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Gender stereotypes in education: Policies and practices to address gender stereotyping across OECD education systems

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Acknowledgements

Abstract

In spite of advances in recognising that girls and boys, and women and men, do not have to be bounded by traditional roles, gender stereotypes persist in education and beyond. Children and youth are affected by gender stereotypes from the early ages, with parental, school, teacher and peer factors influencing the way students internalise their gender identities. As such, not only is intervening in pre-primary education necessary, but also measures at the primary and secondary levels are key to eradicate gender stereotypes and promote gender equality. Based on the analytical framework developed by the OECD Strength through Diversity project, this paper provides an overview of gender stereotyping in education, with some illustrations of policies and practices in place across OECD countries, with a focus on curriculum arrangements, capacity-building strategies and school-level interventions in primary and secondary education.

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Introduction

The OECD is at the forefront of fighting gender inequalities. Through its OECD Gender Initiative, the Organisation examines existing barriers to gender equality in education, employment, and entrepreneurship and monitors the progress made by OECD and non-OECD countries in promoting gender equality. The initiative also provides a comprehensive collection of work carried out by the OECD on gender and gender equality, from governance to development[1]. The extensive work carried out by the Organisation highlights gender disparities in education, employment and society. Some of the recent work of the OECD on gender in education include analyses of gender gaps in educational outcomes and career choices (Borgonovi, Ferrara and Maghnouj, 2018[1]; Givord, 2020[2]; Mostafa, 2019[3]; OECD, 2019[4]) and the evolution of gender gaps in numeracy and literacy between childhood and adulthood (Borgonovi, Choi and Paccagnella, 2018[5]; Borgonovi et al., 2017[6]).

One of the reasons for gender disparities has to do with gender stereotypes (Breda et al., 2020[7]) – widely held, fixed and highly generalised beliefs and expectations that people hold about particular groups. Common Western gender stereotypes include ideas that girls should play with dolls and boys should play with trucks, that boys should prefer blue and girls, pink. While previous OECD work on gender equality has highlighted the key importance of eradicating gender stereotypes in education, e.g. OECD (2019[4]; 2015[8]), it has not yet focused on mapping policies and practices targeting the gender stereotypes in education. Building on existing work carried out by the OECD, this paper aims to build knowledge in this area.

Despite advances in understanding gender, gender stereotypes persist across most OECD countries. Gender stereotypes and norms are present from the moment of a child's birth and, by the first years of their lives, children become affected by stereotypical expectations and norms based on their gender (Rouyer and Zaouche-Gaudron, 2006[9]). These expectations and norms reinforce gender stereotypes and are passed down by parents, schools, teachers and other social institutions, such as the media, from early childhood until adolescence, and even later into adulthood (Bian, Leslie and Cimpian, 2017[10]; Gelman et al., 2004[11]; Lavy and Sand, 2015[12]). Gender stereotypes can strongly affect the way children and youth develop their identities, frame and pursue their educational and professional aspirations. Therefore, intervening to dismantle these stereotypes is crucial to enhance gender equality in our societies.

Schools are one of the most important settings where children and youth are socialised and build their identities. However, across many countries, educational curricula, teaching and learning materials and classroom learning still reinforce traditional gender stereotypes. Teachers and parents have conscious and unconscious gender biases that can reinforce the way gender stereotypes are passed down to children and youth (see Section 1.2). To challenge this and promote more equitable and inclusive education for all students, education systems have increasingly developed strategies to eradicate gender stereotypes. These include designing and implementing more inclusive curricula and textbooks, preparing teachers and

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[1] The complete collection of OECD work on gender and gender equality is available at https://www.oecd.org/gender/resources/.

the school staff and promoting whole-school approaches by engaging parents and the broader community. Strategies also include challenging gender stereotypes through language, play and technology.

Based on the analytical framework developed by the OECD Strength through Diversity project (Cerna et al., 2021[13]), this paper aims to provide an illustration of some of the existing policies and practices to dismantle gender stereotypes across OECD education systems. In particular, the paper focuses on governance arrangements (particularly curriculum), capacity-building and school-level interventions, which are three policy areas the project's analytical framework recognises as key to promoting more equitable and inclusive education systems. Many OECD countries and systems still use a binary understanding of gender. Others are moving away from a binary approach acknowledging gender as a spectrum. Taking into account the diversity in the way gender is acknowledged across countries, the paper combines examples of both approaches.

The paper is structured as follows. Section 1 provides an introduction to gender stereotypes in education, focusing on the role they have in the development of children and youth's identities and learning. The section also provides an analysis of key policy issues linked to gender stereotyping, particularly with respect to curriculum arrangements, capacity-building and school-level interventions. Based on this, Section 2 analyses some of the policies and practices in place across OECD education systems. The illustration does not aim to be a comprehensive overview of the approaches and interventions taken by countries; rather, its goal is to introduce some of the different strategies implemented across countries and organisations to eliminate gender stereotypes. The overview combines examples of approaches taken at the system-level and strategies implemented at a smaller scale by formal education actors or other partners, including non-governmental organisations (NGOs) and civil-society organisations (CSOs). A concluding section summarises key takeaways from the paper and highlights policy pointers to promote further work in the area.

1 An overview of gender stereotypes in education

In spite of advances in understanding gender, gender stereotypes persist in education and beyond, thereby reinforcing gender disparities and inequalities in our societies (OECD, 2015[8]). Understanding and conceptualising gender and recognising gender stereotypes are keys to identifying and developing promising policies and practices for all students. This section provides an overview of gender theory, gender stereotypes and issues related to gender in education systems. As the topic of gender has been widely covered by previous OECD work and other international organisations, the section does not aim to provide a comprehensive review of the existing literature in the area. Rather, this section presents an overview of some of the evidence on gender stereotypes in education through a lifelong approach, from pre-primary education to higher education and beyond. It analyses the role that teachers, parents and peers play in passing on gender stereotypes to children and youth. The section also aims to build a knowledge base to investigate key issues and policy areas related to gender stereotypes using the analytical framework developed by the OECD Strength through Diversity project. Key policy areas in this framework include governance, capacity building and school-level interventions. More will be described about these areas later in this section.

1.1. What are gender stereotypes in education?

1.1.1. Gender

Although the words "sex" and "gender" are often used interchangeably, their definitions are different. *Sex* refers to the biological and physiological characteristics of being male or female, such as reproductive organs and hormones (Council of Europe, 2019[14]). *Gender* involves social roles and relationships, norms and behaviours that boys and girls are informally taught, such as how they should interact with others, what they might aspire to become and what opportunities they might expect, based on their sex (Ibid.). These socially determined roles and behaviours may or may not correlate with the sex assigned at birth. The Council of Europe has defined gender as "socially constructed roles, behaviours, activities and attributes that a given society considers appropriate for women and men" (Council of Europe, 2011[15]). The World Health Organisation (WHO) states that the "characteristics of women, men, girls and boys that are socially constructed" include "norms, behaviours and roles associated with being a woman, man, girl or boy, as well as relationships with each other. As a social construct, gender varies from society to society and can change over time" (WHO, 2018[16]). Gender differs from sex as the latter refers to "the different biological and physiological characteristics of females, males and intersex persons, such as chromosomes, hormones and reproductive organs" (WHO, 2018[16]).

