



POLICY BRIEF
**EDUCATING GIRLS AND THE
MARGINALIZED IN THE DIGITAL
AND TRANSFORMATIVE
INNOVATION AGE: TO MAKE
“LEAVING NO ONE BEHIND” A
REALITY**



Task Force 6

**ECONOMY, EMPLOYMENT, AND EDUCATION IN
THE DIGITAL AGE**

Authors

**KAZUHIRO YOSHIDA, YUTO KITAMURA, PAULA RAZQUIN,
SHINICHIRO TANAKA**

موجز السياسة تعليم الفتيات والمهمشين في عصر الابتكار الرقمي والتحولي: ليصبح نهج "عدم استبعاد أي فرد" واقعياً

فريق العمل السادس
الاقتصاد والتوظيف والتعليم في العصر الرقمي



المؤلفون

كازوهيرو يوشيدا، يوتو كيتامورا، بولا رازكوين، شينشيرو تاناكا



ABSTRACT

Realizing the full potential of individuals and human society requires eradicating gender inequality, broad marginalization, and discrimination; adequate policy measures are needed to ensure their realization. For technology and innovation to accelerate actions that address global inequalities and marginalization, especially those in developing countries, the teaching and learning processes should be transformative and based on an extended scope of learning objectives that stress behavioral changes. The concept of learning should go beyond school: the roles of parents, the community, and broad-based stakeholders must be recognized in a congruent framework.

يتطلب الاستفادة من كل طاقات الأفراد والمجتمع البشري القضاء على كل من عدم المساواة بين الجنسين والتهميش واسع النطاق والتمييز، لذا فهناك حاجة ماسة إلى تدابير مناسبة على صعيد السياسات لتحقيق ذلك. ولا بد أن تكون عمليات التدريس والتعلم تحويلية وتستند إلى نطاق موسع من أهداف التعلم، التي تركز على التغييرات السلوكية، حتى يمكن للتقنية والابتكار تسريع وتيرة الإجراءات التي تعالج عدم المساواة والتهميش على مستوى العالم، لا سيما تلك التي تعاني منها البلدان النامية. ويجب أن يتجاوز مفهوم التعلّم إطار المدرسة: يجب الإقرار بدور الوالدين والمجتمع والجهات المعنية على نطاق واسع ضمن إطار عمل متناغم.



CHALLENGE

COVID-19's indiscriminate infection of the global population on an unprecedented scale is a challenge to humanity. The socially marginalized and physically weaker are typically more susceptible to being victims of incidents such as this disease and, further, are less likely to enjoy the benefits of education. Compared to developed countries, the situation in developing countries, the focus of this policy brief, is even more serious. One global, national, and household concern is gender inequality, which has persisted obstinately for many decades.

Issues of gender inequality have many commonalities with issues faced by children, youth, and adults who are disabled, conflict-affected, or discriminated against due to socio-economic factors, language, ethnic, and other social barriers. Unless these discriminatory barriers are removed, our irreversible commitment to realizing a sustainable and peaceful society “leaving no one behind” will not be successful. Removing these barriers requires changing the behaviors of individuals, households, and society.

It is true that global gender disparity has shrunk significantly in terms of access to basic education, aided by committed actions like those of the Beijing Declaration and Platform for Action (BDPA) (UN 1995), followed by the Millennium Development Goals and the Dakar Framework for Action on Education for All (EFA). However, gender disparity remains and, in many developing countries, even worsens as children progress from primary to junior and senior secondary to higher education. Primary school age girls, for example, are still more likely to be out of school than boys (UNESCO 2019a; UNESCO-UIS 2019). Moreover, girls and young women are less represented in technical and vocational programs and the higher education fields of science, technology, engineering, and mathematics (STEM) (UNESCO 2017a). This results in weaker social, economic, and political representation for women, as well as lesser participation in decision-making.

