outcomes (see Highlight box 1).

Gender-responsive school management and governance. Such evidence as exists suggests that whole-school commitments to gender equality play an important role in promoting gender-egalitarian school policies and practices in the classroom (Bajaj, 2009; Shah, 2011; Willemsen, 2016). Such programmes are often part of a broader package of interventions, and authors rarely draw direct links between these governance activities and girls’ learning outcomes, meaning that the body of evidence on these issues is small.

However, there is some evidence of positive impacts of these types of programmes on girls’ empowerment. For example, Oxfam’s My Rights, My Voice programme in Tanzania found that girls taking leadership positions in student councils and youth advisory boards was associated with increased confidence and self-esteem (see Highlight box 2). Studies of the TEGINT programme (Unterhalter and Heslop, 2012; Mascarenhas, 2012; Para-Mallam, 2012) found that school management committees were more active where community engagement and teacher training activities were strongest, and that in these contexts, girls felt more confident to report gender-based violence.

PEDAGOGICAL ISSUES

Quality of teaching. Several recent systematic reviews are emphatic that enhancing the quality of teaching through teacher training is critical for improving learning outcomes for girls and boys alike, although there is limited data disaggregated by sex. Some studies suggest that where girls lag behind boys, they benefit disproportionately from improved teaching methods. For example, Piper and Korda’s (2011) study of a programme in Liberia, which trained teachers in how to teach students to read, found that girls’ reading levels increased by 1.43 standard deviations compared to 1.21 for boys. There is some evidence (see Highlight box 3) that girls’ learning outcomes improve where teachers hold higher-level qualifications (Unterhalter et al., 2013).
Active learning (methods that encourage students to engage with, rather than simply memorising material). There is strong evidence that active learning leads to improved outcomes for boys and girls alike (Westbrook et al., 2013), with one study showing an additional positive effect for girls. Juárez and Associates (2003) examined Nueva Escuela Unitaria in Guatemala, Escuela Modelo in Nicaragua and the Multi-Grade Demonstration Project in the Philippines. These programmes include training and materials to support active learning techniques such as the use of self-instructional guides, learning corners, small group work and peer teaching alongside students’ participation in school governance structures and curriculum design. They found that girls in schools that encourage active learning outperformed both girls in multi-grade schools without active learning and boys in their classes, though boys’ test scores also improved. The substantial improvement in girls’ performance may reflect a growth in self-confidence, which enabled them to participate more fully in class.

Gender-responsive pedagogy (teaching that redresses gender inequalities through efforts to engage girls and boys equally and to combat gender stereotypes). The six studies we found indicate that training in gender-responsiveness was generally associated with improved test scores for girls and, in mixed schools, boys. It was also linked to more equal gender relations within schools (see Highlight box 4). There were some dramatic increases in girls’ exam pass rates in intervention schools: for example, up from 39% to 67% in Mali and from 77% to 91% in Cambodia over a one-year period (Fancy et al., 2013). Two studies showed the greatest impacts among marginalised (low-income) girls – this may reflect the provision of stipends alongside gender-responsive pedagogy. Most of these six studies also emphasise the importance of improving the quality of teaching alongside enhancing gender-responsiveness.

Impacts of teacher training in gender-responsive pedagogy

The Forum for African Women Educationalists (FAWE) has been working with teachers for 20 years to promote more gender-responsive teaching. A qualitative study of their work in Ethiopia, Gambia, Malawi, Tanzania, Uganda and Zambia showed positive results in learning and enjoyment of school for boys and girls taught with more gender-responsive techniques. Teachers benefiting from the training introduced many different practices, including more interactive learning and more group and pair work. They made an effort to call on girls as well as boys to answer questions, to have boys and girls present group work and be class monitors/leaders, and to change how they speak to students to be encouraging rather than critical. The training programme also led to more displays of learning materials on classroom walls.

Some schools also undertook gender sensitisation with the students, which directly challenged gender stereotypes, lower academic expectations of girls, and beliefs that girls should carry out domestic chores such as cleaning (Wanjama and Njuguna, 2015).

Impact of school environments on gender relations

Studies of the Transforming Education for Girls in Nigeria and Tanzania (TEGINT) programme found a link between better-qualified teachers and girls’ empowerment. Girls in schools with better-qualified teachers were more likely to express their concerns and ideas around schooling. They also tended to identify group-based or ‘political’ solutions to improving education (such as abolishing fees) that indicated a higher level of empowerment, as opposed to individual-based solutions such as sponsorship (Unterhalter et al., 2013).