The term "gender" was introduced in the 1950s to describe the social demonstration of male and female identity. Psychologists aimed to formalise a clear distinction between biological sex – male and female – and social roles – masculinity and femininity (Muehlenhard and Peterson, 2011[17]). From the 1970s, the term began to be increasingly used in feminist theories to express a distinction between sex and the social

construct of gender, including an examination of social expectations of roles filled by girls and boys, men and women.

The concept of gender has shifted away from a binary and heteronormative understanding to being increasingly acknowledged as a spectrum (Cerna et al., 2021[13]; Fox, 2015[18]). *Gender identity* refers to a person's internal sense of being masculine, feminine or androgynous; and *sexual orientation* corresponds to the sexual and emotional attraction for the opposite sex, the same sex, both or neither. "Sexual and gender minorities" refers to LGBTQI+ people, that is, lesbian, gay, bisexual, transgender queer and intersexual individuals. The "+" is often added to the LGBTQI acronym to include people who do not self-identify as heterosexual and/or cisgender but who would not apply the LGBTQI label to themselves (Cerna et al., 2021[13]).

This paper attempts to combine evidence from systems using a binary approach to gender and systems shifting towards an understanding of gender as a spectrum. Other work by the OECD Strength through Diversity project particularly focuses on the inclusion of LGBTQI+ students (McBrien and Rutigliano, Forthcoming[19]). Therefore, the extent to which gender stereotypes related to LGBTQI+ individuals are included in this paper builds on other work of the project.

1.1.2. Gender stereotypes in education

Gender stereotyping occurs when "ascribing certain attributes, characteristics and roles to people based on their gender" (UNICEF, 2017[20]). More accurately, it involves ascribing traditional gender expectations associated with one's assigned sex at birth. An example is the expectation that girls will follow career paths to become nurses or teachers, and boys will pursue goals involved with science, engineering or business and will occupy positions of leadership. Gender stereotyping takes place at home, in schools and in society (OECD, 2012[21]) (See Box 1.1).

Socialising girls and boys based on gender stereotypes can have an impact on their educational and professional expectations, the skills they acquire and their future goals. This, in turn, can reinforce inequalities, as many careers that are associated with women's traditional roles (i.e. teaching, caregiving) offer lower salaries (OECD, 2019[4]). Gender stereotypes can have a considerable influence on the educational aspirations as well as educational and professional choices that students make, with strong repercussions on the labour market and wider society (European Institute for Gender Equality, 2022[22]). Therefore, dismantling gender stereotypes in school and beyond is important for allowing all students to pursue personal and career goals to reach their full potential (European Institute for Gender Equality, 2022[22]; OECD, 2019[4]; OECD, 2012[21]).

Across OECD countries, systems still use a binary and heteronormative understanding of gender expectations. Others are moving away from a binary approach. For example, as of 30 June 2019, 11 OECD countries provided no rights for same sex couples to adopt children, and six had not yet legalised same-sex marriage (OECD, 2020[23]). Only 33% of OECD countries have passed laws that specifically protect LGBTQI+ people from hate crimes or hate speech (Ibid.). The approach countries and education systems take has an effect on how gender stereotypes in education are applied and assumed. The approaches taken toward gender become part of the hidden curriculum as they create unspoken expectations of boys and girls (Basow, 2004[24]). For instance, in places where non-conforming gender is not welcomed, those who do not identify with their birth-assigned sex are often discriminated against and bullied (Council of Europe, 2019[14]). This can happen due to national policies or even in schools within nations with tolerant state policies. For example, the United States has a number of laws protecting gay marriage and rights. However, seven states still have education policies that include information with negative judgments of LGBTQI+ lifestyles in sex education courses. Where discriminatory policies exist, LGBTQI+ students are also more likely to be bullied and isolated (GLSEN, 2018[25]). Students who do not identify with cisgender roles are in particular need of protection, as they experience much higher rates of discrimination than

students who identify with their assigned sex, and they are far more likely to be bullied, experience exclusion and suffer from depression and suicidal ideation as a result (Almeida et al., 2009[26]).

Box 1.1. What are stereotypes, and where do they come from?

Simply defined, stereotypes are generalised beliefs about particular groups of people. Researchers Tversky and Kahneman (1974[27]) explained that people use heuristics, or mental shortcuts, to make judgments and solve problems quickly, as taking time to evaluate singular individuals and events involves far more time and effort. Rather than using logic, people tend to make judgments based on what comes to mind quickly and what they believe to be most probable. People tend to use heuristic thinking when they are not overly concerned about the topic or event being evaluated, so that they can reserve their mental energy for issues that they value. However, this is not always the case, and such thinking can result in unfair evaluations with problematic consequences.

Common gender stereotypes include beliefs that females are more nurturing than males. Thus, they are often considered best suited for caring professions such as teaching, nursing, and counselling. Historically, they have long been stereotyped as "the weaker sex", less capable and more emotional than men, with the result that many people, including many women, believe men make better leaders, politicians, athletes, police, firefighters, etc. In education, girls are commonly believed to be less capable of math and science studies. According to research by Kurtz-Costes et al. (2014[28]), students' gender stereotypes increase as they age, in part based on their perceptions of adults' gender stereotypes.

Source: Kurtz-Costes et al. (2014[28]); Gender and age differences in awareness and endorsement of gender stereotypes about academic abilities, European Journal of Psychology of Education, 29(4), https://doi.org/10.1007/s10212-014-0216-7; Leaper, C. and Friedman, C. K. (2007[29]), The socialization of gender, Handbook of socialization: Theory and research; Tversky, A. and Kahneman, D. (1974[27]), Judgment under uncertainty: Heuristics and biases, Wilbourn, M. P.

The following sub-sections of the paper present an overview of gender stereotyping in education through a lifelong learning approach, from pre-primary education to higher education and the labour market.

Pre-primary education

The first five years of a child's life are key for their development. In this period, children learn fast and develop cognitive and socio-emotional skills that will be key for their well-being (OECD, 2018[30]). These years also correspond to the period in which parents and other social institutions, including pre-primary education, can have a strong influence on the way children are socialised with or without gender stereotypes. In many settings, boys and girls are socialised differently from the early years with long-lasting consequences and internalisation of gender norms and stereotypes (OECD, 2019[4]).

Evidence shows that gender expectations are present from the moment of a child's birth (Leaper and Friedman, 2007[29]), and probably before as parents typically learn the sex of their baby before the birth and already build gender expectations based on whether the new-born will be a boy or a girl. For example, a study shows that gender stereotyping might start as young as three months, with adults making gender assumptions about babies based on their cries (University of Sussex, 2016[31]). The research shows that adults often wrongly assume babies with higher-pitched cries to be female while babies with lower-pitched cries are assumed to be male. When adults are told the gender of the babies, they make assumptions on the degree of masculinity or femininity of the baby based on the level of the pitch of their cry.