Gender discussions in the past, including the BDPA, envisaged realizing women's empowerment through increased access to education and other services. Among the known barriers that prevent girls from attending school or lead them to drop out, supply-side constraints have been relatively eased (such as by more gender-sensitive school facilities). In secondary education, for example, 87% of schools worldwide possess sanitation facilities for girls; this proportion reaches nearly 100% in the majority of G20 nations with available data, with the exceptions of India and Indonesia (UNESCO 2019a). Nevertheless, demand-side, social norms, and culture-related factors (e.g.,

CHALLENGE

child marriage, adolescent pregnancy, preferences for boys' education) are harder to address. Past policy briefs discuss gender equality issues in education (e.g., Ridge et al. 2019), digital skills (Lyons et al. 2019), and Information and Communication Technology (ICT) for non-formal and informal education (Cobo et al. 2018). However, they deal with each issue independently and disregard the critical role that digitalization and transformative innovation can have for a social and behavioral transformation that favors girls and gender equality.

Unfavorable learning environments and outcomes (both cognitive and non-cognitive) combined with labor market distortions and discriminatory social values and norms reinforce gender inequality in both social and economic settings. To achieve equality in education for girls and women, the labor market and society need to be viewed as intertwined processes.



PROPOSAL

This policy brief argues that digitalization, innovation, and broader participation in education by non-conventional players can contribute to prompting a breakthrough for the needed transformation (behavioral and policy changes) for educating girls and the socially marginalized.

Realizing the full potential of individuals and human society requires eradicating gender inequality, broad marginalization, and discrimination—problems that have been further aggravated by COVID-19. Ensuring continued good quality learning opportunities for girls and marginalized students with transformative learning objectives and outcomes is necessary; to achieve this, the potential contributions of digitalization and innovation should be fully pursued. Tackling these issues cannot be achieved solely within the educational system, whether at schools or other learning facilities. The problems are intertwined and occur between and among learning spaces, households, and societies. They call for systematic and cohesive policy approaches viewed as a continuum, and, for sustained effects, our responses must focus on longer-term perspectives rather than quick fixes. We recommend comprehensively taking the following set of policy actions under two broad policy areas.

Policy Area 1. Continued quality learning opportunities for girls and the marginalized

Policy Action 1a: Ensure teachers' attitudes and working conditions are conducive to promoting education for girls.

A safe and hygienic school environment is indispensable, both for preventing girls from dropping out and attending to their learning needs and is also essential for preventing the spread of infectious diseases. Governments should pursue efforts to provide facilities that are conducive to quality and inclusive learning experiences. In addition, corporal punishment, harassment, and violence can trigger negative school and learning experiences and lead to any student dropping out, but especially girls and those in vulnerable situations (UNFPA-UNICEF 2017). The biased behaviors of teachers toward vulnerable students and girls should be transformed from an attitude of punish-to-discipline to one of support-to-include. This requires **nurturing a school culture that is safe and supportive for all, particularly girls**. Moreover, governments have a legal obligation to prohibit corporal punishment in schools and to define the norms and standards for safe and violence-free school environments. This has implications for how schools are managed and therefore also for the roles of school leaders and teacher development programs.

In some countries, the low percentage of female teachers may act as a barrier to access, retention, and learning opportunities for girls. Female teachers face additional burdens compared to male teachers since they often must perform the multiple roles of mothers, wives, and members of the community. Moreover, schools are both workplaces and learning places for teachers. **Policy measures should be introduced to make schools fair and good working places for both female and male teachers** to encourage and support female teachers to fulfil and continue their services. Possible measures could include, for instance, promoting STEM education for girls and women (Policy Action 1b) and protecting female teachers from unfair treatment when they take maternity or other leaves (Stromquist et al. 2017). In turn, this will help girls complete their education and foster improved and continued learning.

Policy Action 1b: Promote STEM education in such a way that it promotes women's increased social participation.

It would be both hypocritical and unacceptable if education, its contents, and outcomes support reproduction of societal bias against women and girls. A case in point is STEM education. A report by UNESCO (2017a) states that, with age, girls tend to lose interest in STEM, and women's participation in STEM fields shrinks when it comes to higher education. Another report (ILO and UNICEF 2018) points out that female youth are three times more likely than male youth to be "not in education, employment, or training (NEET)."

Moreover, the statistics clearly show that women worldwide have 25% less access to the Internet than men, which increases to even 50% less access in sub-Saharan Africa (World Bank 2016). This problem is becoming more serious for girls and women given how COVID-19 has influenced the availability of access to educational opportunities.