Impacts of education on girls’ and women’s empowerment

### TABLE 2: OVERVIEW OF EVIDENCE ON IMPACTS OF EDUCATION

<table>
<thead>
<tr>
<th>ISSUE</th>
<th>NATURE OF EVIDENCE</th>
<th>NUMBER OF STUDIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic impacts of education</td>
<td>Clear evidence of strong positive returns to women’s education – greater returns for men and reduced gender wage gaps</td>
<td>Strong quantitative evidence; 6 studies examined</td>
</tr>
<tr>
<td>Impacts of skills gained in school during adult life</td>
<td>Very few retrospective studies; most highlight the importance of critical thinking, problem-solving and communication skills; some point to importance of specific knowledge or vocational skills for future livelihoods</td>
<td>Limited evidence (&lt;5 studies each on cognitive, non-cognitive and vocational skills)</td>
</tr>
<tr>
<td>Impacts on empowerment</td>
<td>Clear evidence of impacts of education on voice, agency and decision-making power, though quantitative evidence shows a mixed picture on specific forms of decision-making</td>
<td>Large body of qualitative and quantitative evidence (&gt;10 studies)</td>
</tr>
<tr>
<td>Thresholds for empowerment and economic effects</td>
<td>Attending at least the first few grades of secondary school has a major additional effect on economic and empowerment outcomes</td>
<td>Small but growing body of mixed quantitative and qualitative evidence (&lt;5 studies)</td>
</tr>
</tbody>
</table>

2 There were no data available on changing patterns in comparison schools.
ECONOMIC RETURNS TO EDUCATION

There is strong evidence that education – particularly completing at least 10 grades and, in some countries, completing secondary education – has higher returns for women than men in low- and middle-income countries (Montenegro and Patrinos, 2014; Guison-Dowdy, 2012). Montenegro and Patrinos’s review of surveys from 139 countries between 1980 and 2013 also found that returns to education were highest in sub-Saharan Africa, where average education levels are lower than in other regions. Here, each additional year of schooling makes a greater difference to the economic wellbeing of girls and boys, with higher returns for women (between 2 and 3.5 percentage points higher than returns for men). In other regions, overall returns to education and the gender gap in returns are generally lower, though still notable at tertiary level. These gender gaps may reflect the relative scarcity of educated women; men’s advantage may also narrow or disappear in future as more girls complete secondary school and higher education (Aslam, 2013).

KNOWLEDGE AND SKILLS

Our review found no large-scale quantitative evidence, disaggregated by sex, on the development of different kinds of skills through schooling (other than on basic literacy and numeracy). Three qualitative studies pinpointed the skills and knowledge that girls or young women felt were most useful, demonstrating how women draw on these skills in both their professional and personal lives (Seeberg, 2011; Lesorogol, 2008; Willemsen, 2016). These ranged from transferable skills in logical thinking and problem-solving (mentioned in Tanzania and China), to subject-specific knowledge and skills such as maths and English language (which respondents in China highlighted as useful for entrepreneurs) and agricultural and vocational skills (mentioned in Tanzania), to basic skills such as literacy for writing letters and reading the Bible (mentioned in Kenya).

These qualitative findings highlight some of the diverse ways in which women perceive that the skills and knowledge they have learnt in school lead to empowerment in their adult lives. They include giving them more options for earning a livelihood, enhancing their ability to solve problems (which in turn builds self-confidence), and enabling them to undertake other important activities such as maintaining contact with distant family and friends or participating more fully in their religious community.

EMPOWERMENT

There is a substantial body of qualitative and quantitative studies on the relationship between education and women’s empowerment. Many focus on women’s influence over decision-making in marital relationships, while some focus on self-esteem as a building block of empowerment. Qualitative studies with girls in Ghana, Tanzania and China showed an association between education and higher aspirations, desire for greater autonomy and wanting to support their families financially (Posti-Ahokas and Palojoki, 2014; Kneppers, 2015; Seeberg, 2011).

Most of the studies found that secondary education plays a significant role in increasing women’s decision-making power. Moreover, they found that boys and girls who go through secondary education tend to be less accepting of harmful or discriminatory practices such as child marriage or violence against women and girls (e.g. Plan International, 2012; Klugman et al., 2014; Brown, 2012) and are usually more supportive of gender equality (see Highlight box 5).
The impact of education on men’s gender attitudes is another crucial way in which education contributes to girls’ and women’s empowerment. Evidence from the International Men and Gender Equality Survey (IMAGES) showed that secondary education is associated with more egalitarian attitudes to gender equality (Barker et al., 2011). Evans’s (2014) qualitative study of the influences on young people’s attitudes to gender equality in Zambia reported that attending a co-educational school had changed boys’ and men’s perceptions of women’s competence. It had also encouraged girls and women to stand up for themselves and be more confident.

