

Gender Equity and Fee-Free Basic Education in Tanzania

Summary

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Introduced in 2016, the Fee-Free Basic Education Program (FBEP) is the government's flagship policy to expand equitable access to basic education. Evidence shows that policies of this kind increase educational access and lead to significant economic and social benefits. In Ghana, children that received fee-free education were much more likely to complete secondary school and had much higher earnings than children that were not part of the program. In Tanzania, similar benefits to FBEP are possible since the labor market returns to secondary schooling are high.

Getting the most out of FBEP will require a stronger focus on narrowing gender disparities in education outcomes. The economic rates of return schooling are higher for girls than boys and there are significant health benefits associated with investing in girls' education. Better education for girls improves health outcomes, reduces teenage pregnancy and increases the control that women have over the size of their families. In Tanzania, a woman that completes at least secondary schooling has on average two fewer births than a woman with incomplete primary education. Moreover, under-five mortality rates tend to be lower and vaccination rates higher for children born to better educated mothers.

In Tanzania, enrolment and progression rates in basic education are similar for boys and girls but large gender disparities in learning outcomes persist. Primary and secondary drop-out rates are high with approximately 29 percent of girls and 34 percent of boys estimated to drop-out of lower secondary school before they complete. Compared with other countries in the region, gender gaps in primary school learning outcomes are large and widen further as students move into secondary school. Ultimately, the poor examination results of female students affect their ability to continue in formal schooling. Over the last four years, approximately 21 percent of boys and only 16 percent of girls that completed lower secondary schooling went onto upper secondary.

A combination of factors drives differences in education outcomes between boys and girls:

- **Learners and their households**
 - The direct costs of sending children to school is an important driver of gender differences in school attendance and completion. When resources are constrained households often send their sons rather than their daughters to school.
 - The opportunity costs of sending children to secondary school is also high. Studies find that girls have less time to devote to their school work and because they expend greater energy on other activities, arrive at school less ready to learn.
 - Cultural norms, such as early marriage, also affect education outcomes. Moreover, teenage pregnancy, often a consequence of early marriage, has serious implications for girls. For example, only two percent of girls aged between 15 and 19 years of age that have given birth currently attend school compared to 46 percent of girls that have never been pregnant.
- **School inputs**
 - The secondary school network is limited and for many children travel time to school is very long. In 2017, approximately a third of girls enrolled in secondary school had to travel over 3 kilometers to their closest secondary school. These large distances significantly affect the regular school attendance, particularly for girls.

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- Low quality school environments are a key driver of poor learning outcomes. For example, only 44 percent of secondary schools had adequate numbers of toilets for girls and 54 percent of secondary schools had no regular water supply throughout the year.
- **Teachers**
 - A lack of well trained and motivated teachers, particularly in mathematics and science, is a key factor driving low levels of learning in Tanzania. Across the system, estimates of teacher requirements show that only half of the needed secondary school mathematics teachers are available and only 75 percent of the required physics teachers. A recent study in five regions also showed that even when teachers are in post, a fifth were absent from school during unannounced checks.
 - Teachers are insufficiently prepared to support adolescent girls through school.
- **School Management**
 - Weak school management affects education outcomes for girls and boys.
 - Gender and school-based violence has a negative effect on health and education outcomes. While gender and school-based violence is relatively low compared to some other countries in the region it is still common. A recent study found that 75 percent of boys and girls had experienced some form of physical violence by the age of 18 and teachers were reported as the perpetrator by more than half of these children. Strengthening school management has the potential to limit violence towards children in and on the way to school.

Based on a large and growing evidence base, in Tanzania and elsewhere, Table S.1 summarizes a set of policy suggestions necessary to improve education outcomes and narrow gender gaps. However, since the drivers of gender differences in educational outcomes are multifaceted, any initiative to tackle them also need to take a multidimensional approach. Approaches of this kind have been shown to be effective at raising education outcomes particularly for girls. In Burkina Faso, an initiative that took a multidimensional approach and provided schools and girls with a range of support lead to large improvements in enrolment and learning outcomes. A similar multidimensional approach has also had some success in Tanzania. Learning from these experiences and scaling up a similar approach of this kind holds out the prospect of significantly improving education outcomes and narrowing gender gaps. It also has the potential to contribute to the success of FBEP and move Tanzania further towards its goal of universalizing access to good quality basic education.

Table S.1: Summary of policy suggestions to improve education outcomes and narrow gender gaps

Area	Issue	Policy Suggestion
Learners and their households	Direct and opportunity costs of schooling	- Extend the conditional cash transfer program to provide greater coverage of poor households, cover a greater amount of secondary school costs for girls and include non-formal pathways.
	Gender differences in preferences	- Communicate information on the benefits of girls' education , the constraints girls face in performing well at school and other issues such as the impact of early marriage on life chances.
	Early marriage and pregnancy	- Explore increasing the minimum age of marriage for both boys and girls to 18. - Consider removing the 2017 directive to prevent young mothers from re-entering the formal education system. - Formalize and make accessible a pathway for re-entry of young mothers into education through regular schools and non-formal pathways.
School inputs	Limited school network in underserved areas	- In the context of FBEP expansion, implement a strategy to rehabilitate existing schools and construct new schools based on LGA needs in locations that reduce the distance between home and school.
	Poor quality and inadequate learning environments	- Introduce LGA targets for all schools to meet Tanzania infrastructure standards (e.g. adequate water and sanitation facilities, student classroom ratios of 40:1) and have sufficient teaching and learning materials (e.g. student textbook ratios of 1:1). - Ensure that priority is given to infrastructure that supports girls including adequate latrines and availability of water.
Teachers	Lack of well-trained and motivated teachers	- Increase teacher numbers in line with standards and prioritizing subject areas with acute shortages (e.g. mathematics and science). - Institutionalize a system of in-service teacher training . - Establish a teacher awards program that rewards teachers for reductions in gender gaps in school performance.
	Limited teacher support to adolescent girls	- Provide in-service teacher training to challenge gender differences in teacher expectations - Establish teacher mentors to provide specific support for girls in school.
School management	Weak leadership affects student outcomes	- Strengthen school leadership training and include modules on tackling gender and school based violence . - Organize specific interventions to improve girls' performance through organizing increased learning time and after-school activities (e.g. girls' clubs).
	Lack of focus on gender and school-based violence	- Review legislation on corporal punishment and consider abolishing its use in all education settings. - Strengthen grievance redress mechanisms to improve reporting of gender and school-based violence and improve compliance with existing laws and regulations. - Enforce Teacher Service Commission (TSC) procedures for dealing with excessive use of corporal punishment and/or inflicting sexual violence on students
	Limited engagement with community	- Reinvigorate school boards and school management committees .

Gender Equity and Fee-Free Basic Education in Tanzania

1. Introduction

Tanzania has registered improvements in education outcomes over the last 10 years. Enrolments in lower and secondary education have increased from 675,000 in 2006 to 1.8 million in 2016. Inequalities in education access have also narrowed; gender gaps in lower secondary enrolment favoring boys were eliminated in 2015. Overall, these improvements have increased the proportion of skilled workers in the labor force significantly.

Yet to achieve its aspirations of reaching middle-income status by 2025, further improvements in education are needed. Over recent years enrolment rates in primary and secondary education have been declining and, in terms of education outcomes, Tanzania compares unfavorably with its neighbors and other low-income countries. Relatively low education outcomes translate into low average levels of labor force skills and unless addressed will hamper Tanzania's ability to achieve its goal of reaching middle-income status by 2025.

The implementation of the Fee-Free Basic Education Program (FBEP) is a key element of the government's overall strategy to improve education outcomes and accelerate growth.² Introduced in 2016, the program aims to universalize 12 years of basic education and eliminate both informal fees in government primary schools and formal tuition fees for lower secondary government schools. Increases in public spending to significantly expand secondary school places backed up FBEP. Early signs show that the policy is encouraging many more children to start and stay in school.

Tackling gender disparities in basic education will be critical to the success of FBEP. In recent years, Tanzania has eliminated many of the gender gaps associated with education access. However, large gender gaps in learning outcomes start in primary and get wider over the course of secondary school. Poorer learning outcomes reduce the capabilities of girls, affect their chances of progression into higher education and dampen the impact of education investments on economic growth, poverty reduction and health. Put another way, unless the constraints to female education are addressed, significant potential for economic and social development will remain untapped.

The aim of this note is to identify the underlying causes of gender disparities in secondary education and identify promising policy options to tackle them. It shows that addressing gender disparities in education is crucial to the success of FBEP and more broadly to national development goals.

The next section briefly outlines the benefits of extending access to basic education. Section 3 describes the characteristics of gender disparities in secondary education and Section 4 identifies the factors that drive gender differences in outcomes. Section 5 reviews the evidence on interventions capable of narrowing gender disparities. The final section concludes by arguing that narrowing gender differences in education outcomes needs a multidimensional approach.

This note is part of a series that looks at the implications of Tanzania's Fee-Free Basic Education Program (FBEP). Its focus is primarily on secondary education because separate analytical work on early childhood is currently being undertaken and a separate note is analyzing the trends and determinants of learning outcomes in primary education (World Bank 2018).³ The note draws primarily on secondary

² Basic education consists of pre-primary (one year), primary (seven years) and lower secondary (four years).