Gender stereotyping starts from the early years of a child's life and already becomes clear in childhood (Gelman et al., 2004[11]). Studies suggest that children learn gender stereotypes as early as at the age of two (Serbin, Poulin-Dubois and Eichstedt, 2002[32]; Shenouda and Danovitch, 2014[33]), and by the time they are four years old, most children have already built a stable understanding of their gender identity and

learn gender role behaviours (Brown et al., 2011[34]). For example, the OECD's International Early Learning and Child Well-being Study found that gender norms are already evident at the age of five. Five-year old boys are less interested in roles that have been traditionally more female-dominated than girls are in occupations traditionally male-dominated. Additionally, gender appears to be more strongly related to a child's future career aspirations than their socio-economic background, including parental education or occupations (OECD, 2020[35]).

Primary education

Although gender stereotypes are learned from early childhood as infants and toddlers are often socialised according to norms and stereotypes associated to their assigned sex at birth, they are often reinforced by expectations in school. Evidence from primary education shows how gender stereotypes are already pervasive at this educational level. Due to limited cognitive development, children usually understand rules as mandatory requirements; this may make children less tolerant of gender behaviours that do not correspond to the gender stereotypes and roles they were raised with (Su et al., 2021[36]). For example, studies show that primary school students already reflect gender stereotypes related to mathematics, which can then influence their self-concepts about mathematics with effects on their academic performance (Kuhl et al., 2019[37]). Already in the first year of primary education, girls undervalue their abilities and academic performance in mathematics (OECD, 2015[8]). Another research study shows that six-year-old students already reflected gender stereotypes with beliefs of boys being better at robots and programming compared to girls (Master et al., 2017[38]). A study also highlights that, already in the second year of primary school, students consider reading a feminine activity and boys interested in it are seen as weak by their peers (Olavarría et al., 2015[39]).

Gender stereotypes in primary education are also present with respect to career expectations. A study by Wilbourn and Kee (2010[40]) found that 8-9 year-old students were more capable of processing information that matched female names with traditionally male occupations than male names with traditionally female occupations. Additionally, the students had higher recall for occupations when paired with a male name. Based on the results, the authors wonder if strides in encouraging girls in non-traditional roles and careers, unaccompanied by similar encouragement for boys to pursue fields that are traditionally associated with women, contributes to this phenomenon. Their study suggests that boys who want to become nurses, librarians or childcare workers will have a more difficult time with acceptance for their goals than girls studying to become dentists, doctors or police officers. Furthermore, the fact that the majority of primary school teachers are women can further stress gender stereotypes around the teaching profession (OECD, 2017[41]).

Secondary education

Secondary education is a key period for a student's personal and educational development. Not only are students faced with choices concerning their further educational and professional paths; in secondary education years, students also go through pre-adolescence and adolescence, a key growth and developmental period. In these years, gender stereotypes seem to persist, with gender gaps becoming more pronounced. Results from the OECD's Programme for International Student Assessment (PISA) 2018 can help highlight these gender gaps and infer gender stereotypes in secondary education.

Data from PISA 2018 show gender gaps in mathematics and numeracy among 15-year-old students, with boys outperforming girls across OECD countries. Girls, on the other hand, outperform boys both in print and digital reading. In addition, while girls are more likely than boys to pursue higher education, 15-year-old girls' career expectations tend to mirror gender stereotypes (OECD, 2019[4]). As Hadjar et al. (2014[42]) indicate, stereotyping plays a major role in this. They state, "Gendered interests and life plans – being related to socialised gender stereotypes – still reinforce work force separation in terms of women more often becoming nurses, teachers or engaging in other service professions, and men being more likely to

choose professions that are characterised by higher authority, prestige and status" (Hadjar et al., 2014, p. 119[42]). In PISA 2018, among the top ten occupations 15-year-old girls reported to expect for themselves, seven were in the healthcare sector and three related to "teaching professionals", "lawyers" and "policy and planning managers". Instead, boys reported a wider range of occupations, such as athletes, engineering professionals, motor-vehicle mechanics and police officers. In general, even when boys and girls showed similar performance, fewer girls reported that they want to pursue a science, technology, engineering and math (STEM) career compared to boys (OECD, 2019[4]).

Data from PISA 2018 also shows that, in general, girls and boys have different attitudes towards fear of failure and competition. On average across OECD countries, 15-year-old girls have higher levels of fear of failure than boys do, with higher anxiety and lack of confidence in their abilities especially in the area of mathematics and science (OECD, 2019[4]). These gap in lack of self-confidence may be one of the first elements that can later translate into the gender gap in STEM careers (OECD, 2019[4]). In turn, girls' lower levels of self-confidence and higher uneasiness with competition may explain the persisting gender wage gap and in the underrepresentation of women in high-wage occupations (Givord, 2020[2]). However, between-country differences (e.g. see Figure 1.1 and Figure 1.2) suggest that gender gaps in attitudes towards competition are not preordained (Givord, 2020[2]). Students' beliefs in their own competence and abilities can be influenced by gender stereotypes passed on by parents, teachers or peers (Retelsdorf, Asbrock and Schwartz, 2015[43]). Therefore, to close the gender gaps in the labour market and promote gender equality further, teachers and parents should gain awareness of their own conscious and unconscious gender biases and how these can affect students (Givord, 2020[2]).

Figure 1.1 shows gender gaps in the fear of failure. PISA 2018 asked students whether they agree ("strongly agree", "agree", "disagree", "strongly disagree") with the following statements: "When I am failing, I worry about what others think of me"; "When I am failing, I am afraid that I might not have enough talent"; and "When I am failing, this makes me doubt my plans for the future". Students' responses were used to create an index of fear of failure. When looking at the figure, it is interesting to note considerable variations across countries, which suggest that attitudes towards fear of failure are not predetermined. High levels of fear of failure can cause students to be less ambitious, with effects on the educational and professional choices they make (Givord, 2020[2]).

