Women's Voice and Agency Research Series 2014 No.9

GENDER EQUALITY & DEVELOPMENT

Addressing Gender Inequalities in Curriculum and Education: Review of Literature and Promising Practices to Inform Education Reform Initiatives in Thailand

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This paper was commissioned by the World Bank Group to help inform a forthcoming report on women's voice, agency, and participation. It does not necessarily reflect the views and research of the World Bank Group.

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Abstract: In Thailand and worldwide, despite increases in educational enrollment, rigid gender norms dictating appropriate roles and behaviors contribute to the persistence of the gender inequalities. Since education systems are embedded in the broader social context, they reflect the inequalities that exist in society. The structure and content of schooling – textbooks, curricular choices, sex distribution of teachers and administrators, teacher attitudes and behaviors, classroom and discipline practices, and the presence of violence – reflect discriminatory and harmful social norms about the appropriate roles and opportunities for boys and girls (Connell, 1996, 2000, 2010). At the same time, schools have enormous potential to effect social change, transform gender relations, expanding the range of possibilities for both boys and girls (UNGEI, 2012a). This report provides a brief review of the literature and of interventions to promote gender equity through education in several specific areas: textbooks and curriculum; teacher distribution, attitudes, and behaviors; and school violence and discipline. And the report looks at holistic interventions that address multiple dimensions. This review also gives an overview of important steps for assessing gender issues in the educational system, emphasizes the need for rigorous interventions that measure a broad range of outcomes, provides recommendations for policy and programming, and highlights tools and resources.

Note: This background paper was commissioned by the World Bank Group at the request of the Ministry of Education in Thailand. The Ministry is seeking to undertake a project on school reforms, focusing on promoting gender rights and gender equality within the Thai education system. The paper provides a brief overview of best practices and experiences from other countries, with a view to how these initiatives may be relevant in the Thailand school context.

Introduction and Rationale: Why is attention to gender important in the education system?

For more than 15 years, international agreements have emphasized the importance of gender equality in education. Much of the focus has been on gender parity – an equal proportion of girls and boys accessing education – and many countries have made impressive progress in meeting these goals (World Bank, 2012). In Thailand, girls' enrollment now exceeds boys' enrollment at the secondary and tertiary levels. However, gender equality in education encompasses more than access. Recent data shows that women are still less likely to participate in the labor force, are concentrated in particular sectors, and earn less than men. For example, among youth ages 15-24, 56% of men participate in the labor force compared to only 40% of women, and while women are overrepresented among graduates in many fields, they make up less than 20% of graduates in the lucrative fields of engineering, manufacturing, and construction (World Bank, 2013; World Bank, 2014). Gender inequality manifests itself in other ways as well – in high rates of violence (more than 40% of Thai women reported experiencing physical or sexual violence), and in low levels of women's political participation (Garcia-Moreno et al., 2006; GenderStats, 2014).

UNESCO's GENIA Toolkit for Promoting Gender Equality in Education defines gender equality as meaning that "women and men have equal conditions, treatment and opportunities for realizing their full potential, human rights and dignity, and for contributing to (and benefiting from) economic, social, cultural and political development" (UNESCO, 2009, p. 23).

Box A: Understanding Sex and Gender:

Sex refers to biological differences between men and women. **Gender** refers to the roles and responsibilities of men and women that are created in our families, our societies and our cultures. The concept of gender also includes the expectations held about the characteristics, aptitudes and likely behaviors of both women and men. Gender is socially constructed: gender roles and expectations are learned, can change over time, and vary within and between cultures (adapted from UNESCO).

In Thailand and worldwide, despite increases in education, rigid gender norms dictating appropriate roles and behaviors contribute to the persistence of the gender inequalities described above:

women and girls still reap fewer benefits of economic participation and development, have less representation and voice in local and national governments, and bear the primary responsibility for household tasks and childcare. Rigid gender norms do not only disadvantage women and girls: adhering to notions of idealized masculinity, men may engage in risky behaviors such as unprotected sex, aggressive driving, and violence. Boys educational underperformance in countries like Thailand has also been shown to be "the result of any underlying set of gender norms and socially determined, unspoken expectations concerning gender roles" (UNGEI, 2012b, p. 7)

Since education systems are embedded in the broader social context, they reflect the inequalities that exist in society. The structure and content of schooling – textbooks, curricular choices, sex distribution of teachers and administrators, teacher attitudes and behaviors, classroom and discipline practices, and the presence of violence – reflect discriminatory and harmful social norms about the appropriate roles and opportunities for boys and girls (Connell, 1996, 2000, 2010). At the same time, schools have enormous potential to effect social change transform gender relations, expanding the range of possibilities for both boys and girls (UNGEI, 2012a).

Box B: Understanding Gender Equality in Education

UNESCO's Gender Equality Framework defines gender equality in education in terms of four dimensions: equality of access, equality in the learning process, equality of educational outcomes and equality of external results. Gender equality in education means bringing **gender equality to, within, and through education** (UNGEI & UNICEF, 2009).

The goal is to achieve **gender equality**, such that "women and men have equal conditions, treatment and opportunities for realizing their full potential, human rights and dignity, and for contributing to (and benefiting from) economic, social, cultural and political development" (UNESCO, 2009).

In Thailand, gender equality **to** education – that is, equal access to education in terms of enrollment, for example – has for the most part been achieved, though attention is still needed in particular sectors of the population. The focus now should be on achieving equality **within** the school system, and perhaps most importantly, in other outcomes **through** education.

Overview of the Report

This report provides a brief review of the literature and of interventions to promote gender equity through education in several specific areas: textbooks and curriculum; teacher distribution, attitudes, and behaviors; and school violence and discipline. While these are general areas of interest in the literature, it is important to emphasize that the most successful policies and interventions will address more than one of these areas: in a separate section, we highlight examples of multi-dimensional programs that address gender in the education system through several different avenues. Finally, since gender and educational contexts and dynamics vary across countries (as well as within a country), a deep and nuanced assessment of the specific gender-related activities that are needed in a particular context is necessary. This is both the first step for identifying gender inequalities in education and a continual process for improvement. To that end, the last section of this review gives an overview of important steps for assessing gender issues in the educational system. Tools and resources are presented throughout the report and included in Annex A.

Four important caveats about this review are warranted. First, gender differences and inequalities cannot be separated from other social inequalities: gender intersects with poverty, ethnic background, rural or regional differences, disability, and sexual orientation resulting in specific patterns of disadvantage. While this review refers broadly to differences between boys and girls, gender analyses, policies, and programs must take into account the intersection with other social factors. Second, it is important to note that many types of educational interventions, though not explicitly gendered, may also have a positive impact on gender equality. For example, initiatives to improve educational quality by promoting active, child-centered teaching encourage the same reflection, participation, and critical thinking skills that are essential to addressing gender equality in education. A detailed discussion of such interventions is outside the scope of this paper, but should be considered an important avenue for promoting gender equality in and through education. Third, this review highlights the need for more rigorous impact evaluation of gender-related interventions in schools, beyond programs and policies to improve access and particularly from the Global South, as well as evaluation of the impact of various

gender interventions on student learning outcomes. Unless otherwise noted, the evaluation results described in each section, while often rigorous and comprehensive, do not come from impact evaluation studies (e.g. randomized controlled trials). Finally, the intervention examples highlighted in this review are intentionally diverse and global in reach. While the specific country context might be quite different from the situation in Thailand, the purpose is to profile innovative programs that could be adapted to the Thai context in order to achieve equality.