It is recommended that governments **take measures to ensure that policies to strengthen STEM do not discriminate against the participation and experiences of girls**. This includes promoting cooperation between households, the community, and schools. In schools, how STEM fields are depicted in the curriculum and teachers' attitudes and perception toward girls' potential for STEM fields may also reinforce messages of traditional roles for girls. The stereotypical roles of women at home and in society affect how girls perceive their own value and career aspirations. An instrumental action to achieve positive effects would be increasing the number of female teachers for STEM subjects, including successful women in STEM fields as role models, who could consult with female students about their career paths. Thus, STEM pol-

icies should be consistent throughout the education system and society at large. This includes policies to redress societal and labor market distortions that disfavor girls and women in STEM fields, as well as in the teaching profession.

Policy Action 1c: Officially recognize learning outside school and ensure learning continuity for girls.

Past interventions to promote girls' education have been primarily supply-side and, to a lesser extent, stimulating demand by offering incentives such as scholarships for girls or women. Still, many school-aged girls have missed their learning opportunities for a variety of reasons: some never attended school, while others dropped out. For these girls, non-formal learning opportunities such as community learning centers, distance learning, or different types of private learning institutions may be their only opportunity to develop literacy, life skills, or skills for employment. Governments should guarantee the availability of flexible options to serve girls' unsatisfied learning needs, including authorizing/regulating non-state institutions and programs, and where necessary, providing such services themselves. At the same time, we must pay attention to the risk that technological advancement in learning practices outside school may widen opportunities as well as quality gaps between people with abundant resources and those without.

The nexus between non-formal education and formal education, including the mechanisms that ensure non-formal education curriculums are equivalent to those of regular schools, needs to be developed for continuing education. Governments should provide support for learners whose only option is to use these non-formal learning opportunities. Girls and those marginalized tend to suffer most from a lack of alternative options and the discontinuity of learning. Interventions should significantly improve the quality of non-formal learning and emphasize students' acquisition of all aspects of learning outcomes.

Policy Area 2. Transformative learning outcomes through digitalization and innovation

Policy Action 2a: Reorient curriculum toward behavioral changes for transformation.

Education's roles include providing learners with knowledge, skills, values, and attitudes (UNESCO 1997). This statement has been broadly accepted, as repeatedly stated in the Jomtien Declaration (UNESCO 1990), EFA Dakar Framework for Action (UNESCO 2000) and Incheon Declaration (UNESCO 2015). However, improvements in girls'

education have primarily taken place at the prerequisite stage: access to and trajectories in education. The BDPA also emphasizes the critical roles that school access and participation have for acquiring knowledge and skills, especially for girls and women.

While experiences from international cooperation have shown us that increased resources and interventions (i.e., providing more accessible facilities and gender-sensitive materials) have improved “learning opportunities” in basic education, resulting in reduced gender inequality in terms of enrollment, “learning outcomes” have not improved (Independent Commission for Aid Impact 2012). UNESCO (2017b) warns that more than half the world’s children are not mastering minimum proficiencies, whether they attend school or not. The World Bank (2019) stresses that ending learning poverty should be our priority. The definition of learning outcomes needs to be clarified so that it provides the basis for the efforts of governments in developing countries and for international cooperation.

G20 countries are expected to commit themselves and urge the international community **to acknowledge that curriculum objectives must more explicitly emphasize behavioral changes**, as the Jomtien Declaration stated, **and to reorient curriculum implementation accordingly. This will enable learners to achieve outcomes not only in terms of acquiring knowledge and skills, but also and more importantly, in terms of the socio-emotional aspects of the objectives, including values and attitudes.** This is important, particularly for empowering girls and women, because societal norms, culture, and behaviors are often sources of gender inequality. However, the well-intended national curriculum (intended curriculum) does not produce results when there is insufficient focus on its effective implementation. For instance, even though many countries reference the importance of inclusiveness, teachers are not trained regarding what to do and how to ensure that inclusion benefits both students with difficulties and other students. Support for teachers and for providing an enabling environment is weak or absent. Reorienting the curriculum will begin with reevaluating the direction of learning objectives, including providing the utmost care for women and those weaker throughout the teaching and learning processes. Teachers must receive adequate training and support for this transformative reorientation, echoing the statement of Target 4.7 of the SDGs. The target underscores the importance of Education for Sustainable Development (ESD) and Global Citizenship Education (GCED), along with other universal values, such as peace, nonviolence, and appreciation of cultural diversity.