³ An additional note also looks at the fiscal implications of FBEP. (World Bank 2018).

sources but includes a new analysis of the 2015 Demographic and Health Survey (DHS) and findings from focus groups conducted in 2017 with secondary school teachers and female students.

2. The benefits of the Fee-Free Basic Education Program

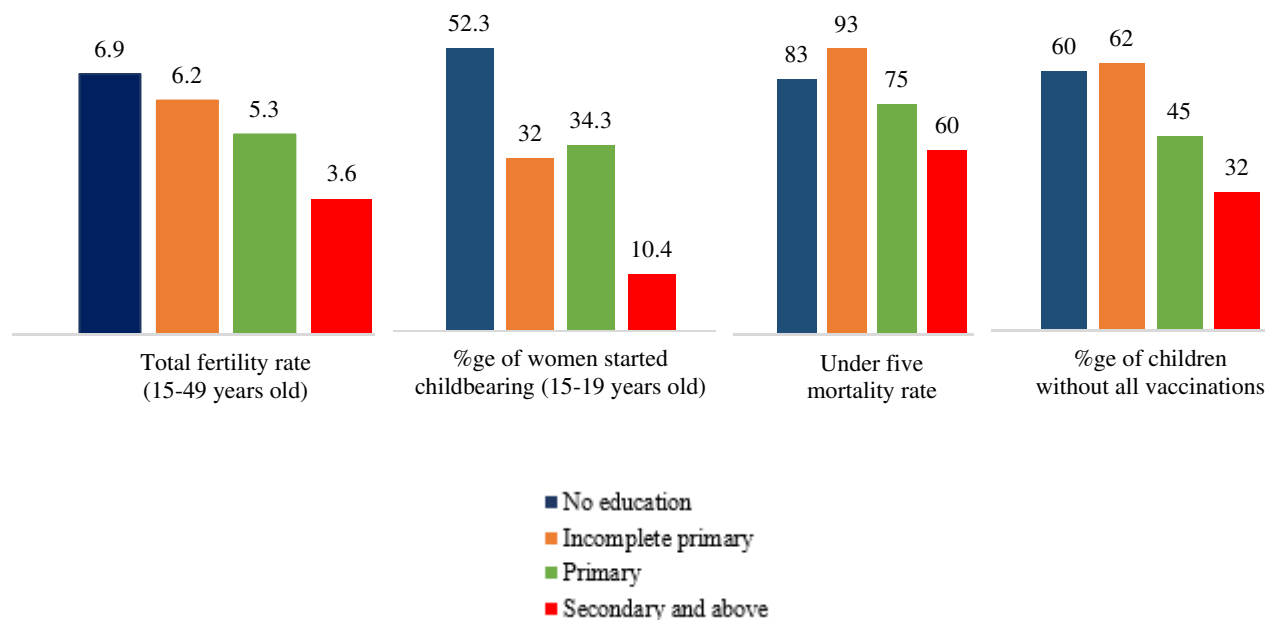
FBEP is expected to significantly increase access to basic education opportunities through the abolition of tuition fees and complementary investments in education quality. The policy aims to universalize 12 years of basic education by eliminating all charges in primary education and abolishing tuition fees at lower secondary. In addition to the FBEP, other investments in secondary education are planned to improve the overall quality of secondary education through improvements in school learning environments, addressing teacher shortages and strengthening their skills and motivation.

Evidence shows that reforms of this kind can improve individual outcomes significantly. A recent study of providing tuition-free senior secondary education in Ghana documented large gains in both educational outcomes and post-education employment and earnings (Duflo, Dupas et al. 2017). Children that received the fee-free education were 26 percentage points more likely to complete secondary school and 5 percentage points more likely to continue into tertiary education. They were also more likely to find work and have higher earnings than children that did not receive the tuition subsidies. The benefits tended to be greater for girls compared to boys. In Tanzania, similar benefits to FBEP are likely since the returns to an additional year of secondary schooling are high, particularly for girls. Using the 2011 labor force survey, the return to an additional year of secondary schooling in the labor market was 18 percent for women and 15 percent for men (Montenegro and Patrinos 2014).

Improvements in basic education are also an important driver of economic growth and poverty reduction. Tanzania's national five-year development plan has made access to good quality basic education an important strategy for building the foundations necessary to adapt and utilize technology for economic diversification and growth (URT 2016). This is consistent with research that shows that the knowledge and skills children acquire during basic education are a strong predictor of economic growth. For example, estimates show that increasing the proportion of the population with basic skills, typically acquired in primary and secondary school, can lead to a 0.5 percentage point improvement in long-term per capita growth rates (Hanushek and Woessmann 2015).

Better education improves health outcomes, reduces teenage pregnancy and increases the control that women have over the size of their families. The recent DHS shows that woman with more education have fewer children. A woman that completes at least secondary schooling has on average two fewer births than a woman with incomplete primary education (Figure 1). Moreover, the proportion of young women that get married and commence childbearing is much lower for women with education at or above secondary schooling. For example, 52 percent of women aged between 15 and 19 years of age with no education compared with only 10 percent of women with secondary education have already begun childbearing (Figure 1).

Figure 1: Better education levels are associated with better health outcomes in Tanzania
Female and child health outcomes by level of education, 2015



Note: Under-five mortality is reported as deaths per 1,000 children. Vaccination data for children aged between 12 and 23 months.
Source: Tanzania Demographic and Health Survey and Malaria Indicator Survey 2015-16.

Improved levels of education, particularly for mothers, also have important intergenerational effects. Better educated mothers tend to raise healthier children. For example, under-five mortality rates tend to be lower and vaccination rates higher for better-educated mothers (Figure 1). Overall, these fertility and improved outcomes for children can accelerate the onset and secure the dividends associated with the demographic transition most countries experience as they develop (Canning, Raja et al. 2015).

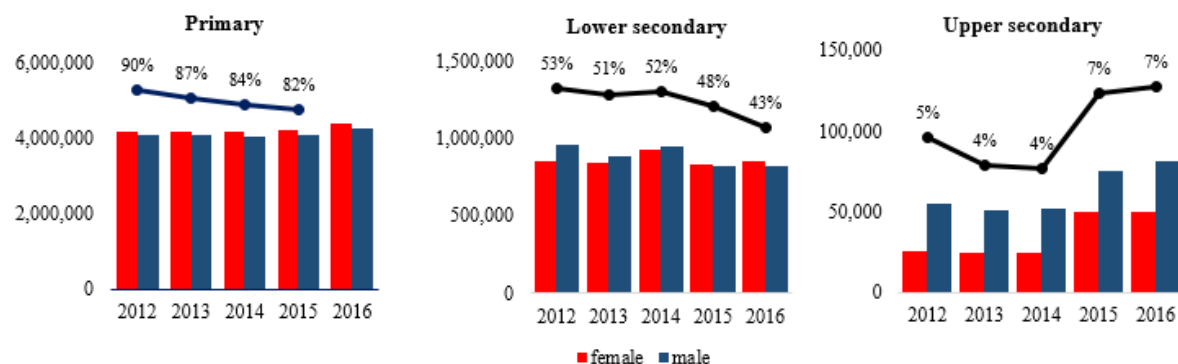
Improvements in education can also provide individuals with the knowledge and skills they need to actively participate in the everyday life of their communities. Studies have shown that education can promote civic engagement and foster greater political participation. In Tanzania, the recent DHS reported much greater access to local media and the internet among individuals with higher levels of education. Better levels of education can also strengthen institutions and improve public services (World Bank 2018). For example, school based-management programs tend to work better when the parents and local community have better levels of education (Carr-Hill, Rolleston et al. 2014).

3. Patterns and trends in primary and secondary education outcomes

Access

Figure 2: Despite recent declines male and female enrolment rates are similar

Enrolment and Gross Enrolment Rates in Tanzania, 2012-2016



Source: Primary education – UNESCO Institute of Statistics. Secondary education - MoEST, EMIS.

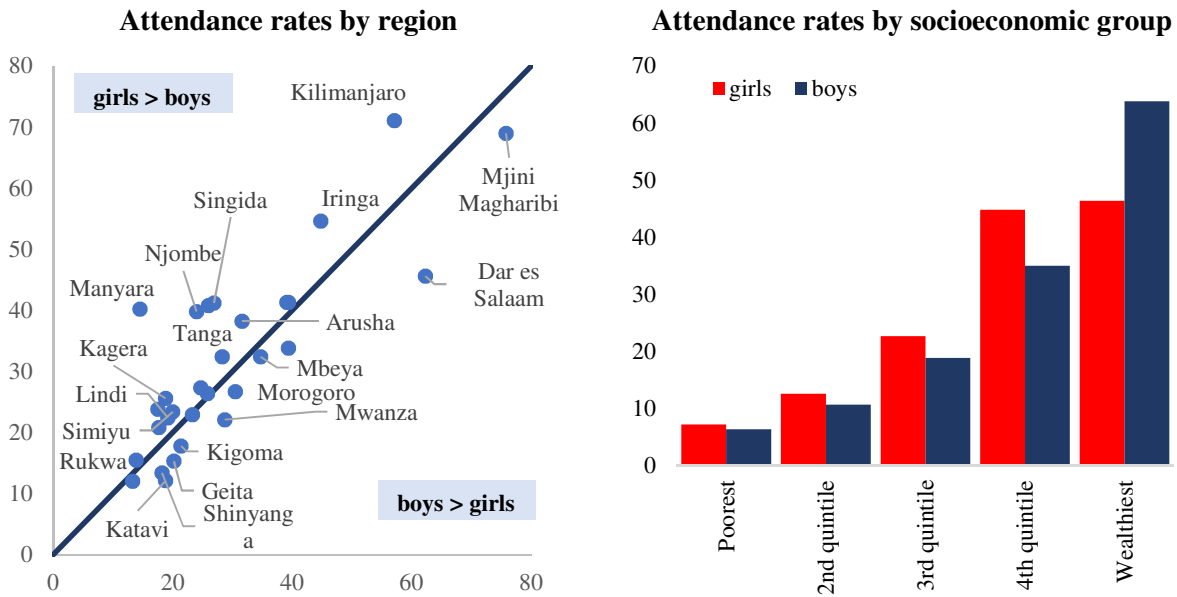
The number of children in primary and lower secondary education has only increased marginally over the last five years (Figure 2). These increases have not been large enough to keep pace with population growth and have resulted in declining gross enrolment rates in primary and lower secondary. However, initial information for 2017 shows that the FBEP, introduced in 2016, has started to reverse this decline. For example, in 2017 the number of students entering primary Standard 1 increased by 41 percent compared with 2016 and enrolments in lower secondary increased by approximately 7 percent.