Figure 1.1. Gender differences in index of fear of failure – PISA 2018
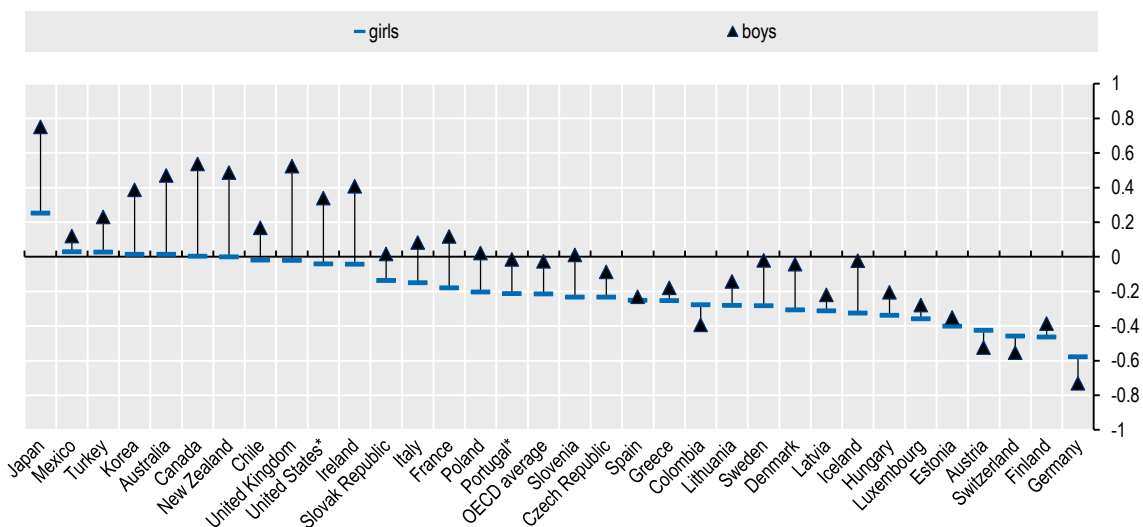
Note: Only countries and economies with available data are shown in this figure.
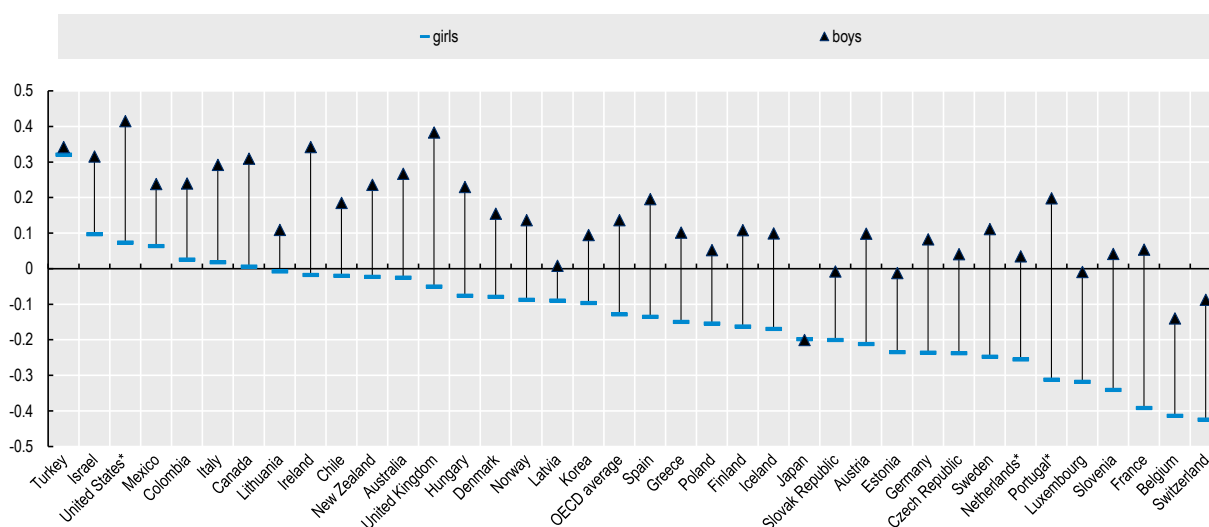
*The Netherlands, Portugal and United States: Data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4 of OECD PISA 2018).

Countries and economies are ranked in descending order of the mean index of fear of failure among girls.

Source: Adapted from OECD (2018[44]), PISA Database, Table II.B1.8.18, https://www.oecd.org/pisa/data/2018database/ (accessed on 08 February 2022).

Figure 1.2 shows the index of attitudes towards competition compiled from PISA 2018 data. PISA 2018 asked whether they "agree", "strongly agree", "disagree" or "strongly disagree" with the following statements: "I enjoy working in situations involving competition with others"; "It is important for me to perform better than other people on a task"; and "I try harder when I'm in competition with other people". Students' responses were used to create the index of attitudes towards competition. The figure shows that, on average across OECD countries, boys scored higher than girls in the index of attitudes towards competition, with considerable variation across countries, which suggest that attitudes towards competition are not predetermined (Givord, 2020[2]). As having more positive attitudes towards competition can have a strong influence on students' educational and career choices, interventions aimed at promoting girls' self-confidence and attitudes towards competition could contribute to fighting gender gaps in education and beyond (Ibid.).

Figure 1.2.Gender differences in index of attitudes towards competition – PISA 2018

Note: Only countries and economies with available data are shown in this figure.

*The Netherlands, Portugal and United States: Data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4 of OECD PISA 2018).

Countries and economies are ranked in descending order of the mean index of attitudes towards competition among girls.

Source: Adapted from OECD (2018[44]), PISA Database, Table II.B1.8.14, https://www.oecd.org/pisa/data/2018database/ (accessed on 08 February 2022).

By the time that students enter secondary school, they are also experiencing a period of key social-affective development, which takes place during puberty (Suleiman et al., 2017[45]). This period of physical, cognitive and emotional development also corresponds to a period when boys and girls are increasingly socialised into expected gender roles and behaviours (Mmari et al., 2021[46]). Evidence shows that normative paths of young adolescents tend to become more rigid when they are exposed to increasing pressure to conform to adult gender norms and behaviours (Moreau et al., 2021[47]). In this period, peer relationships can have a strong influence on adolescents' academic and broader well-being. For example, a study of 5 000

adolescent students in Sweden found that girls' interest in STEM subjects was highly influenced by their friends' preferences (Raabe, Boda and Stadtfeld, 2019[48]). Girls tended to retain their interest in STEM subjects when other girls in their classroom continued to enjoy these subjects.

Beyond secondary education

The attention paid to girls with respect to gender equality arises because girls and women continue to be less represented in education, employment and training. They also have less access to technology for education, employment and services and do three times as much unpaid care and domestic work in comparison to their male counterparts, resulting in higher poverty rates for young women (UN Women, 2021[49]). A gender-stereotypical representation of professions and subjects can hinder female students' learning and prevent them from reaching their full potential by, among others, lowering students' self-assessment, sense of competence and influencing their career choices (Ertl, Luttenberger and Paechter, 2017[50]).

Gender differences in tertiary education are observed in terms of both graduation rates and fields of study. In all OECD countries, the share of women in tertiary education is higher than the share of men (OECD, 2021[51]). The first-time graduation rates for women in tertiary education are also higher than for men in all countries with data available. The reason for this gender gap in attaining tertiary qualifications might be partly due to gender stereotypes and social norms about a woman with university degree (Ibid.). Gender gaps are also present in different fields of study. Women are under-represented in STEM fields and over-represented in teacher training and education science, and in health and welfare fields (OECD, 2021[51]; OECD, n.d.[52]) . The choice of study programmes of men and women are largely influenced from gender stereotyping and gender-biased career expectations (OECD, n.d.[52]).