I. Gender in Textbooks and Curriculum

In education, the curriculum serves as the connection between national education policy objectives and the delivery of education services. The curriculum "determines the purpose and content of education, the mode and length of delivery, and provides guidance material for educators regarding how the content should be taught and how learning outcomes should be assessed. National curriculum can reinforce existing social and gender inequalities by implicitly upholding traditional gender stereotypes or by disregarding the diversity of learning needs and learning styles among girls and boys throughout the country. Alternatively, national curriculum can be a vehicle to promote positive messages about equality between women and men and to integrate human rights education." (CIDA, 2010, p. 23). Addressing gender biases in textbook and curriculum is an important avenue towards equality within education.

Gender Inequality in Textbooks

Textbooks are an integral aspect of the curriculum, and an important and influential mechanism through which children are exposed to ideas about gender (Aikman & Rao, 2010). In Pakistan, for example, a majority of female students participating in an interview study said that they saw textbook images as models for themselves (Mirza, 2004). Given their central role in teaching and learning, research on gender in textbooks has been ongoing since the 1970s. Studies analyzing textbooks across many countries find remarkable consistent results in terms of the representation of gender (Blumberg, 2007, 2008):

- Numerically, there are fewer images of women and girls compared to men and boys. Generally, the
 proportion of females represented decreases as grade level increases. Men also appear to have more
 text space devoted to them, for example, through longer stories about men.
- Men and women are generally portrayed in stereotypical roles and professions: women are often shown in the home, engaging in domestic and caregiving tasks, while men are portrayed in more leadership or professional roles. These representations rarely accurately reflect the actual roles (and changes in roles) of men and women in society, and thus serve to reinforce more traditional, differentiated roles than actually exist in society.
- Men and women are described as having specific gendered attributes: for example, men are described
 as brave and strong, while women are seen as passive, self-sacrificing, and caring. In some cases,
 there were negative portrayals of women, as gossipy or mean-spirited, for example.
- Contributions of important women (as well as minority groups) were ignored or given less consideration.

Addressing Gender Bias in Textbooks

In response to these findings, several countries have taken action. On the policy level, many countries, including Thailand, have instituted policies forbidding gender discrimination in the curriculum and textbooks including specific directives to remove gender stereotypes, and have undertaken revisions of the textbooks. In the global south, the World Bank and other organizations (e.g. Ford Foundation in China) have funded studies and explicit initiatives to eliminate gender bias from textbooks. Generally, the aim is to more accurately reflect the diversity of roles in a society. However, some Nordic countries have explicitly decided to "overcorrect" to promote equality: representing more equality and diversity in roles than actually exists at present (Eurydice, 2010). Such an approach might encourage children to think beyond the social roles they see around them. On the other hand, it may also provoke resistance or backlash from students, teachers, or the community.

Evaluations of textbook reforms in several countries (not including Thailand) have consisted mostly of reviews of second generation textbooks. By these measures, textbook reform initiatives have shown some success; however, these reviews suggest that while representation of women has increased and more overt sexism has been removed, more subtle issues around gender roles and representations remain, and are exacerbated in later grades (Blumberg, 2007, 2008). There is also a strong need for evaluations of the impact of gender bias and reform initiatives on student and teacher attitudes and outcomes.

Working with Textbook Developers

Many countries have examined or intervened in the process of textbook development. In the United States, where textbooks are not centrally produced, efforts to lobby publishers and professional publishing associations resulted in positive changes to textbooks (Blumberg, 2007). There is limited research on the impact of the gender composition of textbook authors/developers: a study in Pakistan found a positive correlation between female authors and the representation of females in textbooks in some subjects (Mirza, 2004). On the other hand, a study in Spain found no impact of the gender composition of the editorial teams on stereotyping in the textbooks (Luengo & Blázquez, 2004 cited in Eurydice, 2010). While achieving gender equity in the profession of textbook development may be a worthy goal in and of itself, these findings (echoed in research on teachers, reviewed below) suggest that the simple presence of women on development teams will likely not be sufficient to reduce gender discrimination in textbooks. Instead, training on gender equality for textbook producers may increase awareness of stereotyping issues, and result in less biased textbooks.

Providing Textbook Guidance and Supplementary Materials for Teachers

Removing gender discrimination from textbooks is an important but insufficient endeavor. Providing supplementary guidance materials and gender training for teachers¹ is necessary, as research shows that teachers interpret and adapt the curriculum based on their own beliefs, and may not be aware of the discriminatory messages they transmit through the textbooks and teaching techniques (Ginsburg & Kamat, 2009; Stromquist, Lee, & Brock-Utne, 1998). Such training may also help teachers address gender discrimination during the lengthy and costly process of textbook reform. For example, In India, a teaching guide was produced to accompany existing textbooks and help teachers and students critically assess gender representation. Such a guide provides a powerful opportunity for teachers to engage with students on gender issues, using existing texts to expose bias and then discuss how to counteract it (Blumberg, 2007).

Beyond Textbooks: Mainstreaming Gender into the Curriculum

Mainstreaming gender into the curriculum goes beyond revising textbooks – it is important to explicitly address gender inequality in the curriculum. One approach to mainstreaming gender into the curriculum involves incorporating the perspectives and experiences of both boys and girls, as well as discussions of gender roles and gender discrimination across the curriculum, including in courses on mathematics, literature, and science. Several European countries explicitly mention in policy documents that a gender perspective should be considered throughout the curriculum. For example, the Maltese National Minimum Curriculum states that "gender equality is not a theme that should be treated by the school in isolation or during the teaching of a particular subject. Equality should be an interdisciplinary theme which teachers can develop within the context of their particular subject, confronting prejudice and promoting more gender-inclusive alternatives" (Eurydice, 2010, p. 57). Providing sample lesson plans and teacher training may facilitate this process for teachers; such resources are widely available and can be adapted to the local context. For example, a review by the Women's Equity Resource Center in the

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¹ Teacher training is discussed in more detail in the next section.

United States suggests tips for incorporating gender into science curricula, such as using examples from what is traditionally considered women's work (cooking, traditional crafts, cleaning) to teach math and science concepts, using examples of men and women in non-traditional careers as examples in word problems, talking about gender and body image as part of units on nutrition, adding books on women in science to school libraries, and highlighting the work of female and/or minority scientists (Gondek, 2008). In Ireland, resource packs given to schools include model lessons in multiple disciplines (Eurydice, 2010).

Other initiatives have included gender as a separate section or unit in classes like Civics or Social Studies, or as the focus of a separate course. For example, in Spain, the citizenship education core curriculum for primary education includes lessons on recognition of gender differences; identification of inequalities between men and women; promotion of equal rights for men and women in the family and social spheres and in the workplace. At the lower secondary level, the curriculum goals also include the critical evaluation of social and sexual divisions of work, sexist prejudices and the issue of female poverty (Eurydice, 2010). Similarly, Tanzania's national syllabi for secondary schools contains topics related to gender as part of the Civics syllabus (covering nearly 25% of the Form 2 lessons) and in the national examination (Thomas & Rugambwa, 2013 cited in Miske, forthcoming). Additional studies to examine and compare the impact of initiatives to mainstream gender in the curriculum are needed to establish a stronger evidence base for these decisions. The next section describes two interventions that have been more rigorously evaluated.

Explicitly Addressing Gender Inequality as Part of the Curriculum: Evidence of Effectiveness

Two recently evaluated programs in India have demonstrated the promise of explicitly addressing gender as a major focus of a separate or dedicated course. The Gender Equity Movement in Schools (GEMS) included school-based group education sessions over two years, taught in an active and participatory manner by outside facilitators to 6th and 7th grade students in low-income public schools in Mumbai. The sessions focused on understanding gender roles, power dynamics, violence, and physical

and emotional changes related to adolescence. An evaluation based on a quasi-experimental design found that, controlling for baseline responses, children in the intervention schools were more likely to report equitable attitudes about gender. Specifically, compared to the control group and controlling for baseline responses, the full-intervention group was approximately 4 times more likely to have highly equitable gender attitudes, 3 times more likely to support higher education for girls, and more than twice as likely to oppose violence (Achyut, Bhatla, Khandekar, Maitra, & Verma, 2011). Based on these promising results, the project has been expanded to 25,000 schools in the state of Maharashtra, and has been adapted for use in secondary schools in Vietnam. The results from a randomized controlled trial in Vietnam will be available in 2014-2015 (Martin, et al. 2013).