Despite these recent improvements and a more rapid expansion in upper secondary enrolment, access to secondary education in Tanzania is still low compared to other comparator countries. In 2013, the average gross enrolment rate in Tanzania was 32 percent compared to a low-income country average of 40 percent and enrolment rates in Kenya of 68 percent.

Similar numbers of girls and boys attend primary and lower secondary school but there are substantial gender differences in upper secondary education. In 2016, for every girl in upper secondary, there were 1.6 boys. While the gender mix of upper secondary enrolments has improved recently, Tanzania had the twelfth-lowest gender parity index among the 145 countries that reported data in 2012, comparing unfavorably with other low-income countries and Sub-Saharan Africa averages.

Figure 3: Gender gaps in secondary school attendance differ between regions and socioeconomic groups

Lower secondary gross attendance ratios, 2015



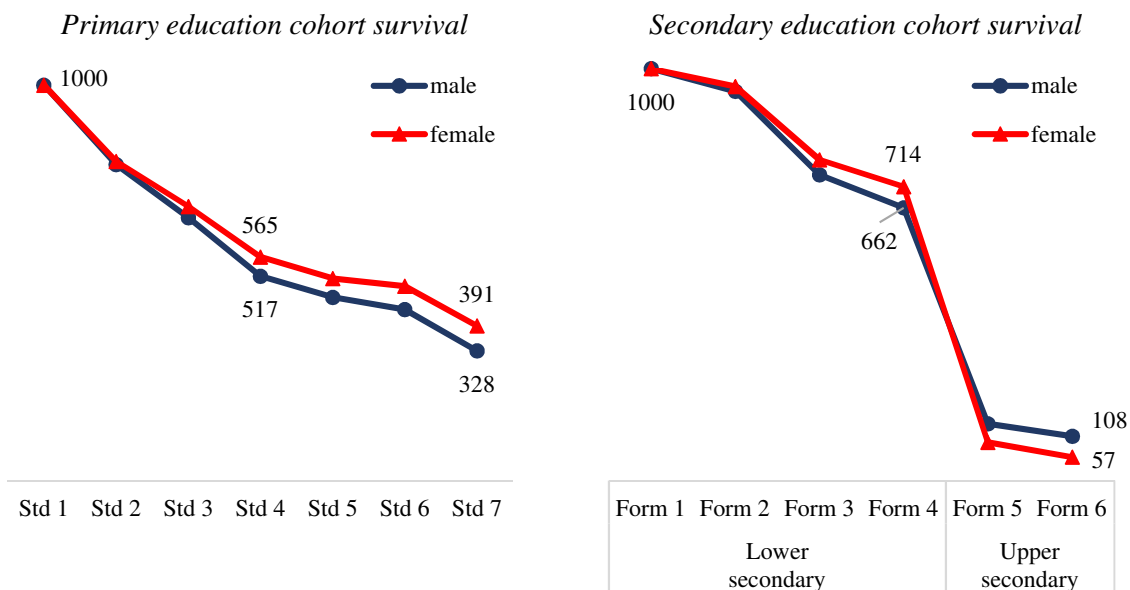
Note: The lower secondary gross attendance ratio is the total number of secondary school students expressed as a percentage of the official lower secondary school-age population (14-17-year-olds).

Source: Tanzania Demographic and Health Survey and Malaria Indicator Survey 2015-16.

Gender disparities in school access differ substantially between different socioeconomic groups and household location. Data from the 2015/16 DHS shows that rural areas tend to have more girls than boys attending secondary school, whereas many more boys than girls attend in urban areas. There are also large differences in gender equity across Tanzania’s regions. Dar es Salaam and Katavi regions have the largest differences in favor of boys whereas Manyara and Njombe have significantly more girls than boys attending secondary school (Figure 3). Unlike many other countries, boys’ attendance rates are much higher than girls among the wealthiest 20 percent of households. This is partly related to location, with a far greater proportion of the wealthiest groups residing in urban centers, like Dar es Salaam, where boys enroll in much greater numbers than girls. In contrast, girls’ attendance rates are higher in all other socioeconomic groups.

Retention

Figure 4: Drop-out rates are high throughout primary and secondary school for both boys and girls
Student progression in primary and secondary education, 2016



Note: The charts show the number of children that successfully complete each grade for every 1,000 students that start primary and secondary. The calculations are based on the reconstructed cohort method and only show the progression of students that do not repeat. When repetition is accounted for overall completion rates are higher.

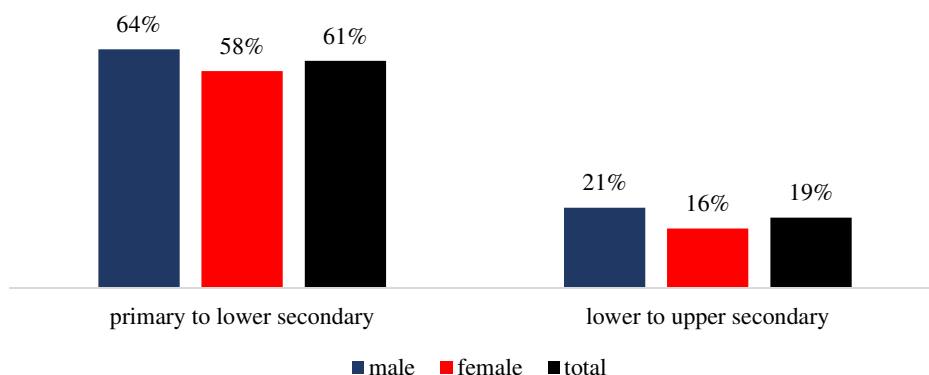
Source: MoEST, EMIS.

Drop-out rates are high throughout primary and secondary education for both boys and girls (Figure 4). Only around a third of children that start primary school finish the cycle in seven years. Accounting for children that repeat, approximately 44 percent of boys and 52 percent of girls that start primary school complete it. Drop-out rates in lower secondary tend to be lower but follow a similar pattern.

Government statistics for primary drop-outs show that the need to work, particularly for boys, and the lack of basic needs (poverty, inability to cover spending) account for 38 percent of drop-out. Other analytical work also confirms the importance of household socio-economic status as a key factor explaining drop-out (Pole de Dakar 2011). The reason for a further 40 percent of drop-outs is not defined while parent's separation and illness accounts for the remainder of drop-outs.

Less information on the causes of secondary school drop-out are reported but in 2016, 12 percent of female drop-out was due to pregnancy. Government statistics on secondary school drop-out only record truancy, death and pregnancy as causes for drop-out. Truancy which is likely to cover many different reasons accounts for over 90 percent of all drop-out. Current government policy prevents girls from continuing their education after they have given birth. In 2015, 3,439 girls reported dropping out of secondary school because of pregnancy. While the information is relatively old, the 2006 household budget survey shows that a further five percent drop-out because they get married.

Figure 5: While more girls reach the end of primary a smaller proportion go onto secondary school
Average transition rates into lower and upper secondary, 2012-2016



Note: The charts show the percentage of students in the last grade of primary (lower secondary) that enroll in lower secondary (upper secondary) in the following year. An average is presented since rates vary year to year.
Source: MoEST, EMIS.