Policy Action 2b: Support transformative innovations that help reduce discrimination against girls and women.

Under a consistent policy environment that promotes transformation, innovations in the teaching and learning processes have the potential to achieve a breakthrough in improving education quality. While technology can help, the digital divide highlights differences in the availability of and accessibility to educational technology. These can result in discrimination and technological inequality inside and outside schools (UNESCO 2019b). Promising discussions on using innovations and digital technologies to advance the education of the marginalized, including girls, are ongoing (e.g., the G20 (n.d.) initiative #eSkills4Girls). There is a risk, however, that government efforts to respond to COVID-19's challenges using digital and other modern technology may adversely affect girls, the socially weaker, and the marginalized. The scope of innovation is broad. The OECD (2012) discusses pedagogical innovation in relation to school autonomy, teacher self-efficacy, and professional learning communities. Innovation happens through practical experiences in both high-tech and low-tech environments. Similar to skills (such as those in OECD (2019)), certain education technologies and innovations may be generic and transferable (e.g., certain IT), while others are context-specific, more deeply connected to the local culture, and difficult to transfer. Technological innovation should be considered in relation to practical pedagogical innovation that does not exclude girls, women, and the marginalized.

The challenge, then, is how we effectively translate innovations so they more widely benefit education practitioners, children, and girls. G20 governments' policies should **create enabling environments for digitalization and innovative practices that contribute strongly to learning outcomes, including non-cognitive ones, that benefit girls and the marginalized and reduce the learning divide**. This can be pursued by collaborating with broad-ranging partners who may go beyond the conventional education community. This includes the education technology (edtech) industry, which has advantages in developing contents and low-cost devices for classroom innovation in cooperation with teachers.

Policy Action 2c: Parents and the community at large should be part of this transformative reorientation.

Parents, families, and communities have important roles to play in all aspects of the school experience and learning process. Setbacks in girls' education are inseparably related to perceived and practiced gender roles in households, communities, and broader societal institutions. The school experience reflects society; the problems that persist in school mirror the problems in society at large, as repeatedly investigated

since Dewey (1899) pointed it out over a century ago. Even if equity in education is realized, the equalizing effect of schooling will be nullified if the job market and societal institutions and rules continue discriminating against women. Therefore, for education outcomes to be effective and sustainable, schools, other learning spaces, households, communities, and societies at large must align toward the principle of equality; education does not end at school.

Governments should establish mechanisms that promote parental and community participation in education in the context of a transformative reorientation. That way, the changes in attitudes and behaviors promoted in schools will be sustained and reinforced in households, communities, and society at large. Biased views of gender roles, stereotyped social values, and norms on the part of households and society must be transformed. The first step would be for the government to encourage parents and communities to support, rather than discourage, girls and female adolescents remaining at school, continuing to learn, and realizing their empowerment. Another step would be to promote democratic structures and processes conducive for authentic parental and community participation in the governance, management, and accountability of schools (Lewis and Naidoo 2004; Kwiri and Openjuru 2009). Schools can provide more opportunities for parents to engage in school matters and activities that help them share common attitudes toward the transformation. Schools should also engage community teachers who possess cultural understanding and knowledge to establish meaningful connections with students and the community. Concurrent measures can include providing life-long learning opportunities for parents and adults that encapsulate common values and promote transformative attitudes.

These policy actions—supporting teachers in promoting girls' education, non-discriminatory STEM education, and non-formal education; reorienting the curriculum for transformation; supporting transformative innovation; and promoting parental and community participation—are all interrelated and essential for achieving educational objectives that leave no one behind. Given the universal nature of the issues raised here, the authors believe that these recommendations are relevant to G20 countries, which are expected to act as global role models. Furthermore, G20 members hold richer empirical knowledge and technical and financial resources essential for responding to the stated bottlenecks. The G20 is the best situated forum for catalyzing solutions. G20 governments are expected to play leading roles in advancing dialogue and cooperating with developing countries.

Disclaimer

This policy brief was developed and written by the authors and has undergone a peer review process. The views and opinions expressed in this policy brief are those of the authors and do not necessarily reflect the official policy or position of the authors' organizations or the T20 Secretariat.