Beyond education, gender stereotypes continue to limit women's roles in society and the labour market. Despite women's gains in education, gender pay gaps are still prevalent in most countries. Several elements contribute to these persisting gaps, including gender segregation in study and occupation fields, the higher likelihood of women to interrupt their career for caregiving, and gender-based discrimination and biases (OECD, 2017[41]). Across countries, women are still less likely than men to work full time and still earn less than men. They are less likely to hold high-level managerial and leadership positions and are more likely to be employed in lower-wage occupations. These conditions are even more acute for mothers and women from lower socio-economic status and lower education (Ibid.). Gender stereotypes also prevail in financial institutions, with access to financing being more challenging for women, e.g. with women receiving higher credit terms than men (Ibid.).

Gender stereotypes also affect men as they are expected to participate in the labour market more actively than in family caregiving. Globally, more than 75% of the total unpaid care work is carried out by women and three out of four women do housework with their daughters, which runs the risk of reinforcing gender stereotypes and gender roles across generations (OECD, 2017[41]). There are also parenthood pay gaps: while mothers tend to earn less than non-mothers do, fathers tend to earn more than men who are not fathers (Yu and Hara, 2021[53]). In general, men experience the largest pay premiums when they transition from having no children to one child, which corresponds to when they start to be associated with positive stereotypes linked to being fathers (Ibid.). Traditional gender stereotypes associated to the roles fathers and mothers play for the family can partly explain these pay gaps.

1.2. Key policy issues linked to gender stereotyping in education

As mentioned earlier, the OECD Strength through Diversity project has developed a holistic analytical framework to promote more equitable and inclusive education systems for all students (Cerna et al., 2021[13]). In line with this framework, this paper analyses key issues linked to gender stereotypes in schools

with respect to these key areas, which can all have an influence on the way gender stereotypes are reinforced (see Figure 1.3):

- Governance – goals, from international to local, and equitable choices; legislation, responsibility and support; and educational offerings that include learning environments.
- Capacity building – creating educational environments that foster inclusion through mechanisms such as public awareness campaigns; assessing needs for training and implementing strategies.
- School-level interventions – providing resources for students, from a positive school climate to counselling, inclusive curriculum, and organisations.

**Figure 1.3. Key policy areas to dismantle gender stereotypes**

The OECD Strength through Diversity project also looks at resourcing and monitoring and evaluation as two other important policy areas to promote more equitable and inclusive education systems. As the eradication of gender stereotypes is often included within broader budgets for gender equality in education, this paper does not focus on identifying promising policies and practices with respect to resourcing. In terms of monitoring and evaluation, it remains important to consolidate monitoring and evaluation systems to assess the effects of interventions and programmes aimed at dismantling gender stereotypes in education. Evaluations of programmes to prevent or reduce gender stereotypes are not widespread, therefore the overview of policies and practices in this paper does not cover this policy area. In general, while assessing the impact of gender stereotypes is complex, proxies exist to show gender gaps and disparities that can be linked to gender stereotypes, such as those included in PISA 2018 (see Section 1.1.2).

Proxies to assess the spread of gender stereotypes are often used. For example, in 2014, the Eurobarometer survey asked respondents to select "Where are gender stereotypes most widespread?" in different fields, including education, sports, politics and media. Figure 1.4 shows the percentage of women and men who responded that gender stereotypes were present in school settings in their country. The

shares of respondents saying that gender stereotypes were widespread in schools were largest in Sweden (31% of women and 24% of men) and lowest in Denmark (8% of female respondents and 7% of male respondents).

Figure 1.4. Gender stereotypes in schools – Eurobarometer 2014

Percentage of women and men who responded that gender stereotypes were present in school settings in their country
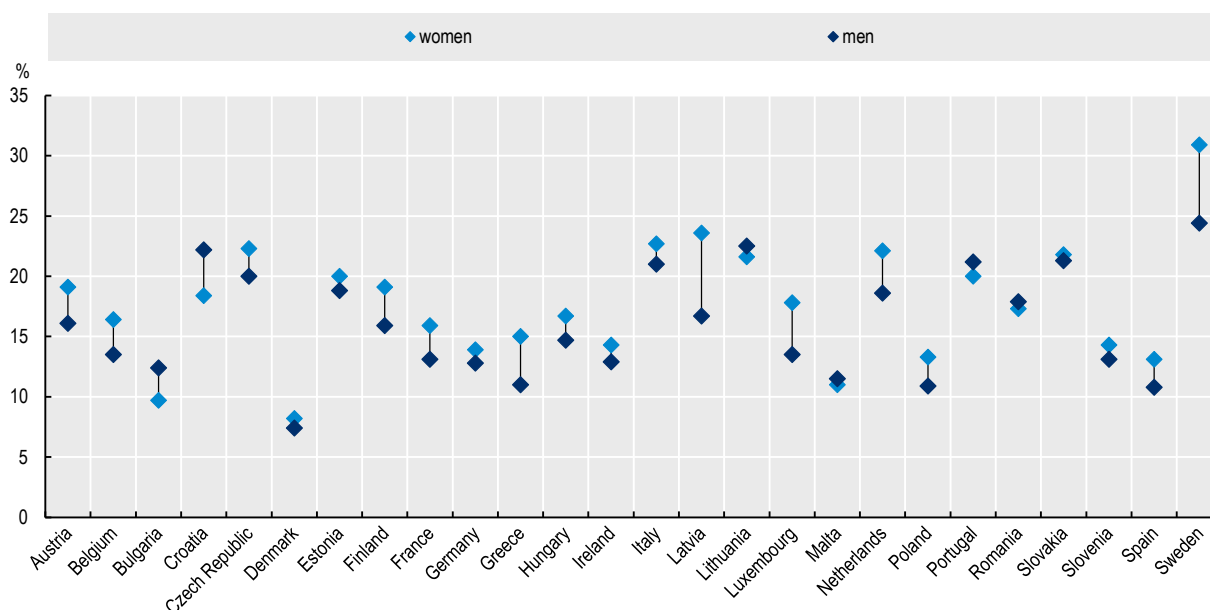
Source: Eurobarometer (2014[54]), Eurobarometer, http://ec.europa.eu/COMMFrontOffice/publicopinion/index.cfm (accessed on 14 February 2022).

The following sub-sections analyse how the policy areas the paper focuses on can reinforce gender stereotypes in education. Following this exploration, the overview of policies and practices (see Section 2) will consider policies and practices that strive to overcome gender stereotyping focusing on governance arrangements (particularly curriculum), capacity building and school-level interventions.

1.2.1. Governance arrangements

Several international documents and commitments by countries to reduce discrimination aim to achieve gender equality and empower girls and women. One of the most significant is the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), adopted by the United Nations General Assembly in 1979 and now ratified by 189 nation states. In particular, Article 10 addresses education and stipulates that it be equitable in all areas, including curriculum, all types of education, scholarships and grants, continuing education, sports, equal teaching staff and more (OHCHR, 1979[55]).

The Beijing Declaration and Platform for Action of 1995 is a comprehensive document that describes the many ways in which women continue to be repressed and discriminated against, including in education and training. Section 4L specifically details numerous practices that are harmful to girls, which include problematic gender stereotypes, and it suggests strategic objectives and actions to take in order to reduce gender discrimination (United Nations, 1995[56]).