The Institute of Human Rights Education (IHRE) includes gender as a major component of its Human Rights curriculum, taught as a separate 3 year course by trained teachers in more than 3500 schools across India (grades 6 to 8). A multi-method evaluation similarly found that students reported a substantial impact, ranging from increased knowledge of and support for human rights to activism around gender and caste equality (Bajaj, 2011a, 2012). It is important to note that these programs provide evidence that intensive, long term attention to gender as part of the coursework has an impact on children's attitudes and behaviors; it is not known (and seems unlikely) whether shorter term class sessions dedicated to the topic would yield similar results. At the same time, separate courses on gender should not replace efforts to integrate gender-responsive lessons and materials across the curriculum.

Addressing Gender Segregation across Curricular Subjects

Another major issue is segregation in curricular subjects. Across the globe, boys and girls continue to choose different fields of study: men are overrepresented in science, agriculture, and engineering, while women are concentrated in health and education studies. These gender differences are important because they have significant consequences for future employment and earnings (Charles & Bradley, 2009; World Bank, 2012). In some cases, the mandated curriculum varies by sex (for example, home economics for girls and agricultural technology for boys); more commonly, a complex mix of

factors including lack of gender-sensitive and relevant content and teaching methodologies, teacher expectations, economic issues, and social norms affect student choices (Mutekwe & Modiba, 2012).

Initiatives to address these disparities have concentrated primarily on increasing the proportion of girls in science and engineering. The Forum for African Women Educationalists' (FAWE) Science, Mathematics, and Technology Model for girls, operating in 13 countries across Africa, features science camps and clubs, study tours, exposure to role models, and awards to female achievers in these fields. In Europe, small scale outreach projects have been implemented in several countries. In the Czech Republic, Spain, Ireland, and Malta, a gender perspective is included in manuals for vocational guidance counselors in the education sector. In other countries, universities, companies, and research institutions have invited girls to participate in visits and "career days," and multi-media outreach efforts have been developed to encourage girls to consider careers in science and engineering. In Sweden, a special state grant to municipalities funds summer courses for girls that contextualize natural science and technology in cultural, societal, environmental and historical perspectives. However, a European review of initiatives to influence educational and occupational choices argues that while small-scale initiatives exist in numerous countries, "most of them are lacking an overall national strategy to combat gender stereotypes in career choices and to support young people at school with systematic guidance on gender-sensitivity for study and career" and very few focus on boys' career choices. In addition, the review provides no information on the impact of such initiatives (Eurydice, 2010).

II. Teachers and Teaching

Gender Imbalance in Educational Personnel

Teachers (and other school staff) are central to promoting gender equality in education. At a basic level, researchers argue that the sex distribution of personnel in the educational system transmits and reinforces messages about gendered patterns of power and authority (Connell, 1989, 1996). In many countries, including Thailand, the distribution of teachers across grades, types of subjects, and

administrative and ministerial positions is patterned by sex: the proportion of men is higher in secondary versus primary school, in math and science subjects, and at higher levels of school administration. These patterns, where women generally hold less prestigious positions compared to men (and in numbers not proportional to their representation as teachers), "foster the mindset that men are naturally endowed to control and lead", and, alternately, that women are particularly well-suited for caring and nurturing young children (Stromquist, 2006, p. 149). Such patterns also mean that the classroom experiences and knowledge of women teachers, particularly at the primary level, may not represented at the level of policy-making (Aikman & Rao, 2010).

Addressing the Underrepresentation of Women in Educational Administration

Numerous reports describe strategies to recruit women teachers (including accelerated training and strong support) in settings where the proportion of women teachers is lower than men's, and where the presence of women is important for increasing girls' attendance at school. Similar strategies can be used the proportion of women in higher-level positions. The 2010 Eurydice report describes a few programs to specifically attract more women into school administration in Europe. In the Netherlands, the "More Women in Management" program emerged as part of a 2006 agreement between the government, trade unions, and employer organizations and included specific targets for educational institutions. In Ireland, the Department of Education and Science conducted detailed analyses of the sex distribution of educational personnel at all levels, including board membership of educational agencies and committees, and funded an in-service course for women teachers interested in progressing to management positions (O'Connor, 2007). Other countries have also used quotas to increase the proportion of women in top leadership positions.

Addressing the Underrepresentation of Men in Teaching

The Eurydice report also describes some initiatives to study and address the underrepresentation of men in teaching, particularly at the primary level. In the Ireland, the Men as Teachers and Educators

(MATE) campaign has promoted the rewards of being a teacher through ads in newspapers, radio, the internet, and in guidance counseling materials and posters for schools. In the United Kingdom, the Training and Development Agency for Schools funds three day courses, including a school placement, for men interested in teaching. In other countries, initiatives have focused on teacher training colleges: in Lithuania, male students receive preferential admissions, and in the Netherlands and Sweden, they have access to mentoring programs and networking opportunities with other male students and teachers. In Norway, where improving the gender-balance among school personnel is one of the main aims for the national action plan for gender equality, county level teams were created to recruit more men into early childhood education, and pilot day care centers focused on men as employees were established. While the problem of low wages and prestige, and lack of career development may play a role, in countries where teachers enjoy reasonable remuneration (e.g. Luxembourg) and prestige (e.g. Finland), the profession is still predominantly female, suggesting that social norms that associate teaching with women's care work are a barrier to more equity in the profession. These initiatives emerged as part of a debate on the impact of the feminization of the teaching workforce on boys. This debate, focused in countries where boys' enrollment and achievement now lags behind girls', has at times been contentious, and is often based on rather simplistic or stereotypical perceptions about the gendered characteristics of teachers rather than on evidence on the impact of teacher sex on student outcomes (Kelleher, 2011).

Impact of Teacher Sex on Student Outcomes: Brief Review of the Evidence

What does the evidence say about the impact of teacher sex? There is substantial evidence that the presence of female teachers in school has been beneficial to girls' enrollment, particularly in highly sex-segregated contexts where parents may be reluctant to send girls to schools staffed only by men (Kelleher, 2011; Lloyd, 2009; Plan, 2013). A recent review also provides some evidence that sex matching (as well as matching by caste, race, or other social characteristics) between teachers and students and improved learning outcomes, primarily for girls but also for boys, based on studies in North America, South Asia, and sub-Saharan Africa (Plan, 2013). The hypothesized reasons are multiple and

complex, and may include teachers' attitudes and/or discriminatory practices (Chudgar & Sankar, 2008; Rawal & Kingdon, 2010), different teaching/learning styles, and positive role-modeling (Plan, 2013).

Ultimately, however, experts agree that the sex of the teacher is less important than the teacher's equitable attitudes, behaviors, and teaching practices. The evidence does not support the view that female teachers are automatically able (or willing) to support girls or that male teachers are not able to effectively do so, and vice versa as related to boys' education. Instead, interventions should focus on creating training and accountability systems so all teachers – both male and female – are supported and encouraged to create learning environments where the participation of all learners is valued, irrespective of age, ethnicity, caste, religion or learning ability, where children feel safe, and importantly, where stereotypical views are challenged (Heijnen-Maathuis, 2008; Plan, 2013). Thus, focusing on changing the gender balance in teaching and school administration is unlikely to achieve the long-term goal of equality within education. Nevertheless, in an effort to increase genders balance in the profession and counteract stereotypes about appropriate professions for men and women, initiatives to increase the proportion of men in primary education, and the proportion of women in education management, as described above, may be of interest as efforts to equalize educational "inputs".