REFERENCES

Cobo, Cristóbal, Alessia Zucchetti, and Alex Rivas. 2018. Redesigning Education Landscape for the Future of Work: Third-space Literacies and Alternative Learning Models. T20 Policy Brief.

Dewey, John. 1899. *The School and Society: Being Three Lectures*. Chicago: The University of Chicago Press.

G20. n.d. "Initiative on #eSkills4Girls." Accessed April 13, 2020. <https://www.eskills4girls.org/>.

ILO and UNICEF. 2018. "GirlsForce: Skills, Education and Training for Girls Now" (Working paper, June 14, 2020). Geneva: ILO and New York: UNICEF.

Independent Commission for Aid Impact. 2012. *DFID's Education Programmes in Three East African Countries*. London: ICAI.

Kwiri, Topher, and George Openjuru. 2009. *Teacher Quality and Parental Participation in Children's Learning. Walking the Talk: Improving the Quality of Learning Outcomes in Primary Schools in Uganda*. Kampala: Action Aid Uganda.

Lewis, Suzanne Grant, and Jordan Naidoo. 2004. "Whose Theory of Participation? School Governance Policy and Practice in South Africa." *Current Issues in Comparative Education*, 6 (2): 100–112.

Lyons, Angela, Alessia Zucchetti, Josephine Kass-Hanna, and Cristóbal Cobo. 2019. *Bridging the Gap between Digital Skills and Employability for Economically Vulnerable Populations*. T20 Policy Brief.

OECD. 2012. *Teaching Practices and Pedagogical Innovation: Evidence from TALIS*. Paris: OECD.

OECD. 2019. *OECD Futures of Education and Skills 2030: OECD Learning Compass 2030 – A Series of Concept Notes*. Paris: OECD.

REFERENCES

Ridge, Natasha, Susan Kippels, Alejandra Cardini, and Joannes Paulus Yimbessalu. 2019. *Developing National Agendas in Order to Achieve Gender Equality in Education*. T20 Policy Brief.

Stromquist, Nelly P., Steven J. Klees, and Jing Lin, eds. 2017. *Women Teachers in Africa: Challenges and Possibilities*. New York: Routledge.

UNESCO. 1990 *World Declaration on Education for All and Framework for Action to Meet Basic Learning Needs*. Paris: UNESCO.

UNESCO. 1997. *Learning: The Treasure within*. Report to UNESCO of the International Commission on Education for the Twenty-first Century. Paris: UNESCO.

UNESCO. 2000 *The Dakar Framework for Action*. Paris: UNESCO.

UNESCO. 2015. *Incheon Declaration and Framework for Action for the Implementation of Sustainable Development Goal 4*. Paris: UNESCO.

UNESCO. 2017a. *Cracking the Code: Girls' and Women's Education in Science, Technology, Engineering and Mathematics (STEM)*. Paris: UNESCO.

UNESCO. 2017b. *More than One-Half of Children and Adolescents are not Learning World-Wide*. Fact Sheet No. 46. Paris: UNESCO.

UNESCO. 2019a. *Global Education Monitoring Report 2019. Gender Report: Building Bridges for Gender Equality*. Paris: UNESCO.

UNESCO. 2019b. *Artificial Intelligence in Education: Challenges and Opportunities for Sustainable Development (UNESCO Working Papers on Education Policy 07)*. Paris: UNESCO.

UNESCO-UIS. 2019. *New Methodology Shows that 258 Million Children, Adolescents and Youth Are Out of School (Fact Sheet 56)*. Montreal: UNESCO Institute for Statistics.

REFERENCES

UNFPA and UNICEF. 2017. UNFPA-UNICEF Global Program to Accelerate Actions to End Child Marriage: Progress Report 2016. New York: UNFPA and UNICEF.

United Nations. 1995. Beijing Declaration and Platform for Action. New York: United Nations.

World Bank. 2016. World Development Report 2016: Digital Dividends. Washington, DC: World Bank.

World Bank. 2019. Ending Learning Poverty: What will it take? Washington, DC: World Bank. (Conference Version).



AUTHORS

Kazuhiro Yoshida

Hiroshima University

Yuto Kitamura

The University of Tokyo

Paula Razquin

Hiroshima University, University of San Andrés

Shinichiro Tanaka

Japan International Cooperation Agency