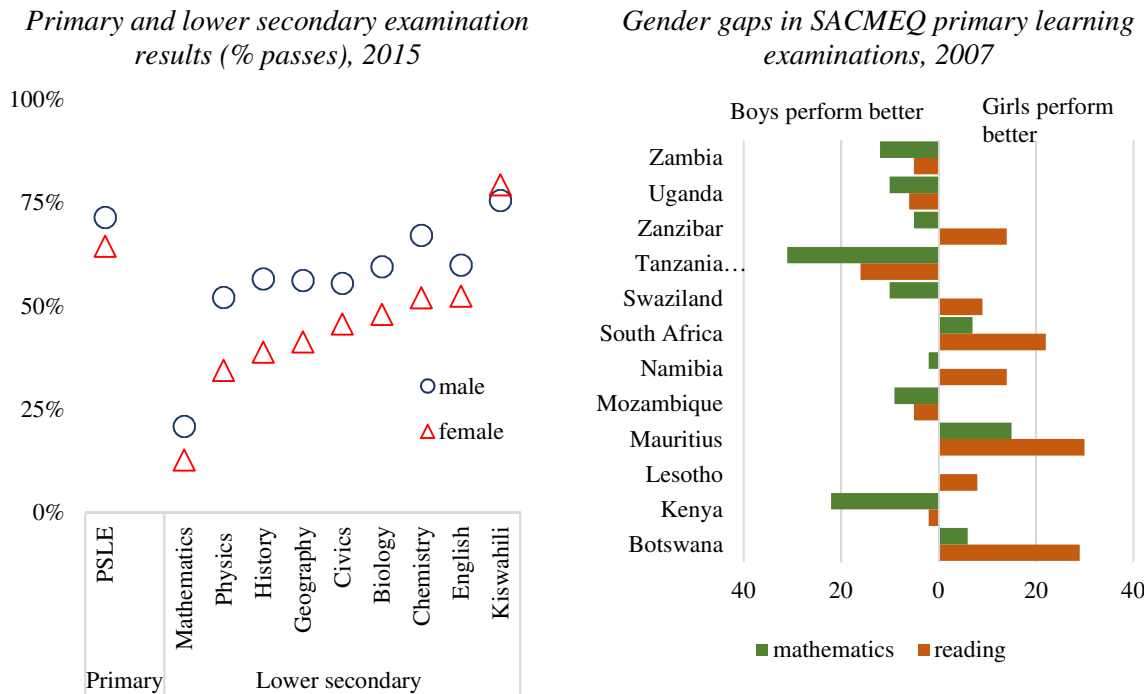
While more girls reach the end of primary, a slightly smaller proportion go onto lower secondary (Figure 5). Transition rates between lower and upper secondary school are low and favor boys significantly. Over the last four years, approximately 21 percent of boys and 16 percent of girls that completed lower secondary schooling went onto upper secondary.

Learning outcomes

A key factor underlying lower female transition rates into secondary school is their Primary School Leaving Examination (PSLE) pass rates (Figure 6). Entry into lower secondary schooling is conditional on a student’s examination scores with priority given to the best performing candidates. Since girls tend to perform less well than boys in the PSLE a slightly smaller proportion are eligible to go onto lower secondary school.

Gender gaps in primary learning outcomes also tend to be large compared to other countries in the region with the mainland also significantly underperforming Zanzibar (Figure 6). Among 12 countries in the Southern Africa Consortium for Monitoring Educational Quality (SACMEQ) assessment in 2007, Tanzania mainland had the largest gender gaps in learning achievement in mathematics and reading (Bashir, Lockheed et al. 2018).

Figure 6: Boys learn more than girls in Tanzania
Examination and assessment results, 2007 and 2015



Source: PSLE and CSE examination results - MoEST, EMIS. SACMEQ results from <http://www.sacmeq.org/?q=sacmeq-projects/sacmeq-iii/readingmathscores>.

At the end of lower secondary, examination results are significantly poorer for girls which also affects their eligibility for upper secondary. The gender gap in pass rates tends to widen between the end of the primary and lower secondary which suggests that girls tend to fall further behind during the lower secondary cycle (Figure 6). The proportion of girls passing and the quality of their passes in the Form 4 examinations result in fewer girls than boys qualifying for an upper secondary school place (see Figure 5).

4. Factors contributing to gender disparities in education

The previous section showed that overall enrolment and completion rates in basic education were similar for boys and girls. However, looking beyond national aggregates gender differences were evident in some regions and in some socioeconomic groups. Section three also highlighted the large gender differences in learning outcomes that increasingly affect the chances for girls to continue their education. Most notably, poor learning outcomes at the end of lower secondary were a key driver of the significantly lower female transition rate to upper secondary. This section explores four key factors that school systems require to provide equitable access to learning opportunities: prepared learners, effective teaching, learning-focused inputs, and skilled management and strong governance. When these factors are absent or ineffective they can reduce overall levels of learning, increase school drop-out and result in gender disparities in education outcomes (Figure 7).

Figure 7: Four factors that contribute to gender disparities in education outcomes



Source: World Bank (2018).

Learners and their households

The socioeconomic status of households is an important determinant of education outcomes. Regression analysis was used to look at how household characteristics affect the probability of children attending and completing schooling.⁴ The regression analysis shows that children from wealthier backgrounds are more likely to attend and complete secondary school (Annex Table 1). While there are no gender differences in the effect of wealth on school attendance, the impact of socioeconomic status seems to be much stronger for girls than boys in lower secondary school completion.

The findings suggest that wealthier households are in a better position to cover the direct and indirect costs of basic education. While the data used to explore these associations was collected prior to FBEP, households face significant direct and indirect costs of sending their children to school. Direct costs for education include the provision of school supplies, the costs of transportation to school, sanitary wear and uniforms. A recent study analyzing the costs of public secondary education provision estimated annual student expenses, excluding boarding and hostel fees, to be TZS 310,000 (US\$140) per year (Mutasa 2016). The direct costs are likely to be higher for parents that choose to send their children to boarding school. These schools are relatively common in Tanzania with approximately a quarter of all government secondary schools offering some boarding facilities.

The opportunity costs of sending children to secondary school can also be high. Household demands on children's time can also mean that girls have less time to devote to their school work when they are out of school. Studies in Tanzania have found that girls work for their households more frequently and for longer periods than boys (World Bank 2006). They also frequently substitute for care work responsibilities when their mother engages in paid work outside of the home (Zambelli, Roelen et al. 2017). This often means that girls have less time to devote to their school work and because they expend greater energy on other activities, arrive at school less ready to learn.

The effect of household size on lower secondary school attendance and completion differs between boys and girls. While the results are not always statistically significant, additional young children in the household tend to have a negative impact on girls' outcomes and little effect on boys. For example, an

⁴ An analysis of the determinants of primary school learning outcomes is reported in (World Bank 2018) Owing to the lack of data it is not possible to replicate this analysis for secondary school learning outcomes.

additional child under the age of 5 reduces the chances of a girl attending lower secondary school by 18 percent (Annex Table 1). This potentially reflects the additional demands on girls to care for young children in the household and the detrimental impact it has on attendance.

Differences in household head preferences for education can also result in gender differences in outcomes. In Tanzania, parents overwhelmingly say that if they only had money to send one child to school, they would send a son (Morris, Hardy et al. 2017). Moreover, using the education level of parents as a proxy for education preferences, the regression analysis shows that outcomes are positively correlated with the education level of the household head although these effects are only significant for boys. Mother’s education seems to affect the probability of lower secondary school completion but the effects are much stronger for boys than girls (Annex Table 1).

Cultural norms, such as early marriage, can also affect education outcomes. Almost one-third of Tanzanian women marry before the age of 18 and analysis has shown that for every year that a girl marries before the age of 18, the likelihood of completing secondary school is reduced by six percentage points (Wodon, Male et al. 2017). A recent study found that socio-cultural norms such as girls lack of agency, the institution of bride price and religious preferences contribute to a propensity for girls to get married early and discontinue their schooling (URT 2017). A household’s socio-economic status can also be a driver of early marriage, with girls being pressured to relieve the financial burdens a family may have by marrying early (Morris, Hardy et al. 2017).

Teenage pregnancy, often a consequence of early marriage, also has serious implications for girls. For most girls of school age falling pregnant means the end of any chance of completing their basic education. The Education Regulations Act (Expulsion and Exclusion of pupils from schools No. 295) of 2002 states that students can be expelled if they are married or commit a criminal offense, including an offense against morality. While teenage pregnancy is not mentioned explicitly it is interpreted by education officials in their duties as an offense against morality. Current legislation also prevents young mothers from returning to government schooling after giving birth. Girls that have been pregnant have extremely low attendance rates compared with the average girl (Table 1). For example, only two percent of girls aged between 15 and 19 years of age that have given birth currently attend school compared to 46 percent of girls that have never been pregnant. Similarly, attendance rates for girls aged between 20 and 25 years of age are 10 percent for girls that have never been pregnant compared to less than one percent of girls who have given birth.

Table 1: Pregnancy negatively affects school attendance

Attendance rates and level of schooling for girls by childbearing status, 2015

	Currently attending school (%) (1)	Level of school attending (%)						Sample Size (n)
		Pri. (2)	Post-Trai n (3)	Sec. ‘O’ level (4)	Sec. ‘A’ level (5)	Post -sec. train (6)	Uni. (7)	
15-19-year-olds								
All boys	39.6	40.6	1.2	54.9	1.2	1.9	0.1	3,203
All girls	34.5	25.7	0.4	69.7	2.1	2.0	0.0	3,158
Never pregnant	46.1	25.6	0.5	69.6	2.3	2.0	0.0	2,134
Girls that have been pregnant but have never had a live birth	5.52	-	-	100	-	-	-	20
Girls that have had a live birth but not currently pregnant	2.0	49.4	-	46.9	3.7	-	-	529
Girls that are currently pregnant	5.2	51.3	-	48.8	-	-	-	238

20-24-year-olds

All boys	12.5	4.7	1.6	36.2	27.9	20.2	9.4	2,194
All girls	6.3	1.5	2.4	33.9	42.3	12.8	7.1	2,679
Never pregnant	24.8	0.7	1.4	34.1	43.4	12.7	7.7	609
Girls that have been pregnant but have never had a live birth	9.5	-	94.0	6.0	-	-	-	24
Girls that have had a live birth but not currently pregnant	0.3	-	-	39.8	60.2	-	-	1,567
Girls that are currently pregnant	0	-	-	-	-	-	-	282

Notes: Column 1 shows the percentage of individuals currently attending school. Columns 2-7 show the percentage of children by level of school attending only for those currently attending school (e.g. 40.6% of boys aged 15-19 years old that are currently attending are in primary school) – Columns 2-7 in each row add to one. Percentages for **all girls** and **all boys** (shaded rows) use household weights while other percentages use individual weights.