Studies using large-scale data sets to probe the influence of education on women’s decision-making power have drawn mixed conclusions. For example, Kishor and Subaiya’s (2008) review of Demographic and Health Survey (DHS) data in 23 countries conducted between 1999 and 2004 found that the two biggest influences on women’s decision-making power were age and waged employment. By contrast, household survey data from India and Pakistan showed that women with secondary education or higher were more likely to perceive that their preferences would be taken into account in deciding how many children to have and choice of spouse (Aslam, 2013). Other studies found that having secondary or higher education was most likely to be positively associated with women making their own decisions about their health care, and about purchases for daily needs. Attaining secondary or higher education was also associated with women making decisions jointly with their husband about large household purchases and about visits to family or friends (Arnot et al., 2012; Schuler, 2007; Murphy-Graham 2009, 2010).

A set of recent studies have examined what aspects of education contribute most to women’s empowerment, and conclude that pedagogies that encourage reflection, the development of communication skills and curricula that directly challenge gender inequalities play an important role (See Highlight box 6).

**THRESHOLDS FOR THE EMPOWERING EFFECTS OF EDUCATION**

There appears to be a link between attaining a minimum level of education and seeing positive impacts on women’s employment and empowerment. This minimum varies depending on the economic opportunities available and prevailing social norms around women’s employment. Evidence from South Asia suggests that at least 10 years’ education is necessary for accessing better-paid jobs, and with this level of education, gender pay gaps diminish (Aslam, 2013).

However, in Pakistan, only around 10% of women achieve this level of education. Some studies from India suggest that having around five years’ education is associated with more egalitarian marital relationships (Arnot et al., 2012). Further probing of these issues in other contexts would be valuable.
Conclusions and implications for policy and practice

The review confirms the positive impacts of education on girls’ and women’s empowerment and livelihoods. The effects of education on women’s future livelihoods largely depend on the presence of economic opportunities and supportive social norms, which are themselves underpinned by education (notably secondary education) of boys as well as girls. In many countries, an increase in girls’ participation – with more girls attending secondary education up to the grades where they take key exams – has led to women’s greater labour force participation – an important route to empowerment. Qualitative and quantitative studies also show that education has impacts on self-confidence, aspirations, communication skills and decision-making power and can lead to more egalitarian marital relationships.

The empirical evidence on school environments and pedagogical approaches that boost girls’ learning outcomes and empowerment indicates the following.

Efforts to promote gender-responsiveness among teachers (ensuring equal attention to girls and boys, use of classroom practices that encourage active learning among girls and boys, and challenging gender stereotypes in classroom practices and discourse) have led to improved learning outcomes for girls and boys alike. These need to be accompanied by efforts to enhance the quality of teaching so that educational outcomes for girls and boys are not equally low.

Curricula that promote critical thinking and problem-solving skills play an important role in empowerment processes for girls and boys. These skills build self-confidence and are valuable in adolescence and adulthood to address personal as well as livelihood challenges. There are fewer reports on curricula that help students develop vocational skills, but such skills are valued by women – particularly where they underpin economic success and allow them to be financially independent.

In-school mentors and counsellors appear to play an important role as role models, building girls’ self-confidence and commitment to study. Alongside enhancing teaching, this could be a worthwhile focus for further investment and evaluation. Such mentors may be regular teachers or pastoral staff, or be employed to deliver specific curricula.

Extra-curricular life skills clubs – whether open to girls only, or also to boys – help students develop greater aspirations and commitment to study. They also build self-confidence and communication skills, which can enable girls to participate more fully in class.

The review identifies a number of key knowledge gaps for effective policy and practice, both to support effective learning and to realise the empowering potential of girls’ education:

- Evidence on the impact of key strategies to enhance quality of education: relatively few studies of effective learning and teaching strategies disaggregate their findings by sex.
- The cost-effectiveness of different approaches to enhancing the quality of education in general and girls’ learning outcomes in particular.
- The impact of investments in infrastructure on learning outcomes: most evidence focuses on enrolment, retention or attendance.
- The potential and limitations of alternative learning environments for girls such as open learning, flexible learning or distance learning. This could be particularly important for girls (and boys) in remote areas and for those with restricted access to education, such as young married girls.