Curriculum, teaching and learning materials

Teaching and learning materials often reinforce gender stereotypes and promote the acceptance of entrenched norms related to stereotypes. An analysis carried out by UNESCO of 110 national curriculum frameworks in 78 countries shows that gender biases and stereotypes persist, particularly in math and science textbooks, and images of women are highly under-represented in these fields in the textbooks (Chavatzia, 2017[57]). The analysis shows that there is still progress to be made to promote an equal representation of genders, representing men and women in different positions in the family and society as well as including an equitable representation of the needs and experiences of men and women. Additionally, in most textbooks, individuals who do not identify through a binary understanding of gender are largely not represented (Ibid.).

In a 2021 analysis of textbook anthologies, Kostas (2021[58]) examined past reviews of textbooks in terms of gender representation and conducted a qualitative research project in two primary schools in Athens, Greece, with 40 boys and 40 girls. Findings included the following:

- There are far fewer images of women and girls than men and boys. Generally, the proportion of female representation decreases as grade level increases. Men also 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, with males in positions of dominance. Women are typically associated with domestic and caregiving tasks, while men are portrayed in roles associated with power and authority. These representations serve to reinforce traditional or outdated perceptions of their roles.

- When females are depicted in professional roles, they are usually stereotypical ones, such as teachers, actresses and nurses.

- There are no depictions of gender fluid individuals, thus creating an ideology of heteronormativity.

- The representation of women was often reduced to household chores, such as sewing and cooking, with an over-emphasis on a nurturing role.

- Kostas' textbook analysis found 63 males and four females depicted in the workforce. Married women were not depicted in jobs outside of the home. "There was not a single case of a female scientist and the only intellectual role permitted, for women, was that of the teacher" (Kostas, 2021, p. 59[58]).

When interviewing Grade 3 and Grade 4 students about the representations in textbooks, Kostas found that girls were more likely than boys to question or resist the depictions of gender roles. This was particularly the case with girls who had mothers in professional roles in the workforce (Kostas, 2021[58]).

Since 2010, similar textbook analyses have been conducted in several countries, including Australia (Parker, Larkin and Cockburn, 2017[59]), Greece (Gouvias and Alexopoulos, 2018[60]), Japan (Lee, 2018[61]), Slovak Republic (Osadán, Belesova and Szentesiova, 2018[62]), Spain (Taboas-Pais and Rey-Cao, 2012[63]) and the United States (Good, Woodzicka and Wingfield, 2010[64]; Cepeda et al., 2021[65]), all with similar findings in textbooks from physical education to linguistics.

A curriculum that offers expansive views of the capabilities of students across the gender spectrum can provide important models for all students. An inclusive curriculum allows students to "see themselves" represented as role models in math, science, language, arts and other areas of subject matter and career goals (McKendree et al., 2002[66]). For instance, including information about Sally Ride, the first American woman in space, in a science textbook provides girls with the opportunity to see themselves as future scientists, engineers or astronauts. Adding the fact that she was also lesbian can provide LGBTQI+ students with a point of pride.

Overall, the best way of integrating or mainstreaming gender issues into the curriculum is directly through the teachers and the leadership of schools at an institutional level. However, one of the main problems

remains how to motivate teachers and school leaders, and how to make this a normal part of the curriculum at each school level (European Institute for Gender Equality, 2017[67]).

1.2.2. Capacity-building

The OECD Strength through Diversity project defines capacity building as an essential focus to increase equity and inclusion in education (Cerna et al., 2021[13]). To achieve this, measures to increase awareness are essential at the system level. Another aspect involves preparing, recruiting and retaining school teachers and staff and providing professional learning and mentoring. Awareness also involves instructing students so that they can make informed decisions and advocate for one another. Promoting parental awareness of gender stereotypes is equally important.

To create capacity, it is important to first understand the challenges created by gender stereotyping and how they are currently affecting students. This section will begin with an examination of teacher, peer, societal and parental stereotypes to understand the need to address them.

Teachers' gender stereotypes

As is true with all humans, teachers have conscious and unconscious biases and stereotypes that affect the way they reflect, act and make decisions (Davis and Nicaise, 2011[68]). They communicate these stereotypes and biases through their attitudes and interactions within the classroom (Brussino, 2021[69]). Biases can be detrimental to students because of the negative effects biases can have on the development of students' academic and social self-concepts (Ertl, Luttenberger and Paechter, 2017[70]). Research is not always clearly distinctive in assessing social, emotional and academic effects. For instance, a 2016 survey conducted in Québec, Canada, found that most teachers believed that male students prefer technical and mathematical activities by nature (academic), that girls are naturally more disciplined (social), and that male and female students have distinct learning styles (academic). As a result, male and female students receive different educational experiences even while in the same classrooms, with teachers expecting more from boys in STEM subjects. Additionally, if female teachers do not express confidence in their own abilities in mathematics, this can be detrimental to girls' achievement in the subject, worsening girls' mathematics self-concept and self-efficacy, and thus reinforcing overall STEM stereotypes (Beilock et al., 2010[71]).

Several studies find that teachers tend to rate the mathematical ability of male students higher than their female students, even when both groups demonstrate equal ability according to objective performance assessments (Dickhauser and Meyer, 2006[72]; Tiedemann, 2000[73]; Nürnberger et al., 2016[74]). Students can perceive teachers' evaluations of student ability. For example, Dickhauser and Meyer (2006[72]) report that in classes where teachers inaccurately attributed higher mathematical ability to boys, boys rated their teachers' perceived beliefs of their own abilities higher than girls did (Ibid.).

Students' relationship with their teachers can be at least partially predictive of their academic behaviours and social development (Chen et al., 2020[75]; Rucinski, Brown and Downer, 2018[76]). Teacher-student interactions are fundamental in the construction of gender differences within the education system (Smyth, 2007[77]). These interactions may strengthen gender stereotypes as teachers may reinforce behaviours conforming to gender norms and punish or try to repress behaviours not conforming to gender norms (Hajovsky, Chesnut and Jensen, 2020[78]). For example, evidence shows that boys may receive more attention during classroom interactions and when they interrupt, while girls are generally punished when they interrupt (Ibid.). In particular, teachers are more likely to call on boys than girls, so that boys actively participate more in class discussions. When girls interrupt the lesson, they are usually scolded; when boys do, they are attended to (Ewing and Taylor, 2009[79]). Boys also tend to be more active than girls and, as a consequence, teachers may pay more attention to boys to maintain control over the classroom (Bassi et al., 2018[80]).