Teacher Attitudes and Behaviors

Extensive research demonstrates that teachers, both male and female, hold stereotypical and discriminatory attitudes about boys' and girls' characteristics, abilities, and roles. In studies around the world, teachers attributed girls' academic achievement to hard work but to boys' natural ability, and assigned competency in certain subjects to a specific sex – for example, reporting that boys were better at math (for a review see: Plan, 2013). Teachers' behavior also varies based on the sex of the student, consciously or subconsciously. Teachers have been observed paying more attention and interacting more frequently (positively and negatively, through discipline) with male students (Eurydice, 2010; Sadker, Sadker, & Zittleman, 2009). For example, classroom observations from a study in India found that although teachers stated that girls should have the same right as boys to attend school, they called on boys

more often, asked them more challenging questions, and praised them more frequently (DeJaeghere & Pellowski Wiger cited in Miske, 2013). Research has also shown that teachers assign roles and tasks in the classroom based on gender stereotypes, for example, sweeping or cleaning assigned to girls, and monitoring the class, rearranging desks or interacting with other adults to boys (Aikman & Unterhalter, 2007; Anderson-Levitt, Bloch, & Soumare, 1998; Leach & Humphreys, 2007).

As a whole, these attitudes and behaviors have important implications for children: for example, Lloyd, Mensch, and Clark (2000) found that in Kenya, girls were more likely to drop out of schools in which teachers rated math as less important for girls than for boys. Overall, these attitudes and differential treatment reinforces existing gender roles, and may encourage passivity and conformity in girls, while placing greater value on independence and leadership for boys. At the same time, harsh treatment and expectations for quiet or submissive behavior may alienate boys (UNGEI, 2012b).

Addressing Teachers' Inequitable Attitudes and Behaviors

Addressing teachers' gendered attitudes and behaviors requires important investments in gender-focused teacher professional development, including pre- and in-service training, and monitoring systems. Such training would encourage teachers to understand gender (and other) hierarchies and power dynamics, and what they as teachers do to either maintain or challenge these hierarchies. A new review of gender in teaching and learning in the global South, produced for the United Nations Girls Education Initiative, found that "few, if any, current teacher education models seem to explicitly integrate gendered approaches to teaching into classes on content and pedagogy. This seems to be the case from the first term of teacher education, to classroom observations, and up through teaching experiences while still a teacher education student" (Miske, 2013, p. 20). Similarly, a review of European countries found that generally, gender does not feature prominently in pre-service teacher education programs, and is only sporadically included as a topic for continuing professional development (Eurydice, 2010). There is much room for

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² The authors note that given the highly decentralized nature of teacher education in many European countries, it is difficult to assess the extent of availability.

growth and innovation in this area. One innovation, the Teacher Training Portal on Gender Equality (iGEP), was developed by Promundo-Brazil and accredited by the Brazilian Ministry of Education. iGEP consists of a website portal and online facilitated training package including modules on gender, sexuality, health and care, pregnancy, motherhood and fatherhood, and violence. Teachers who participate in the online course are awarded continuing education credits.

Box C: Examples of Teacher Training for Gender Equality in East Asia and Pacific Region

In 2009, in response to legislation on gender equality and violence prevention, the Government of **Vietnam** together with 12 UN agencies launched a Joint Programme on Gender Equality. As part of the Programme, UNESCO Ha Noi Office and the Vietnamese Ministry conducted a national textbook review and developed teacher training modules to promote gender equality. The teacher training modules were conceived as a comprehensive, generic resource package that teacher training institutions can customize for specific pre-and in-service trainees, local contexts and needs. The manual, which is available online, includes specific activities and assessments for school personnel to understand and address gender inequalities in education (Vietnam MOET & UNESCO, 2011).

In Indonesia, the Decentralized Basic Education project includes a focus on enhancing the quality of teaching and learning and improving the school learning environment. Teachers are trained in active-learning, gender-sensitive methodologies to engage both boys and girls. As a result of the trainings, teachers were able to connect their lessons to students' realities and encouraging inquiry and reflection among them (USAID, 2008). A recent evaluation (USAID, 2012) found some improvements in teachers' use of active learning methods, but did not specifically focus on its gender dimensions.

Transforming Teacher Attitudes and Practices: Examples and Evidence of Impact

The few teacher training programs that have been evaluated have shown promising results, though more rigorous studies that explore the impact of teacher-focused interventions on a variety of outcomes, including teacher attitudes and practices, as well as student learning outcomes, are needed. An evaluation of an elective one term course on gender equity for pre-service Turkish teachers found that course participants had more equitable attitudes (in terms of male and female gender roles at home, at work, and as related to education) at the end of the course (Erden, 2009). The IHRE program, described

above, provides training for practicing teachers who then teach a human rights focused course to their students. A recent evaluation found that the teachers took action on abuse in their own and their students' lives, changed their teaching practice to eliminate corporal punishment, and interacted more with students and colleagues of different backgrounds, especially those from different social status and ethnicities. Since teachers had high status in the rural communities included in the study, they were able to have significant impact (Bajaj, 2011a, 2011b). The GEMS program in India, described above, also included a series of teacher workshops focused on gender and power dynamics. In interviews, teachers who participated in the workshops reported profound changes in their interactions with students as well as in their personal lives, in terms of how they interacted with, related to, and valued their female family members (Levtov, 2013). Finally, in Sweden, "gender pedagogues" were trained to serve as resources in their school communities and initiate activities around gender equity. While most of the participants reported that the course strengthened their competence to make connections between equality and gender and the national curriculum goals, less than 50 percent of the gender pedagogues had employment that made it possible for them to work as resource persons. The authors argued that the one-time investment in a course was easier for schools and municipalities to provide compared to the longer-term financial support needed for programming for gender equality (Nilsson, 2007).

Using Action Research to Transform Teacher Attitudes and Practices

An especially promising approach may be to integrate action research on gender into teacher training, to help teachers observe and understand the impact of their teaching on students, and to develop self-assessment tools. Thus approach encourages self-reflection and deeply contextualized analysis and proposed solutions, and can be a more cost-effective compared to bringing in external evaluations or interventions. This approach was used in Bhutan (Heijnen-Maathuis, 2008), as well as in Ghana, where a group of teachers conducted a gender analysis of their school curriculum and practices, and identified areas for change (MacKinnon, 2000 cited in Miske, 2013). A variety of tools, checklists, and manuals have been developed to help teachers and administrators to document and reflect on gender in educational

settings. The Forum for African Women Educationalists and the Gender in Education Network in Asia-Pacific (GENIA) have developed toolkits and teacher manuals (see Annex A), as have various national education bodies. For example, in Romania, the Institute of Education Science in cooperation with UNICEF developed a compendium for teachers and school inspectors including specific tools for self-evaluation and evaluation of educational institutions and textbooks from the gender perspective (Eurydice, 2010). Similarly, teacher training modules developed in Vietnam (see Box C) include self-assessment activities (Vietnam Ministry of Education and Training & UNESCO, 2011). Plan's Because I am a Girl "School Equality Scorecard," focused on gathering information from students, is another useful tool. Information collected as part of school assessments can be used as part of broader monitoring of changes towards gender equality in school.