Source: (Ministry of Health (MoHCDGEC), Ministry of Health (MoH) et al. 2016).

School inputs

The secondary school network is limited and for many children travel time to school is very long. In 2017, approximately a third of girls enrolled in secondary school had to travel over 3 kilometers to their closest secondary school. These large distances have been shown to impact significantly on enrolment and regular attendance particularly of girls (Pole de Dakar 2011, Theunynck 2017). The costs of transport to cover these large distances can be prohibitive and long walks can expose girls to physical dangers along the way. Moreover, where girls walk to school this can add significantly to their already large physical burdens in the household and affect levels of concentration and effort while at school.

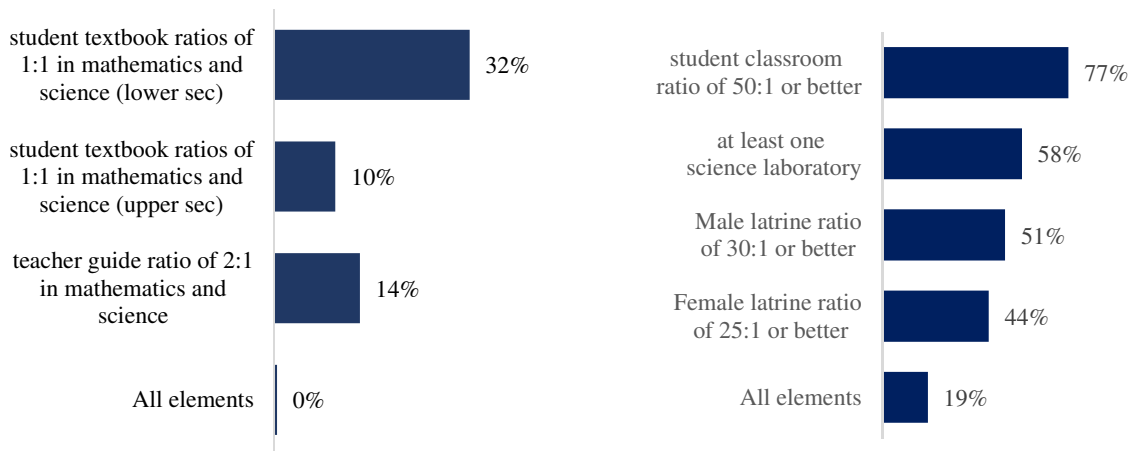
The low quality of school learning environments is a key driver of the relatively low education outcomes in basic education, particularly for girls. A review of recent impact evaluations shows that the quality of school infrastructure has a positive impact on school enrolment rates, attendance rates and learning outcomes (Krishnaratne, White et al. 2013). Improvements in the school learning environment also frequently have a larger impact on girls' performance (Sperling and Winthrop 2015). For example, improved water and sanitation facilities are especially important for the well-being of adolescent girls making the transition to puberty and can support better school attendance and performance.

The existing infrastructure in many government schools is inadequate and the FBEP will place further pressure on these facilities. Existing schools have shortfalls in classrooms and other facilities (Figure 8). For example, many schools have overcrowded classrooms and limited facilities for science teaching. Looking at infrastructure as a complete package shows that less than one in five secondary schools meet minimum infrastructure and school input standards (Figure 8). Without increased investment to eliminate these shortfalls and the building new schools in underserved areas the expected expansion in enrolment from the FBEP will not result in an improvement in education outcomes and a narrowing of gender inequalities in learning.

Figure 8: Most secondary schools lack basic infrastructure and teaching and learning materials
Availability of Teaching and Learning Materials and Basic Infrastructure, 2017

Percentage of government secondary schools with adequate teaching and learning materials, 2017

Percentage of government secondary schools with basic infrastructure, 2017



Source: EMIS.

The poor quality and lack of menstrual hygiene management conditions in latrines, overcrowded boarding dormitories and lack of health services can also impact girls’ performance (Sperling and Winthrop 2015). For example, the availability of water and sanitation facilities tend to vary widely across secondary schools. Only 44 percent of secondary schools had adequate numbers of toilets for girls and 54 percent of secondary schools have no regular water supply throughout the year. Focus groups of female secondary school students also highlighted the poor quality of learning environments as a major factor hampering their education (see Box 2).

Box 2: Focus group findings on secondary school teacher attitudes and behaviors

In October 2017, a World Bank team accompanied by CAMFED visited a lower and upper secondary school in Chalinze, Tanzania. The objectives were to explore the challenges that young women face in schools in Tanzania. Focus groups were held with female students and teachers in lower and upper secondary.

Major findings from discussions with female students are that girls face many constraints in school, the biggest of which was the poor quality of the school environment and the punishment they receive from teachers. For example, responses to the question “What is a school of quality” reflect the frustrations that students experience at school. Most of the responses received included the physical characteristics of schools as well as teacher behavior. Issues around cramped dormitories and classrooms and poor water and toilet facilities were raised repeatedly.

Moreover, school feeding and health came out as a prominent issue in these focus groups. In a context where many of these students live at the school which is a boarding school, girls often mentioned hunger and lack of adequate school meals as a challenge that they face. Furthermore, poor health care and poor health (including sexual health) were often cited as causes for missed classes.

Source: Focus group discussions conducted by authors in Chalinze, 2017.

In Tanzania, lack of nutrition and health came out as prominent challenges that girls face. According to the Head Teacher during a focus group in the town of Chalinze in 2017, the only contribution asked of parents is TZS 1,250 per student per term for school meals, however, the reality is that often the school does not receive these full payments nor would such payments be enough to provide quality school meals to all students and teachers. In a context where many students live at the boarding school, girls often mentioned hunger and lack of adequate school meals as a challenge that they face.

Teachers

A lack of well trained and motivated teachers, particularly in mathematics and science, is a key factor driving low levels of learning in Tanzania. Available evidence suggests that despite recent increases, government secondary schools still suffer from teacher shortages. Across the system, estimates of teacher requirements show that only half of the needed secondary school mathematics teachers are available and only 75 percent of the required physics teachers.

Evidence also suggests that the skills and motivation of teachers are low. Even when teachers are in post, absenteeism and administrative duties limit the amount of time they spend in the classroom. A recent study in five regions found a fifth of government secondary school teachers absent during unannounced visits. Moreover, only 30 percent of the teachers that were present were in the classroom teaching (Filmer, Habyarimana et al. 2017). The relatively poor secondary school examination rates also suggest that the competencies of existing teachers are low (see Figure 6).⁵ While there has been some progress on strengthening the systems that manage and support teachers they remain weak. For example, in-service training is irregular and often addresses only some of the weaknesses in competencies exhibited by teachers.

Teachers in Tanzania are provided little training to challenge gender biases and support adolescent girls through guidance and counseling. Programs in other countries that have provided training for teachers to adopt gender-sensitive approaches have succeeded in addressing gender stereotypes and improving the learning environment for girls. For example, a study in Egypt found that regular in-service teacher training improved the likelihood that girls would successfully complete secondary school (Lloyd, El Tawila et al. 2003). In Tanzania too, providing training on pedagogical support and other forms of in-school support for girls has been shown to narrow gender inequalities in student learning at the secondary level. Moreover, these effects tend to be larger than the benefits of bursaries and cash transfers (Alcott, Rose et al. 2017).

Differences in teacher expectations and attention also drive gender differences in learning outcomes (Box 3). For example, lower expectations of girls' ability may limit the attention teachers give to girls or may cause them to steer them away from science and mathematics. Girls are also called on to perform chores for teachers at school (e.g. fetching water, cleaning classrooms) which can reinforce gender stereotypes as well as take time away from learning (UNICEF 2003). Pressure to perform well in the high-stakes national examinations can also encourage teachers to focus their effort on better-performing students that can widen gender gaps as children progress through the basic education cycle (Bashir, Lockheed et al. 2018).

Box 3: Focus group findings on secondary school teacher attitudes and behaviors

Major findings from discussions with students and teachers reveal that teachers are a challenge to girls in schools. In discussions with teachers on their perceptions of girls, the focus group identified that teachers have negative attitudes about girl's ability and identified drivers that they believe contribute to the challenges girls face in schools. For example, multiple teachers believe that student's family traditions and cultures were barriers to them studying hard and succeeding in schools.

In discussions with girls on their favorite and least favorite teachers, and their reasoning for their ranking, negative teacher behavior, and corporal punishment, were frequently mentioned as a challenge that girls face. Teachers who were "merciful" were cited as being the preferred teachers. Students mentioned that harsh punishment by teachers and unfair punishment for student mistakes was a challenge for them in schools – and in some cases cited this as a waste of their learning time. Additionally, students believe that teachers are not equipped to teach, are too severe, and are uncaring about their students.