Although boys may receive more attention, teachers' grading of girls may be positively biased relative to the grading of boys because teachers see girls as being more diligent and hardworking than boys (OECD, 2015[8]). Evidence shows that conscious and unconscious gender stereotypes among teachers can affect the way teachers award grades to girls and boys; reinforcing gender norms and stereotyping among students and families (Lavy and Sand, 2015[12]; OECD, 2015[81]). Biases and stereotypes can also affect the way students develop their social and emotional skills, make sense of the world and develop their identities (King, 2020[82]). Evidence of gender socialisation in early childhood classrooms suggests that many teachers have gender expectations about children's behaviour and, depending on these expectations, they reward and punish boys and girls differently. Primary and secondary school teachers often see girls as diligent and hardworking, while boys are more likely to be considered "naturally clever" (Skelton, 2006[83]). Early childhood education teachers seem to have closer and less conflicting relationships with girls (Buyse, Verschueren and Doumen, 2010[84]; Choi and Dobbs-Oates, 2015[85]; Sette, Spinrad and Baumgartner, 2013[86]; Silva et al., 2011[87]). Primary teachers also reported closer relationships with girls (Koepke and Harkins, 2008[88]). Furthermore, girls are more likely to see teachers as figures they wish to emulate compared to boys (Ryan, Stiller and Lynch, 1994[89]).

The 2016 Québec survey mentioned above revealed that most teachers believed that boys' brains work differently than girls' brains, that boys need more activity than girls, and that observed gender differences do not result from inequalities between the sexes (Conseil du statut de la femme, 2016[90]). This survey found similar attitudes in secondary school teachers. These indications show the importance of providing coursework on gender stereotyping for those preparing to enter the teaching profession as well as ongoing professional learning for classroom teachers in order to reduce the effects of gender biases.

Taken together, these findings suggest that teacher-student interactions eventually affect the self-confidence and self-esteem of both girls and boys and that the observed differences in performance between male and female students have a very weak connection with ability (Yavorsky, Buchmann and Miles, 2015[91]). However, it is important to note that there are cultural variations that affect gender stereotyping. Deutschmann, Steinvall and Lindvall-Östling's (2021[92]) comparative research in Sweden and the Seychelles shows that cultural comparisons are complex, but girls outperform boys in all subjects in the Seychelles. Exemplifying gender expectations, Sweden indicates high expectations of men in childcare, but women are seen as more academically favoured and more responsible, "breadwinners", and responsible in the Seychelles. Deutschmann, Steinvall and Lindvall-Östling provided professional learning to their participants, which was found to help them reflect on ways in which they stereotype and how this could help them to modify their behaviours.

Peers and society reinforce gender stereotypes

Students elaborate their own identities not only through their interactions with teachers and parents, but also through their relationships with their peers, media and society at large (Taylor, 2003[93]). Studies find that children have rigid stereotyped notions of female and male appropriate roles in society resulting in harassment and bullying of those who not fit the defined gender stereotypes (Trautner et al., 2005[94]; Ruble, Martin and Berenbaum, 2007[95]). Media provides stereotypical gender roles that affect children from the earliest ages, such as in popular cartoons (Coyne et al., 2016[96]). Taylor (2003[93]) points to stereotypical gendered roles in popular children's storybooks. These researchers describe ways for parents and teachers to help students critically assess the images they see on a daily basis in order to diminish the power of stereotypes in prescribing limiting or problematic behaviours.

These stereotypes pertain to attitudes toward studying as well. Boys are mostly concerned with preserving an image of themselves as reluctantly involved and disengaged (Younger and Warrington, 1996[97]). They privilege a sort of "effortless achievement" (Jackson, 2002[98]), while girls tend to be hard workers because of gender stereotypes, as a reflection of an image of women as diligent and obedient (Bian, Leslie and Cimpian, 2017[10]).

There are, however, campaigns involving children that are defying gender stereotypes. In 2019, the United Kingdom banned gender stereotypes in advertising (Tiffany, 2019[99]). In 2013, the mayor of New York City launched the "I'm a Girl" campaign targeting girls ages 7-12 to recognise that their value is not from a socialised belief in external beauty, but rather from their character and abilities (Lewars, 2013[100]). "Deliver for Good" is a global campaign focused on placing girls and women as central to development (Women Deliver, 2007[101]). Informational campaigns such as these are intended to help girls recognise their worth and capability individually and as peer groups.

Parents' gender stereotypes: Like parents, like children?

Dismantling gender stereotypes in schools is only part of the issue: gender stereotypes are also developed and reinforced by what happens at home (OECD, 2012[21]). Gender-stereotyped parenting can have an influence on children's lives. For example, in families with traditional gender roles, children are more likely to have gender-stereotypical expectations (Endendijk et al., 2016[102]). Similarly to teachers, parents may influence children's academic outcomes through beliefs about their child's ability as well as conscious and unconscious gender stereotypes and biases. For instance, a study shows that parents of elementary school students consciously report believing their sons to be more interested in science than their daughters and, hence, they engage in more complicated conversations about scientific topics with their sons than with their daughters (Tenenbaum and Leaper, 2003[103]). In the study, boys report higher self-efficacy in science than girls, providing evidence that they may accurately understand their parents' beliefs by observing their attitudes towards their sons and daughters (Ibid.).

Although women still contribute more than men to household chores (see Section 1.1.2), there has been a considerable increase in the participation of men in family life. Sweden offers an excellent example by providing parents 480 days of parental leave, which can be taken until the child turns eight. This has given rise to an increasing number of fathers who take leave to care for their children while mothers work outside the home (Will, 2017[104]). Many OECD countries offer some parental leave for both parents, even though with large disparities in the length of the leave offered to mothers and fathers. The increased participation of men in caregiving and family life can have a positive impact on children as it creates a challenge to traditional gender stereotypes in the household (van Polanen et al., 2017[105]). Evidence shows that paternity leave can help dismantle gender stereotypes within the family and society at large. Fathers' quotas in parental leave could yield to changes towards attitudes towards gender roles in society (Unterhofer and Wrohlich, 2017[106]).

1.2.3. School-level interventions

School policies and practices can have an influence on the way gender stereotypes are reinforced. These include learning strategies, non-instructional support and services as well as parental and community engagement. In particular, language and play are two important means through which gender stereotypes can be reinforced or challenged.

Language

Much in language is gendered, from pronouns (for example, he/she) to the structure of some languages that assign feminine or masculine articles to nouns (for example, Romance, German and Greek/Slavic languages). According to Bigler and Leaper (2015[107]) gendered language contributes to gender stereotypes by treating gender as binary and sometimes promoting male-dominated language (such as "Congressman", "businessman"; the tendency of using a male pronoun to replace a generic noun, such as in "If a student is absent from school, he needs to bring a signed excuse upon returning"). Even the use of "his or her" implies that gender is binary, creating a bias favouring hetero-sexism. According to Waxman (2013[108]), children draw conclusions based on categorisation, affecting their conceptualisation of social groups. Waxman cites research by Liben and Hilliard (2010[109]) in which preschool teachers were

randomly assigned to use gender neutral or gendered labelling language in their classrooms for two weeks. Immediate and one-month post-tests indicated that the children in classrooms using gendered language were more prone to gender stereotyping. They suggest learning strategies and language that downplays gender stereotypes. For instance, teachers can refer to "students" rather than "boys and girls". Rather than holding competitions such as "the boys against the girls", they can create mixed-gender groupings.