Teacher Training and Gender Equality: Lessons Learned

Additional research is sorely needed on the effectiveness of specific content and pedagogy in teacher training around gender. Nevertheless, some important lessons have emerged. Teacher training should be participatory and allow teachers to reflect on gender in their personal and professional life (Aikman & Unterhalter, 2007; Chege, 2006a; Kirk, 2004). It should be ongoing: one or two gender trainings are not enough, as demonstrated in an evaluation of the USAID-funded QUIPS project in Ghana that found that changes in teachers' classroom practice regarding girls' participation lasted only as long as the head teacher -- a champion for the approach -- together with other teachers and mentors continued to give their support (Camfed, 2012 cited in Miske, 2013). This finding also suggests that training for school administrators and special resource persons may also be important for supporting teacher change. Finally, it is important that teacher training and monitoring happens as part of broader changes that allow teachers to change their practices. For example, teachers in Nepal and Bhutan who were trained on child centered pedagogies expressed frustration and felt professionally unsupported, given that the content heavy and exam driven curriculum had not been revised (Heijnen-Maathuis, 2008).

III. School Violence

The issue of gender-based harassment and violence in schools has received increasing attention and is an important aspect of addressing gender issues in schools. Violence has negative academic, emotional, and health consequences for children, and childhood experiences of violence are associated with future perpetration (for men) and victimization (for women) in adulthood (Flood & Pease, 2009; Pinheiro, 2006). Violence in school occurs in many forms: bullying, sexual harassment, verbal abuse, and physical altercations between students, as well as corporal punishment or sexual contact between teachers and students. Community or gang violence may also spill-over into schools, or manifest as violence across schools. While recent studies have focused on violence against girls, studies in most countries show that it is boys who most commonly experience violence in school, and that sexual minority boys are at particular risk (Meyer, 2009; Pinheiro, 2006). A recent review of the school violence literature identified other groups that may vulnerable to violence, including children who have a disability or stigmatized illness (including HIV/AIDS), and refugee or minority group children (RTI International, 2013).

In Thailand, violence remains very much a part of daily life -- a 2008 study found that a quarter of students had been in a physical fight on the school premises, 28% reported being bullied on one or more days in the past month, and 54% reported being verbally abused by a teacher on or more times in the past year (WHO, 2008). Boys are generally more likely to experience (and perpetrate) school violence compared to girls. In addition, a new UNESCO report documents fear of and experiences of violence among sexual minority youth or youth who do not conform to traditional gender roles (UNESCO & UNGEI, 2014).

Violence in school is deeply rooted in gender inequalities: scholars argue that violence in school reproduces power hierarchies in society and reinforces the idea of the use of violence as normative and appropriate for resolving conflict. Violence can also be used to "prove" masculinity or to police (and punish) the actions of students who deviate from rigid notions of appropriate gender roles and behaviors (Leach & Humphreys, 2007; Meyer, 2009). While reducing violence is an important goal in its own right,

emerging evidence shows that violence and a lack of feelings of safety in schools are associated with negative academic outcomes, including lower enrollment and attendance, and lower achievement (RTI International, 2013). Despite the importance of this issue, a 2009 analysis of gender and education in East Asia and the Pacific concluded that there is little evidence of national strategies to tackle gender violence in schools or incorporate its discussion into the curriculum (UNGEI, 2009).

Corporal Punishment and Gender Inequality

In many settings, violence and harsh treatment perpetrated by teachers is an important concern. In Thailand, where corporal punishment in schools was banned in 2000, a 2006 study funded by the National Health Foundation found that corporal punishment continued to be used,³ and up to 60% of the teachers surveyed strongly believed that corporal punishment was the right method to use with students (Global Initiative to End All Corporal Punishment of Children, 2013). More recent data may show whether the ban has had an effect in reducing corporal punishment. Research shows that corporal punishment is gendered, in terms of who uses it, under what circumstances, and to whom and in what severity is it applied. In South Africa, for example, Morrell (2001) showed that corporal punishment is more commonly used (and with greater severity) against male students, with the assumption that "they can take it" or that it made them "tough," and that it taught girls to be submissive and unquestioning. Rules and practices around corporal punishment also served to sexualize relationships between male teachers and female students (Humphreys, 2006, 2008; Morrell, 2001). The use of corporal punishment also reflects teachers' lack of training or practice with alternative effective, non-violent disciplinary measures (UNGEI, 2009).

Peer Violence

School violence is most commonly perpetrated by other students. Aggressive behavior and sexual harassment is often normalized as typical behavior for boys, as the 'boys will be boys' discourse, and is not taken seriously by school officials, while violence among girls, especially verbal harassment and

³ Specific prevalence rates were not cited.

bullying, may be dismissed. Sexual violence is also a concern: several studies, primarily from Africa, reveal a consistent pattern of sexual abuse in school, perpetrated mostly by other students but also by teachers or school staff (Dunne, 2007; Leach, 2006; Pinheiro, 2006). In several settings, including Cameroon and the United States, researchers describe how teachers and male students trade sexual banter in the classroom (Johnson-Hanks, 2006; Pascoe, 2007). How the school responds to instances of violence between students (as well as from staff) is considered critical: it directly affects levels of violence in school, as well as normalizes such behaviors (Klein, 2006; Leach, 2003).

Addressing Violence in School: The Need for a Comprehensive Approach

Addressing violence in schools requires a comprehensive, multi-level approach that includes both the prevention of violence and effective mechanisms to address it when it does occur (Greene, Robles, Stout, & Suvilaasko, 2013). At the national level, policies regarding corporal punishment or harsh treatment, as well as general gender-based violence are an important step; more important perhaps, are effective monitoring and sanctions. At a more local level, establishing school policies and committees to address violence and creative a positive discipline climate can both support and monitor teacher and student behavior, providing guidelines and recourse. In addition, goals and benchmarks around social and emotional skills hypothesized to prevent violence (e.g. self-esteem, self-efficacy, tolerance and appreciation for diversity, respect, conflict resolution) can be included in national curricular goals, as was done by several states in the United States (Dusenbury, Zadrazil, Mart, & Weissberg, 2011).

Working with Teachers to Prevent Violence

Working with teachers and school staff is essential to eliminating school violence. These efforts need to take into account gendered power relations and should therefore provide opportunities for teachers to reflect on their beliefs about gender and violence and how these relate to the practice of corporal punishment, as well as provide training in alternative methods for discipline and classroom management. In Kenya, an innovative program worked with student-teachers to reflect on their own experiences of violence as children, which led to positive resolutions to avoid violence in their future

professional practice (Chege, 2006a, 2006b). Similarly, as a result of their training on human rights, teachers involved in the IHRE program reported lower use of corporal punishment (Bajaj, 2011a). Training on effective, non-violence classroom management and discipline, and on how to effectively intervene in peer violence can assist teachers to maintain a commitment to reducing violence. For example, in Bhutan, teachers and teacher educators received training on preventing disciplinary problems by using active and joyful teaching methods such as Circle Time, where children have an opportunity to discuss important issues in their lives such as relationships, respect, and non-violent conflict resolution (Heijnen-Maathuis, 2008).

In high violence contexts, guardians or advocates can be trained to provide additional support and monitoring. In refugee schools in Sierra Leone and Guinea, female Classroom Assistants (CAs) worked in pairs to protect girls from sexual exploitation by being another adult observer and an explicit advocate. An evaluation of a similar school-based intervention in Tanzania where female teachers were trained as guardians and supported by regional committees showed that girls felt they had someone to go to for advice, and that the communities began to confront sexual violence more openly. This resulted in both protection for girls and prosecution of perpetrators (Mgalla, Schapink, & Boerma, 1998 cited in Miske, 2013). While the level of violence in these contexts may seem extreme compared to Thailand, similar programs for training guardians or advocates may be effective in schools with lower levels of violence, or different types of violence such as bullying, by creating safer spaces and a culture that does not tolerate violence.