Source: Focus group discussions conducted by authors in Chalinze, 2017.

⁵ There is no information on secondary school teacher competencies. However, the latest Service Delivery Indicator Survey found that only 22 percent of primary school teachers had minimum mastery in the curriculum they teach.

School Management

Good school leadership can ensure the effective use of teachers and other resources to support the educational outcomes of all children. Recent studies have found a strong and positive relationship between the quality of management at the school level and student learning outcomes (World Bank 2018). However, school-level management capacity is low in Tanzanian schools in absolute terms and relative to the other low-income countries. The remaining part of this section focuses on two drivers of poor outcomes for boys and girls that relate to weak overall management at the school level.

Ineffective management at the school level can fail to prevent gender and school-based violence. Recent evidence in Tanzania highlights a high incidence of gender-based violence. The main findings of a representative survey of 13-24-year-old youth conducted in Tanzania in 2009 included (UNICEF, CDC et al. 2011):

- 30 percent of girls and 14 percent of boys had experienced sexual violence prior to the age of 18. Almost a quarter of reported incidents occurred while traveling to or from school and 15 percent reported that at least one incident occurred at school.
- 50 percent of girls and 66 percent of boys did not tell anyone about the abuse they had suffered. Only 20 percent of girls and 10 percent of boys sought out support services after incidents.
- Approximately 75 percent of boys and girls experienced some form of physical violence by the age of 18. Teachers were reported by more than half of these children as perpetrators of physical violence.
- The incidence of emotional violence was also relatively common with around a quarter of girls and 30 percent of boys reporting some experience before the age of 18.

Given that less than half of children attend school, these results suggest that gender-based violence in school or on the way to school is very common. Moreover, mental health experts find that corporal punishment may produce a host of negative outcomes for children that can affect their schooling including depression, withdrawal, anxiety, substance abuse and precocious sexual behavior (Hyman 1995).

The recent Ending Violence in Childhood Global Report provides a comparison of childhood violence across different countries in Sub-Saharan Africa (Table 2). Overall, Tanzania's indicators on childhood violence tend to be below or at regional averages. However, the experience of childhood violence is still relatively common. The report shows that a third of girls aged between 15 and 19 have experienced physical violence and 13 percent sexual violence.

Table 2: Key indicators of inter-personal violence in childhood, 2015

Country	Corporal punishment at home (% of 1-14 years)	Peer violence in schools		Violence against adolescent girls		
		Bullying (% 13-15 years)	Physical fights (% 13-15 years)	Physical violence (% 15-19 years)	Sexual violence (% 15-19 years)	Child homicide rate (per 100,000)
Kenya	84	57	48	27	11	3
Burundi	97	70	48	35	12	5
Ethiopia	88	50	51	34	13	6
Ghana	94	62	53	32	17	5
Tanzania	77	28	40	24	13	6
Malawi	72	45	23	21	18	1
South Africa	76	37	34	26	8	8
Uganda	80	46	36	54	19	10

Zambia	80	65	53	33	16	6
SSA average	82	47	41	29	12	7

Note: SSA average based on country averages for 41 SSA countries.

Source: Know Violence in Childhood. 2017. Ending Violence in Childhood: Overview. Global Report 2017.

Know Violence in Childhood. New Delhi, India.

While some forms of corporal punishment in schools are permitted by law, safeguards to monitor and ensure that laws are complied with are unevenly enforced by school management. Although the law prohibits child abuse and torture, it does allow for “justifiable correction,” which includes the caning of children. While the Education Regulations Guidelines of 1979 regulate the type and severity of corporal punishment and requires reporting, the incidence and severity are likely to be under-reported. Grievance redress mechanisms are also weak at the school level and are unlikely to provide sufficient protection for students suffering the worst forms of violence.

Research in Tanzania has shown that strong links between schools and local communities can improve girls’ education outcomes. For example, a recent intervention to support the schooling of marginalized secondary school girls included support for community initiatives through grants to parent support groups and a series of community sensitization campaigns. These formed part of a broader package of support which resulted in better education outcomes for girls and particularly marginalized girls (Alcott, Rose et al. 2017). While schools have school managing committees and school boards these are often dysfunctional or have limited representation from parents and the local community. For boarding schools where students are drawn from outside the local community, the links between school, parents and other stakeholders can be particularly weak.

5. Promising policy directions to narrow gender disparities

Table 3 provides a summary of the main suggestions for improving education outcomes and narrowing gender gaps. The suggestions are drawn out of the analysis of the key drivers of gender disparities in education and a review of the evidence on effective interventions to tackle these constraints.

Table 3: Summary of policy suggestions to improve education outcomes and narrow gender gaps

Area	Issue	Policy Suggestion
Learners and their households	Direct and opportunity costs of schooling	- Extend the conditional cash transfer program to provide greater coverage of poor households, cover a greater amount of secondary school costs for girls and include non-formal pathways.
	Gender differences in preferences	- Communicate information on the benefits of girls' education , the constraints girls face in performing well at school and other issues such as the impact of early marriage on life chances.
	Early marriage and pregnancy	- Explore increasing the minimum age of marriage for both boys and girls to 18. - Consider removing the 2017 directive to prevent young mothers from re-entering the formal education system. - Formalize and make accessible a pathway for re-entry of young mothers into education through regular schools and non-formal pathways.
School inputs	Limited school network in underserved areas	- In the context of FBEP expansion, implement a strategy to rehabilitate existing schools and construct new schools based on LGA needs in locations that reduce the distance between home and school.
	Poor quality and inadequate learning environments	- Introduce LGA targets for all schools to meet Tanzania infrastructure standards (e.g. adequate water and sanitation facilities, student classroom ratios of 40:1) and have sufficient teaching and learning materials (e.g. student textbook ratios of 1:1). - Ensure that priority is given to infrastructure that supports girls including adequate latrines and availability of water.
Teachers	Lack of well-trained and motivated teachers	- Increase teacher numbers in line with standards and prioritizing subject areas with acute shortages (e.g. mathematics and science). - Institutionalize a system of in-service teacher training . - Establish a teacher awards program that rewards teachers for reductions in gender gaps in school performance.
	Limited teacher support to adolescent girls	- Provide in-service teacher training to challenge gender differences in teacher expectations - Establish teacher mentors to provide specific support for girls in school.
School management	Weak leadership affects student outcomes	- Strengthen school leadership training and include modules on tackling gender and school based violence . - Organize specific interventions to improve girls' performance through organizing increased learning time and after-school activities (e.g. girls' clubs).
	Lack of focus on gender and school-based violence	- Review legislation on corporal punishment and consider abolishing its use in all education settings. - Strengthen grievance redress mechanisms to improve reporting of gender and school-based violence and improve compliance with existing laws and regulations. - Enforce Teacher Service Commission (TSC) procedures for dealing with excessive use of corporal punishment and/or inflicting sexual violence on students
	Limited engagement with community	- Reinvigorate school boards and school management committees .

Policies to address constraints affecting learners and their households

The Tanzanian government's announcement in 2016 of FBEP has lifted an important barrier to education access and completion. Easing the costs faced by households of sending their children to school is already having a pay-off. In 2017, the year after the introduction of FBEP, enrolment in primary and secondary schooling increased significantly.

However, additional support is likely to be required to reduce the other direct and opportunity costs associated with education, particularly for poor and vulnerable households. This note has shown that the socioeconomic status of households is a strong predictor of education outcomes including both enrolment and completion. Additional policies beyond the abolition of fees will be needed to enable poor households to send and keep their children in school. Conditional cash transfer programs have been used successfully in many countries to encourage poor households to send and keep their children in school (Snilstveit, Stevenson et al. 2015).

Tanzania's Productive Social Safety Net (PSSN) program provides conditional cash transfers that incentivize school attendance for children in poor households (TASAF. 2016). In 2015, 1.1 million households, approximately 14 percent of all households, were enrolled in the program. Through cash transfers, conditional on school attendance, the program has the potential to greatly increase the attainment of children in the poorest households in Tanzania. It could support universal basic education further by increasing overall coverage of the approximately 25 percent of households that fall below the poverty line. Consideration could also be given to increasing the transfers associated with secondary school attendance. Currently, the program pays between TZS 48,400 (US\$ 22) and 70,400 (US\$ 32) for a child in secondary school each year. Compared to the average annual non-fee student expenses of TZS 308,000 (US\$ 140) highlighted in a recent study it is possible that current levels of support are insufficient to adequately support the education of poor students.

While conditional cash transfers have been successful at getting students to attend school they have been less successful at improving learning outcomes. However, there is evidence that linking rewards or cash transfers to learning outcomes or providing transfers to students themselves can improve both enrolment and learning outcomes. In Kenya, a merit scholarship provided to girls increased examination scores significantly even for poorly performing girls who were unlikely to win a scholarship (Kremer, Miguel et al. 2009). A recent impact evaluation in Mozambique found that providing primary school girls with a school supplies voucher conditioned on attendance improved both attendance and learning outcomes (de Walque and Valente forthcoming). While this evidence is from primary schooling, piloting similar interventions may provide useful information on how to tackle both high levels of drop-out and low learning that afflict the secondary school system in Tanzania.