Working with Students to Prevent Violence

Interventions have also been geared directly at students. Numerous programs violence prevention and conflict resolution programs have been developed, implemented, and evaluated worldwide. However, these interventions rarely incorporate a gender dimension, and as such are beyond the scope of this review. An important aspect of addressing violence with students requires helping girls (and boys) "build skills to identify, name, and, at times, confront the social conditions and gendered relations behind these

acts" (Miske, 2013, p. 16). A notable example is the GEMS program in Indian middle schools, where group education activities and a school campaign included reflective discussions of violence in the context of gender relations, emotional management, and relationships between boys and girls. At the end of the intervention, participating students reported less tolerance of violence and greater likelihood of taking positive action in response to peer violence (e.g. tried to stop it, sought help) compared to students who did not participate (Achyut, et al., 2011).

Students can participate in activities to identify safety concerns in and around the school and community: for example, the Population Council has developed "safety mapping" tools that include identifying safe and unsafe spaces (e.g. hallways or restrooms) and times (specific times of day, or times of the year), and examining options for accessing support and resources (Austrian & Ghati, 2010). School-based clubs for girls have also been shown to be an effective mechanism to increase girls' safety in schools by creating ways to monitor and report violence, building girls' confidence and agency, and creating social networks and support (ActionAid International, 2013; Austrian & Ghati, 2010; Miske, 2013). Similar clubs for sexual minority students can similarly raise awareness of and reduce violence against this vulnerable population (Meyer, 2009).

Violence Prevention as Part of Sexual and Reproductive Health Education

Finally, violence prevention has been effectively integrated into courses or workshops on sexual and reproductive health and HIV prevention. For example, the Stepping Stones program in South Africa included a 50 hour curriculum on a variety of sexual and reproductive health topics including gender based violence, taught through participatory approaches over a six to eight week period to adolescents and young adults. A randomized controlled trial found that a significantly lower proportion of men in the intervention group reported perpetration of violence against a partner compared to men who did not participate (Blanc, Melnikas, Chau, & Stoner, 2013; Jewkes, Nduna, & Levin, 2008).

Sexual and reproductive health education, together with programs or elements to improve girls' confidence or self-esteem, may also contribute to the prevention of teen pregnancy, which is associated with school dropout. However, a comparative analysis of data across several countries in francophone

Africa found that the risk of dropout for girls for reasons other than pregnancy (e.g. exam failure or financial constraints) far exceeded the risk of dropout due to pregnancy (Lloyd, 2011). While these findings need to be tested in other contexts, they suggest that in addition to providing sexual and reproductive health education and services and implementing policies that support school attendance of pregnant or parenting girls, schools must create systems to support girls in school and ensure their progress.

IV. Addressing Gender Holistically: Multi-dimensional programs

While specific elements of gender in the education system have been examined in the previous sections, promoting gender equality through education requires addressing multiple elements and dimensions of schooling simultaneously. Achieving gender equality in education cannot be done by only addressing textbooks, or only implementing violence prevention programs. A safe and supportive environment free from violence, textbooks and curricula free from stereotypes and discrimination, equitable teacher attitudes and practices, and specific attention to understanding gender relations and building competencies beyond educational basics are all important components. In this section we briefly describe three integrated, multi-dimensional programs that incorporate some or all of these components, identified in a recent review by education expert Cynthia Lloyd (2013). These programs are generally either alternative programs as part of the formal education system or separately run by NGOs and are designed to address the specific needs of girls, building individual, social and economic competencies to enable them "to recognize their inherent worth, the fundamental equality of all human beings and their ability to contribute to personal and social betterment [...] develop the capacity to critically examine their lives and broader society and take action toward personal and social transformation" (Murphy-Graham, 2012, p.3 cited in Lloyd, 2013). While they generally focus on the empowerment of girls, these programs are built on strategies that have broad potential to engage and transform the lives of boys as well.

One model already operates in Thailand. The Child Friendly Schools (CFS) model, implemented by UNICEF in multiple countries in collaboration with governments is designed to improve the quality of public primary schools and create gender-sensitive, healthy, safe, and inclusive learning environments. The model varies across countries, but generally includes a wide spectrum of interventions, from ensuring adequate school building facilities, providing teaching and learning materials, extensive teacher training on child-centered pedagogy, and developing links to the community. A 2009 evaluation of CFS schools in six countries found huge variation across countries and schools in the level of investment and implementation. Still, the evaluation found that schools that had high levels of family and community participation and use of child-centered pedagogical approaches had stronger conditions for learning – in these schools, students felt safer, supported and engaged. Students, teachers, and parents in CFS schools generally had a very positive view of the equality of opportunities for male and female students, and these findings were corroborated by classroom observations, though some deeply rooted gender stereotypes were also noted (UNICEF, 2009a). In Thailand, the evaluation found that students who attend CFS schools where students report greater gender equality were significantly more likely to state that they looked forward to coming to school, that they felt safe at school, and that they wanted to complete secondary school when compared with students who attended CFS schools where students reported less gender equality (UNICEF, 2009b). These evaluations suggest that CFS is a promising approach in terms of creating gender equitable schools.

The Forum of African Women Educationalists (FAWE)'s Centre of Excellence (COE) model has transformed ordinary schools in 14 African countries into gender-responsive schools that focus on the physical, academic and social dimensions of both girls' and boys' education. Elements of the model include gender-responsive training for teachers and school, an emphasis on Science, Mathematics and Technology for girls, empowerment training for students, a sexual maturation management program for girls, gender-responsive school infrastructure, and community involvement in school management. FAWE has developed manuals and guidelines for wide dissemination, but the program has not yet been formally evaluated (Lloyd, 2013).

The SAT Program (Sistema de Aprendizaje Tutorial), designed in the 1980s by the NGO FUNDAEC (Fundacion Para la Aplicacion y Ensenanza de las Ciencias), is an alternative formal secondary education system for ethnic minority girls in Honduras, fully accredited and subsidized by the government and implemented by local NGOs. The SAT curriculum and teachers use student-centered, experiential, and dialogue based pedagogy, and specifically focus on gender issues, presenting "interdisciplinary content in ways that purposefully question dominant, patriarchal power structures" (Miske, 2013, p. 12). Service to and engagement with the community is an essential feature. A longitudinal qualitative evaluation found that SAT students displayed greater ability to identify problems and conceive solutions, more gender awareness, self-confidence, and knowledge compared to women in a comparison village who had not attended the program. A quasi-experimental quantitative study found that after two years, that adolescents in SAT villages had higher composite test scores than students in public secondary schools. The SAT program has been expanded to Colombia, Guatemala, Costa Rica, Nicaragua, and Ecuador (Lloyd, 2013).

V. Gender Analysis in Education

Addressing gender inequalities in education requires a comprehensive approach that is both systemic and specifically targeted at girls and other vulnerable populations (Gunawardena & Jayaweera, 2008; Subrahmanian, 2006), and that is designed for the particular context and needs of the country. A recent UNGEI working paper suggests four steps for gender analysis: 1) Collect and analyze data on all aspects of gender inequality within the sector, including multiple levels of analysis (e.g. institutional, community); 2) Raise awareness and identify allies to ensure that data leads to action; 3) Plan and implement programs and policies based on the specific context; and 4) Monitor and evaluate the implemented initiatives (UNGEI, 2012a). These steps are discussed briefly below.

Collecting Data and Evaluating Impact

The importance of data cannot be overstated. Accurate and detailed information is essential for planning appropriate action, as well as for mobilizing support. Table 1 provides some ideas about indicators that could be collected to give a clearer picture of the current gendered context of schooling in Thailand – much of this information is already available for analysis. For all of these indicators, it is important to examine not only national differences by sex, but also sex differences by region, socio-economic status, ethnic background, etc., and among groups of disadvantaged children such as those with disabilities, street children, or working children (Heijnen-Maathuis, 2008).

Assessing change in gender attitudes and norms is an important aspect of evaluating gender reform initiatives in education. Numerous survey tools to generally assess attitudes about gender roles, gender equity, and violence have been developed and used, primarily in Western contexts – Beere's 1990 "Gender Roles: A Handbook of Tests and Measures" specifies more than 50 different scales. Within the context of research on women's empowerment and gender inequality in the global south, the most frequently used measures of gender-related attitudes (used in for example, the Demographic and Health Surveys and the World Values Survey) relate to attitudes about who should make decisions on various domestic issues (e.g. large and small purchases, healthcare, and education of children), women's freedom of movement, and access to or control over resources (e.g. participation in paid employment, contribution and use of household income), and the appropriateness of violence against women in specific situations. Another survey, the International Men and Gender Equality Survey, implemented in at least 10 countries, includes the Gender-Equitable Men Scale (also adapted for women) which measures norms related to masculinity, gendered roles, sexual and reproductive health, sexual relations, and violence, as well as several items measuring men and women's attitudes towards gender equality and equality policies (Barker, et al., 2011; Pulerwitz & Barker, 2008).

While these scales can capture general attitudes about gender, they do not focus specifically on education or school experiences. In this case there is less consistency: different researchers have developed specific survey questions for teachers and students adapted to the particular context, including items related to perceptions of competency (e.g. "Math is harder for girls"), fairness and equal treatment

(e.g. "Girls and boys are treated equally in my school"), as well as more general questions about school climate, teaching practices, support in school, and school violence (See for example: Achyut, et al., 2011; Chudgar & Sankar, 2008; Ghuman & Lloyd, 2010; Lloyd, El Tawila, Clark, & Mensch, 2003; Lloyd, et al., 2000). Plan and Care, two large international non-governmental organizations, have adapted the GEM scale or developed other measures geared specifically towards school-aged children to assess gender attitudes, norms, and circumstances in schools, and are currently evaluating these measures in multiple countries. Classroom and school observation tools have also been developed, and are included as Part of Annex A. In general, there is great interest in improving measurement of gender equality dimensions in schools, and new tools and guidelines are likely to become available in the coming years.

In addition to survey tools, qualitative research and participatory methodologies that engage teachers, students, and communities can provide invaluable insight into gendered norms and practices in schools. As discussed in previous sections, there are numerous participatory tools that can be used at the school or community level for the dual purpose of collecting information while providing sensitization and training to school staff, students, and community members. This information can also be collected on a regular basis as part of a monitoring plan, and incorporated into other educational monitoring systems, to examine change over time.

Building Support for Gender Equality in Education

Raising awareness, identifying allies, and building broad support for promoting gender equality through education is an important and challenging step. Analyses of gender mainstreaming in South and East Asia concluded that political will was perhaps the strongest factor in facilitating gender mainstreaming in education. International commitments (e.g. Education for All, Millennium Development Goals (MDGs)) have also played an important role in generating interest and action, and the renewed focus on goals beyond gender parity in education (for example, in the discussion of post-2015 MDGs) is promising. Several countries in the Asia-Pacific region have developed comprehensive plans and partnerships to promote gender equality in education. In Cambodia, for example, an Inter-ministerial

Gender Working Group and a Steering Committee on Gender and Girls' Education regularly report on progress on Goal 5 of the EFA, achieving gender equality in education. The Cambodian Ministry of Education, Youth and Sport developed a Quality Assurance Scheme to apply standards to a range of areas, and a Gender Mainstreaming Strategic Plan with both qualitative and quantitative indicators was disseminated to central, provincial and district education staff. Gender assessments were carried out in 24 provinces, and gender responsiveness was one of six core dimensions implemented in Child-Friendly Schools. As mentioned in Box C, a collaboration between government agencies and UN bodies is implementing gender equality efforts in Vietnam, in response to legislative mandates around gender equality and violence prevention. Indonesia has created a dedicated unit within the education ministry responsible for ensuring that gender equity is planned for and monitored, in consultation with the Coordinating Ministry of Women's Empowerment.

As the above examples demonstrate, there are different models for implementing efforts to promote gender equality in education. In general, however, these efforts require developing partnership and garnering broad-based support: mainstreaming analyses have found that establishing specific gender units (within national or local governments), while successful in raising awareness of gender issues, have struggled with limited power and funding to achieve their ambitious mandates. Efforts to mainstream gender should thus occur "in the context of a broader discourse on institutional change, addressed to issues of reaching excluded groups, tackling inequality, and improving accountability of functionaries and providers" (Gunawardena & Jayaweera, 2008; Subrahmanian, 2006, p. 17).

Involving Parents

In addition to government agencies, teachers, and students, it is important to garner support from parents and parent organizations. Parents play a key role in their children's educational and career choices through their expectations and material, informational, and emotional support and resources (Equal Opportunities Commission, 2007). Parents, like teachers, are also central to shaping their children's gendered attitudes and experiences. Parents often hold traditional attitudes about gender and about

schooling, and may resist efforts to promote equity in school. For example, studies in several countries found that parents support teachers' use of corporal punishment for disciplining children (e.g. Feinstein & Mwahombela, 2010; Morrell, 2001; Mweru, 2010). At the same time, parents can act as allies and advocates for their children, and maintain accountability from the school or teachers. For example, a grassroots website by Thai parents monitors the use of corporal punishment in schools, naming particular schools and teachers who violently punish children and demanding responses and actions from the school administrations. While this particular approach is controversial, it demonstrates that parents can be involved in creating more equitable schools. Meeting with parents, providing gender training, explaining the reform initiatives, listening to their concerns, and involving them in the process of promoting gender equity can strengthen the implementation in schools, as well as extend the impact of these programs beyond the school and into the community. For example, the evaluation of the IHRE program in India found that students and teachers engaged with parents – enlisting their support or actively resisting or challenging their inequitable attitudes or behaviors (Bajaj, 2011a).

Regarding all stakeholders, it is important to recognize that gender norms and inequalities are deeply entrenched, and efforts to promote equality may be met with anything from indifference to active resistance. Gender training at all levels – from parents and teachers to senior government officials – with opportunities for discussion and reflection, can counteract this resistance and build support. Emphasizing the benefits of promoting equality in schools, from compliance with international agreements to expanded opportunities for boys and girls, can contribute to this process.

Implement and Evaluate Programs and Policies

Once information is collected and support garnered, context-specific policy and program interventions can be designed and implemented. Examples of such initiatives have been discussed throughout this paper, and should be designed for the local context and needs. However, as this and other recent reviews have indicated, more data and rigorous evaluations are sorely needed to understand the short- and long-term impact of interventions on the gendered experiences of students in school. Thus, the

fourth step – careful monitoring and rigorous evaluation of policies and programs at multiple-levels – should be an integral part of these initiatives.

Table 1: Sample Indicators of Gender Equality in Education

Equal Access (equality TO education)	Equal Treatment and Opportunity (equality WITHIN education)	Education and Other Outcomes (equality THROUGH education)
Sex disaggregated: Gross/net enrolment rates by location, region, ethnicity, religion, socio-economic status, etc. Survival rates (+5 years of schooling) Drop-out rates Completion rates Absenteeism/attendance rates Repetition rates Average years of schooling Transition/progression to higher levels Proportion of female to male teachers, head teachers, school administrators and ministers, inspectors National, local, and school policies related to access	 Subject choice/assignment by gender (including extra-curricular activities) Gender-awareness in textbooks, curriculum, and teacher training Gender balance within classrooms Level of training of male/female teachers Gender discrimination within the school and classroom (context specific indicators needed, e.g., teacher practices, access) Teacher gender attitudes Levels and types of violence experienced Other factors shaping participation and performance (e.g. reproductive/productive responsibilities) National, local, and school policies related to equal treatment and opportunity 	 Exam performance (on both international and local exams) by gender Male/female employment across different levels of education Gender differentials in teaching at all levels (recruitment, wages, positions) Gender differentials in wages across different levels/sectors of employment Changes in social norms and gender roles Changes in levels of violence National, local, and school related to outcomes

Adapted from (Subrahmanian, 2005)

Conclusions and Recommendations

This paper presented ways in which the education system reproduces gender stereotypes and inequalities, as well as policy and program examples that aim to instead promote gender equality in and through education, harnessing the enormous transformative power of schools. We conclude with these recommendations:

- Efforts to promote gender equality need to be comprehensive and systemic, supported by legislation, resource allocation, and institutional development. Gender training for education officials and collaborations across units and ministries may be necessary in order to garner support.
- Support for gender equality initiatives must also be built at the grassroots level, with students, teachers, parents and communities.