Improving the information that households base their schooling decisions on also has the potential to both increase their investments in education and providing additional support to their daughters. The note has shown that the returns to education in the labor market are higher for girls than boys. Providing information of this kind along with information on the types of occupations that are open to girls can shift household preferences for education. Providing parents with information on their children's performance in school can also improve outcomes. The most successful programs of this kind gave parents regular information on attendance and more detailed information on student performance on class work rather than just test results (World Bank 2018).

Reducing the incidence of early marriage and reducing teenage pregnancy will have significant benefits for girls. Current laws in Tanzania allow children, with their parent's consent, to marry at 14 years of age. As this note has shown this can hamper educational opportunities and overall life chances for the girls affected. Raising the minimum age of marriage to 18, as other countries in the region have done, would

be an important first step. Over the past 3 years, many countries in Africa, including Ethiopia, Malawi, and Zimbabwe, have joined an African Union initiative to increase the minimum age to 18 and remove loopholes that allow children to marry earlier. However, changes in policy will not be enough, they need to be backed up with activities to communicate the changes widely and measures need to be taken to enforce them.

More generally, activities that tackle the underlying factors associated with early marriage can also support better education outcomes. In Burkina Faso, Ethiopia and Tanzania a comprehensive package of interventions targeted at keeping girls unmarried delayed child marriage by as much as 50 percent and as little as 33 percent for girls aged between the 12 and 17 (Medhin and Weissman 2017). In Tanzania, the program provided training for local community and religious leaders on issues related to child marriage, provided school supplies to girls on condition that they remained unmarried and provided non-financial incentives to the families of participating girls.⁶ Other programs in Sub-Saharan Africa have also been successful at reducing the incidence of child marriage (Box 4).

Box 4: Ending Child Marriage in Ethiopia

In Ethiopia, Berhane Hewan (“Light of Eve”) was a two-year project conducted from 2004 to 2006 that aimed to end child marriage in rural Ethiopia, through a combination of group formation, support for girls and community awareness.

The program provided families with cash conditioned on their daughters remaining unmarried and in school for the duration of the program. The program also included social mobilization of girls led by female mentors, provision of school supplies, livelihood skills for out-of-school girls, and “community conversations” on early marriage and reproductive health.

The intervention was associated with considerable improvements in girls’ school enrolment, age at marriage, reproductive health knowledge and contraceptive use. The program found that girls aged 10-14 participating in the program were more likely than those not in the program to be in school and not to be married. The program did find, however, that girls in the older cohort did not experience reductions in marriage rates, indicating that age at which students are provided information is important for reducing the likelihood that they will remain unmarried and in schools. The success of the Berhane Hewan program, suggests that well-designed and effectively implemented programs can delay the earliest marriages until later adolescence.

Source: Erulkar and Muthengi (2009).

Reassessing policies that prevent young mothers from re-entering formal schooling also have the potential to improve education outcomes. In Tanzania, girls that get married or become pregnant are not allowed to continue their studies in the formal government school system. This goes against the spirit of international treaties and conventions that Tanzania is a signatory to. Some of these treaties, for example, the African Charter on the Rights and Welfare of Children, have specific provisions for the right of pregnant girls to be provided with opportunities to complete their schooling.⁷ Many countries in the region, as well as Zanzibar, have successfully introduced girls’ re-entry programs. The Forum of African Women Educationists (FAWE) has advocated and supported the introduction of these programs in 33 countries since its establishment 25 years ago (Tembon and Court 2008).

Providing alternative pathways for young mothers to continue their education could also be made more accessible and affordable. While teenage mothers have access to non-formal education pathways, this is often not the case in practice. Some local governments have incorrectly interpreted the policy on

⁶ This model cost \$117 per girl per year.

⁷ Article 11(6).

expelling pregnant girls from formal schools as a blanket ban on pregnant girls accessing any form of education. Even when non-formal education is open to young mothers, access is patchy and the costs prohibitive. In 2017, only 4,198 girls were enrolled in Open and Distance Learning (ODL) centers and studying for secondary school qualifications. Moreover, some regions had very little provision at all. For example, Dodoma, Manyara, Mara, and Kibwa reported no ODL provision at all. Students also must pay for non-formal education and the costs can be prohibitive. For example, from a visit to an ODL center in Dodoma the average annual costs of enrolling on the secondary school courses ranged from TZS 220,000 – 264,000 (US\$ 100-120). Providing clearer guidance to local governments to prevent the denial of non-formal education to young mothers is vital. Reducing the overall cost of non-formal education and ensuring that the condition for secondary school attendance in the cash transfer program includes non-formal education would enable more young mothers to continue their education.

Policies to improve the quality of school learning environments

The FBEP provides a unique opportunity to plan the school network in a way that reduces distances to school. It is estimated that approximately 200,000 new classrooms will need to be constructed over the next five years to keep pace with enrolment expansion. This will require building more classrooms in existing schools and establishing new schools. Locating new schools in underserved areas and in locations that reduce travel time will have significant benefits. A construction strategy that supports local governments to effectively plan and implement this expansion is well underway. It is crucial that the plans are evaluated and implementation monitored to ensure the most efficient expansion path.

Investing in good quality learning environments will improve student outcomes particularly for girls. Infrastructure investments have a positive impact on school enrolment, attendance and learning achievement (Krishnaratne, White et al. 2013). The construction of new schools in rural areas of Afghanistan increased enrolment rates and learning outcomes for all students but especially girls (Burde and Linden 2013). Ensuring that new construction accommodates the needs of girls can also narrow gender gaps in education outcomes (Sperling and Winthrop 2015). For example, improved water and sanitation facilities in schools are especially important for the well-being of adolescent girls making the transition to puberty and can support better school attendance. The provision of separate latrines for adolescent girls in India significantly increased their attendance (Adukia 2017). Moreover, improved provision of teaching and learning materials are likely to have greater benefits for girls where existing resources are allocated unequally.

Coordination between the central and local government will be crucial to ensure that all the required school inputs come together in the classroom at the same time. Existing information systems can be used to plan, set targets and monitor the number of schools that have the full set of minimum inputs outlined in government standards and norms.

Policies to increase the skills and motivation of teachers

The shortage of well-trained teachers in specific subject areas represents a significant impediment to improving education outcomes. Research from many different countries demonstrates the important role played by teachers in increasing students' learning and improving their academic performance (Chetty, Friedman et al. 2011, Bruns and Luque 2014). However, Tanzania suffers from significant teacher shortages and the very large increase in future teacher demand brought about by FBEP. The government has already developed a primary school teacher hiring and deployment strategy to identify teacher shortages and support a more equitable distribution of teachers across schools. A similar strategy is needed in secondary education to establish norms for school teacher provision and mechanisms through which shortages can be dealt with in the short-term (e.g. using related subject teachers to teach in subjects with teacher shortages,

increasing teacher working loads). The norms can also provide the basis to assess the current distribution of teachers and identify redistributions needed to improve efficiency.

Establishing a system to provide good in-service training opportunities is necessary to improve teacher competencies. Effective teacher professional development ensures that training is based on concrete and practical content rather than strictly theoretical, training on teaching practice is subject-specific rather than general and teachers receive continuous support rather than one-shot training. Examples of successful programs that provide long-term coaching have shown to have positive impacts on student learning in African countries (Popova, Evans et al. 2016).

Providing teachers with the skills necessary to support at-risk learners and adolescent girls is also important. In-service training will help to equip teachers with the skills to identify at-risk students and teaching practices that support equal learning environments. Training can also help teachers, understand issues around adolescence and methods to support boys and girls through this stage of their lives. It can also address issues of physical/corporal punishment and train teachers on approaches to identify and prevent physical, sexual and emotional violence. Gender-responsiveness training of this kind was associated with improved outcomes for girls and boys (Markus and Page 2016). Training of this kind could also support the establishment of teacher mentors in all schools to provide support to adolescent girls. Similar programs have had significant success in Tanzania (see Box 5).

Box 5: Teacher Mentors in Mwanza

In Tanzania, in response to observations that girls experienced sexual abuse by peers and teachers, a guardian program was implemented in 1996 in the Mwanza Region. The main goal of the program was to create a more protective environment for primary school girls against sexual exploitation through the establishment of a guardian program in every primary school. Female teachers were elected by their colleagues and trained as guardians for female students, with the result that girls felt there was someone to turn to for advice about school-based violence and the wider community began to confront sexual violence more open. The guardian program was successful at making the school environment more conducive for learning, particularly for girls.

Source: Mgalla, Schapink et al. (1998).

The introduction of a teacher recognition awards program can help to motivate teachers and provide a spotlight on gender gaps in school outcomes. The note has highlighted the relatively high levels of teacher absenteeism in government secondary schools. Introducing a teacher recognition award that rewards teachers based on male and female student examination results, reductions in drop-out and completion of teacher in-service training could improve teacher motivation. The impact of teacher incentive programs of this kind has been mixed. Their success tends to depend on the types of programs introduced and whether complementary support (e.g. training, additional school resources) is provided at the same time (Snilstveit, Stevenson et al. 2015). A small pilot in Tanzanian secondary schools found that the introduction of non-monetary awards for teachers based on student performance was successful at improving learning outcomes (Filmer, Habyarimana et al. 2017). Other evidence from Tanzania also shows that combining teacher incentives with additional resources to improve the learning environment can also be a successful strategy to raise outcomes (Mbiti, Muralidharan et al. 2015).

Policies to strengthen school management

Further training and support to school headteachers in management and teacher support is needed. The quality of school leadership is a significant determinant of overall levels of learning in a school and how equitably they are distributed (Bashir, Lockheed et al. 2018). Headteachers are responsible for monitoring and supervising teachers, motivating students, administering school funds and managing relationships with parents and the local community. The note has shown that overall management quality

in Tanzanian schools is quite low. While much of the evidence is from developed countries it shows that school leadership can be an effective way of ensuring that head teachers have the skills they need to undertake their responsibilities effectively. For example, in the United States of America, a 300-hour training course spread over two years found significant improvements in student learning outcomes (Fryer Jr 2017). Course content included how to provide teacher feedback, how to use student assessment data and how to develop school targets and goals. Qualitative evidence also suggests that where schools have a focus on gender equality, a more gender-sensitive approach is used in the classroom (Markus and Page 2016). Using this growing evidence base on effective leadership training can strengthen existing training courses in Tanzania to ensure that schools function effectively for all students.

Policies on the use of corporal punishment in schools should be reassessed and school leadership should ensure that existing rules are adhered to. To ensure that schools provide a safe and secure environment for girls and boys, a reassessment of the existing legislation on the use of corporal punishment in schools is needed. Given the harmful effects it has on children and their education this reassessment should ensure that if corporal punishment remains in schools that there are mechanisms through which students are able to report abuses and seek redress. The operation structure, timeline for case handling and protocols of the grievance redress mechanism should be made public and a sensitization campaign held in all local governments and schools. Moreover, the Teacher Service Commission (TSC) should be brought in to enforce its policies and consequences regarding teachers abuse of corporal punishment and infliction of violence (including sexual violence) on students. Providing specific training to headteachers to outline their roles and responsibilities around gender and school-based violence can also support efforts to make school safe for all children.

Schools should also aim to provide additional support to girls through after-school programs. Girls clubs have been one initiative that has been successful in many different settings (Bashir, Lockheed et al. 2018). Clubs run by BRAC Uganda offer games, music, sex education, financial literacy, vocational training, and access to microfinance for young women (in and out-of-school) trying to become entrepreneurs. Girls who have been members of the clubs for two years were found to be 72 percent more likely to be involved in income-generating activities, such as getting a job or becoming self-employed, than girls who did not join the clubs. They were also 26 percent less likely to get pregnant as a teenager and 58 percent less likely to marry or move in with a boyfriend (Bandiera, Burgess et al. 2014). In Nigeria and Tanzania, the Transforming Education for Girls in Nigeria and Tanzania (TEGINT) program found that girls' clubs were associated with improved learning outcomes and study skills (Mascarenhas 2012)

Improving links between schools and local communities could also foster better parental support for girls' schooling. While schools are required to have a school management committee or board, in general, these do not function in the way that was originally intended. In particular, school committees and boards are not regularly involved in school decision making and do not often receive information on school affairs (Masue 2014). Renewed efforts to ensure that school boards have the appropriate representation, meet regularly and have decision making authority would improve local community engagement and provide stronger accountability for school affairs.

6. The need for a multidimensional approach

This note has shown that tackling high levels of drop-out and improving learning outcomes particularly for girls are vital for the successful implementation of the FBEP and to achieve gender equity. It has shown that there are a host of factors, both in and outside of the school system, that drive these poor outcomes and large gender gaps. Experience in Tanzania and elsewhere shows that there are interventions capable of tackling each of these factors.

Since the drivers of gender differences in educational outcomes are multifaceted any initiative to tackle them also needs to take a multidimensional approach. Approaches of this kind have been shown to be effective at raising education outcomes particularly for girls (Bashir, Lockheed et al. 2018). In Burkina Faso, an initiative aimed at improving education outcomes for children in rural villages adopted a multidimensional approach (Kazianga, Levy et al. 2013). It provided new schools with water and sanitation facilities, separate latrines for boys and girls. A set of complementary interventions included the provision of school meals, take-home rations for girls' conditional on attendance, school provisions, information campaigns on the benefits of education (particularly for girls), an adult literacy program for mothers and gender sensitivity training for teachers. The program led to an overall increase in enrolment of 19 percentage points but girls' enrolment increased significantly more than boys. It also improved test scores in mathematics and French by a similar magnitude for both boys and girls.

A similar multidimensional approach has had some success in Tanzania. Camfed, a non-governmental organization, has addressed many constraints affecting girls secondary schooling simultaneously. The approach aims to remove financial barriers by covering direct and indirect costs of schooling for girls, provide support to community-led initiatives to engage parents, train teacher mentors, staff and parents to improve educational quality and develop and distribute low-cost educational resources. It also enables young women graduates to take on a leadership role as 'Learner Guides' in their local schools to provide mentoring and deliver a life skills curriculum. Over the last five years, it has provided support of this kind to approximately 65,000 girls and a similar number of boys in 201 secondary schools across Tanzania. A recent evaluation showed that the multi-dimensional approach was successful at narrowing gender inequalities and raising levels of student learning at the secondary level (Alcott, Rose et al. 2017).

Learning from experiences like this and trialing similar approaches at scale holds out the prospect of significantly improving educational outcomes and narrowing gender gaps. Promising small-scale interventions like this often have difficulties when attempts are made to scale them up. In Kenya, for example, a successful small-scale intervention to hire contract teachers to reduce class sizes was successful at improving learning outcomes (Bold, Kimenyi et al. 2013, Duflo, Dupas et al. 2015). Yet a combination of limited capacity to manage the new contracts and teacher union objections meant the same approach failed when it was scaled up. A different approach to scale up where an initial set of solutions, like the multidimensional approaches outlined in this section, are used as a starting point and adapted through experience and evaluation during implementation are more likely to be successful (Andrews 2015, Banerjee, Banerji et al. 2016). An approach of this kind also has the potential to contribute to the success of FBEP and move Tanzania further towards its goal of universalizing access to basic education

Annex Table 1: There are gender differences in associations between household characteristics and education outcomes

Marginal effects from a logistic regression on lower secondary school attendance and completion

	Lower secondary school attendance			Lower secondary school completion		
	Total (1)	Male (2)	Female (3)	Total (4)	Male (5)	Female (6)
Individual characteristics						
Orphan	-0.22 (0.27)	-0.45 (0.47)	-0.11 (0.32)	0.16 (1.11)	-0.26 (1.92)	0.001 (0.76)
Male	0.32*** (0.10)			0.69*** (0.15)		
Household characteristics						
Wealth index	0.36*** (0.09)	0.41*** (0.12)	0.36*** (0.12)	0.37*** (0.13)	0.36** (0.16)	0.50*** (0.18)
Sex of h/h head	0.37*** (0.14)	0.43** (0.18)	0.25 (0.19)	-0.50*** (0.18)	-0.74** (0.31)	-0.43* (0.26)
Age of h/h head	0.02*** (0.004)	0.01* (0.01)	0.02*** (0.01)	0.02*** (0.01)	0.04*** (0.01)	0.01 (0.01)
Education of hh head	0.04*** (0.02)	0.09*** (0.02)	0.01 (0.02)	0.16*** (0.04)	0.35*** (0.06)	0.02 (0.04)
Mother's education	0.05 (0.06)	0.06 (0.08)	0.03 (0.09)	1.90*** (0.15)	0.48*** (0.12)	4.07*** (0.35)
Household size	-0.16*** (0.04)	-0.13** (0.05)	-0.21*** (0.07)	0.08 (0.07)	0.07 (0.09)	0.10 (0.13)
No. children under 5	-0.05 (0.06)	0.10 (0.08)	-0.18** (0.08)	-0.11 (0.10)	-0.06 (0.12)	-0.07 (0.17)
No. children under 18	0.25*** (0.05)	0.14** (0.06)	0.38*** (0.09)	-0.18 (0.11)	-0.07 (0.13)	-0.41** (0.19)
H/h owns land	0.18 (0.15)	0.04 (0.22)	0.25 (0.20)	-0.04 (0.19)	-0.37 (0.26)	0.01 (0.29)
Time collecting water	-0.001 (0.001)	0.001 (0.001)	-0.001 (0.001)	0.001 (0.001)	0.0003 (0.001)	0.002 (0.002)
Household location						
Urban household	0.81*** (0.17)	1.14*** (0.24)	0.60** (0.24)	0.43* (0.24)	0.88*** (0.33)	0.19 (0.33)
Km to market	-0.002 (0.003)	-0.001 (0.003)	-0.003 (0.004)	0.004 (0.004)	0.002 (0.005)	0.006 (0.005)
Km to health center	-0.02 (0.01)	-0.02 (0.02)	-0.02 (0.02)	-0.03 (0.02)	-0.02 (0.03)	-0.07** (0.03)
Constant	-2.19*** (0.37)	-1.76*** (0.57)	-2.15*** (0.47)	-8.24*** (0.77)	-6.73*** (1.1)	-11.76*** (1.21)
Regional dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	50,898	24,773	26,125	52,093	25,118	26,755

Notes: Marginal effects are reported which show the change in the probability of attendance/completion for a one-unit increase in the explanatory variable. Standard errors in parentheses. Asterisks denote statistical significance - *** p<0.01, ** p<0.05, * p<0.1.

Source: Author's calculations from DHS 2015/16.

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