- Efforts should be guided by in-depth gender analyses and supported through data collection, monitoring, and evaluation, with specific attention to the intersection of gender with socio-economic status, ethnicity, regional differences, sexual orientation, disability, etc. Data should go beyond measures of access to capture equality within and through education, including gendered experiences, attitudes, and outcomes, as described in Table 1. A range of methods qualitative, quantitative, and observational with an emphasis on participatory approaches should be used.
- Explicit policies to prohibit discrimination and stereotyping, promote positive messages about equality, and reduce violence in schools should be developed and incorporated at the national, local, and school level. Processes and guidelines for addressing these issues should also be developed and widely disseminated to school authorities, teachers, parents, and students.
- Training on gender inequality, power dynamics, human rights, and violence should be an integral part of pre- and in-service teacher training, training for curriculum developers and school inspectors, and the student curriculum. Resources to support teachers including self-assessments, sample lesson plans, mentoring, and accessible resource persons or centers are necessary to help teachers improve their practices.
- Efforts to train, monitor, and support teachers to use child-centered, participatory, and diverse teaching and assessment styles, as well as training on positive, non-violent classroom management and disciplinary strategies should continue, as these methods focus on the diversity and strengths of children, rather than on gender stereotypes.
- Comprehensive approaches to eliminating violence in schools (both against girls and among boys or
 girls) should include establishing national and school level policies prohibiting violence and
 procedures to effectively address it when it does occur, as well as training program for violence
 prevention and teacher or bystander interventions.

Holistic, multi-dimensional programs that build social, emotional, and financial competencies in
addition to educational skills, with a component on gender analysis and human rights, should be
implemented, as part of the curriculum or as supplemental programs for both girls and boys.

 The gender analysis may reveal that programs targeted to specific disadvantaged groups are necessary. These programs may include incentives for enrollment, additional support, condensed or distance learning programs, depending on the specific needs.

 Continuous monitoring and rigorous evaluation of policy and program initiatives should be undertaken, using participatory methods to the extent possible. Lessons learned from these initiatives should be incorporated into the design and planning of current and future interventions.

This report presented an overview of gender equality issues and initiatives in the education sector. Challenging gender norms and inequalities is a long and challenging process, involving change at the individual as well as institutional level. However, gender inequality also has serious costs, for men and women, and for society as a whole. The various efforts outlined in this report show promise in bringing about a more equitable world and expanding the range of opportunities for boys and girls, men and women.

Annex A: Gender Equality in Education Resources

General Resources, including tools:

• UNESCO (2009) Gender in Education Network in Asia-Pacific (GENIA) Toolkit: Promoting Gender Equality in Education

A comprehensive guide for learning about, analyzing, implementing, and advocating for gender equality in education. Includes tools for raising gender-awareness among a range of stakeholders, as well as tools for assessing and creating gender-responsive educational environments and educational management.

Available at: http://www.unescobkk.org/education/gender-networks/genia-resources/

• Forum for African Women Educationalists (FAWE) (2006) Experiences in creating a conducive environment for girls in schools: FAWE Centre of Excellence

Includes useful discussions on setting up centers of excellence schools and on building support and collaborations.

Available at: http://www.fawe.org/Files/fawe_best_practices_-_centres_of_excellence.pdf

• Canadian International Development Agency (2010) Education & Gender Equality Tipsheets

Originally developed to assist CIDA program officers, this document explores issues of gender equality in education policy, education statistics and management information systems, teacher training, and curriculum development. The examples of result statements (outlining ultimate outcomes, intermediate outcomes, and immediate outcomes) and key questions to ask are particularly helpful.

Available at: http://publications.gc.ca/collections/collection_2010/acdi-cida/CD4-62-2010-eng.pdf

• Equal Opportunities Commission, UK (2007) The gender equality duty and schools: Guidance for public authorities in England

A useful example of guidelines for education professionals for implementing gender equality policies Available

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CCoQFjAA&url=http%3A%2F%2Fwww.equalityhumanrights.com%2Fuploaded_files%2FPSD%2F46_gender_equalityduty and schools guidance.doc&ei=vOwsUoKDN6-

r4AOv8YDgDg&usg=AFQjCNF1TxxTjQCCR3Tt3qA1ZxcCJoSnpQ&sig2=yQWa9PQIHS-Ggoo_8l6XXA&bvm=bv.51773540,d.dmg

Gender Training:

 Vietnam Ministry of Education and Training & UNESCO (2011) Teacher Training Modules that Address Gender Issues and Promote Gender Equality

Specific training tools and activities for teachers and educational personnel. Includes assessment tools.

Available at:

http://www.academia.edu/2764201/Teacher_Training_Modules_that_address_gender_issues_and_promote_Gender_Equality

• FAWE (2005) Gender Responsive Pedagogy: A Teacher's Handbook

Another collection of tools and tips for training and sensitizing teachers to gender issues in their schools. Includes assessment tools.

Available at: http://www.ungei.org/resources/files/FAWE GRP ENGLISH VERSION.pdf

• UNESCO (2004) Gender Sensitivity: A training manual for sensitizing education managers, curriculum and material developers and media professionals to gender concerns

Includes activities to sensitize a range of stakeholders to gender issues.

Available at: http://unesdoc.unesco.org/images/0013/001376/137604eo.pdf

• International Center for Research on Women, CORO, and the Tata Institute for Social Sciences (2011) Gender Equity Movement in Schools (GEMS): Training Manual for Facilitators

This manual was developed for facilitators working with middle-school students in India, and includes activities around gender and violence appropriate to that age-group.

Available at:

http://www.icrw.org/files/publications/Gender%20Equality%20Movement%20in%20Schools%20Training%20Manual.pdf

Promundo's Program H & M toolkits

Promundo's training tools for young men and women focus more specifically on the role of masculinity in understanding gender inequalities, reducing violence, and improving sexual and reproductive health. Though not school specific, they have been implemented in school settings provide useful activities and tools, particularly for working with men and boys.

Available at: http://www.promundo.org.br/en/publications-for-youth/

Specific Tools and Resources:

• UNESCO (2009) Promoting Gender Equality through Textbooks: A Methodological Guide

This guide provides both a rationale for why textbooks are important in terms of gender equity and human rights, as well as specific tools to assess and monitor inequalities in textbooks.

Available at: http://unesdoc.unesco.org/images/0015/001588/158897e.pdf

• UNESCO (2005) Exploring and Understanding Gender in Education: A Qualitative Research Manual for Education Practitioners and Gender Focal Points

This comprehensive manual provides guidance on conducting qualitative research (including interviews and observations) with a focus on gender in education.

Available at

http://www.ungei.org/resources/files/Exploring_and_understanding_gender_in_education_UNESCO.pdf

• USAID (2009) SCOPE Report: Girls' Improved Learning Outcomes (GILO)

This report presents one useful example of an observation tool to examine teachers' gendered behaviors. Developed as part of the GILO project in Egypt.

Available at:

http://gem2.org/sites/default/files/GILO%20SCOPE%202009%20Report FINAL 20Apr2010.pdf

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