Play

Even in play and sports, beginning in the home and continuing into school years, items and activities are often gendered in a binary way. Toys intended for boys are often associated with action, aggression and athletics, and those intended for girls are associated with appearance, nurturing and education (Blakemore and Centers, 2005[110]). As Weisgram and Bruun (2018[111]) discuss, differences in toy and play selection by gender concern many scholars and educators, because they are linked to the development of cognitive, physical and social abilities. For instance, many toys designed traditionally for boys are linked to the development of spatial skills that help to develop early mathematics and engineering interest and abilities. Stereotypical toys for girls lend themselves to nurturing, fashion/beauty and passivity, as girls dress up like princesses and rock their dolls. Some researchers worry that gendered toys contribute to prescribed interests and beliefs rather than allowing children to freely explore interests and abilities (Weisgram and Bruun, 2018[111]).

The next section will examine ways in which OECD countries are working to reduce gender stereotypes in education.

2 Policies and practices across OECD countries

This section provides an overview of some of the existing policies and practices in place across OECD countries to fight gender stereotypes in education. The overview focuses on primary and secondary education while acknowledging the key importance of interventions in pre-primary education to reduce gender stereotypes. The paper covers key policy areas included in the analytical framework developed by the OECD Strength through Diversity project: governance arrangements (curriculum), capacity-building strategies and school-level interventions. The overview only includes some of the existing policies and practices in place across OECD countries to compile knowledge on the issue while not aiming to be a comprehensive mapping of interventions across countries. The overview does not only include strategies and interventions developed by actors in the formal education sector. It also presents promising approaches taken by non-governmental organisations (NGOs) or other actors in society, which have played an important role in promoting initiatives to dismantle gender stereotypes across OECD education systems.

2.1. Curriculum

Governance arrangements, including curriculum policies, are important in challenging gender stereotypes at school and in society. Among the systematic issues to acknowledge when designing a curriculum free of gender bias and stereotypes, there is the importance of having a curriculum that includes gender-responsive content at all educational levels (UNESCO, 2009[112]). Curriculum objectives and recommendations are key to inform the development of teaching and learning materials that promote gender equality and challenge gender stereotypes. Previous work of the OECD Strength through Diversity project presents strategies in place across countries and organisations to develop more diverse and inclusive curricula, including intervening on teaching and learning materials with respect to gender, gender identity and sexual orientation (Brussino, 2021[69]). The following sub-sections present an overview of some of the approaches in place across OECD countries to challenge gender stereotypes in curricula and teaching and learning materials.

2.1.1. Curriculum objectives

In general, gender equality is largely included as a curriculum objective across countries and systems. This is, for example, the case in **Finland.** Its Equality Act requires authorities, educational institutions, employers and other stakeholders providing education and training to promote gender equality in a systematic manner (Finnish Institute for Health and Welfare, 2021[113]). Some systems specifically refer to dismantling gender stereotyping as a national curriculum objective. These include, for instance, **Sweden**, which outlines the eradication of gender stereotypes and biases in schools as a key objective in its national curriculum (Skolverket, 2018[114]). Sweden has also experimented with gender-neutral pre-schools (see Box 2.1).

The province of **Québec** in **Canada** requires primary schools to cover content aimed at reflecting on gender roles and stereotypes and promoting egalitarian relationships. In particular, the content should teach primary school students to identify stereotypical representations of femininity and masculinity in their personal and social environments and in the media. Students should also learn to make connections between gender stereotypes and the development of their gender identity (Québec Ministry of Education, 2022[115]). In **Australia**, the Australian Curriculum, Assessment and Reporting Authority has produced consultation material on the Australian Curriculum: Health and Physical Education, which focus on challenging gender stereotypes and social norms. In particular, the consultation material for the Australian Curriculum: Health and Physical Education is designed to enable schools to meet the diverse learning needs of all students, particularly in the area of sexuality and relationship education, also with respect to gender and sexual orientation (Australian Curriculum, Assessment and Reporting Authority, 2021[116]).

Box 2.1. Sweden's gender-neutral pre-schools

Sweden has a limited number of "gender-neutral" pre-schools, which have been overseen by Lotta Rajalin since 1998 (MacLellan, 2017[117]). In these schools, children are encouraged to freely choose from toys that are traditionally designated as girls or boys' toys. Boys are not criticised for crying, and girls are not discouraged from exhibiting behaviours, such as "rough-housing", that are typically attributed to boys. Teachers learn not to compliment girls for their clothing or boys for their tenacity. Instead, they learn gender-neutral positive comments to provide to the children.

Initial studies indicate that children who attend these pre-schools are less likely to gender-stereotype as compared to children in typical pre-schools (Shutts et al., 2017[118]). They were also more likely to play with mixed-gender friends. Though the study is small, it considers the potential impact of stereotype reduction for opening up future career opportunities for both genders. Studies to date have not considered gender fluid students.

Source: MacLellan, L. (2017[117]), Sweden's gender-neutral pre-schools produce kids who are more likely to succeed, https://qz.com/1006928/swedens-gender-neutral-preschools-produce-kids-who-are-likely-to-succeed/ (accessed on 25 January 2022); Shutts et al. (2017[118]), Early preschool environments and gender: Effects of gender pedagogy in Sweden, https://doi.org/10.1016/j.jecp.2017.04.014.

Objectives of gender equality and eradication of gender stereotypes in education are also reiterated at the international level. One of the main examples of international efforts to achieve this is the **Beijing Declaration and Platform for Action** (see Section 1.2.1), which is considered the most progressive blueprint for gender equality and women's rights. The Declaration was issued after The Fourth World Conference on Women in 1995 and recommends that countries develop curricula, textbooks and teaching materials free of gender stereotypes at all educational levels.

2.1.2. Textbooks, teaching and learning materials

Gender equality and dismantling gender stereotypes can be largely promoted through textbooks. Internationally, among others, the **Council of Europe** recommends that textbooks and the materials used to teach students at all school levels should be assessed for "sexist language, illustrations and gender stereotypes, and revise them so that they actively promote gender equality" (Council of Europe, 2019[119]). At the national level, several countries promote programmes and interventions to support the eradication of gender stereotypes from textbooks, teaching and learning materials. For example, the province of **Alberta** in **Canada, Germany** and the **French Community of Belgium** provide resources for educational stakeholders to review educational materials and ensure that they promote gender equality free of gender

stereotypes (OECD, 2015[8]). Similarly, in the **United States**, the states of Washington and Alaska require school districts to eradicate gender stereotypes and biases in their educational materials (Ibid.). In **Chile**, supported by the National Women's Service, the Ministry of Education has developed guiding materials for publishers to prevent and eradicate gender biases and stereotypes in textbooks (OECD, 2021[120]).

Across countries, the focus is mainly on gender relations acknowledging gender as a heteronormative binary concept. From this perspective, some countries tend to include more female representations than male representations to promote gender equality and dismantle bias. For example, in **Canada** and **Sweden**, textbooks represent the female gender more frequently than the male gender, particularly in terms of representation of women in non-traditional and non-domestic roles, such as politicians and activists (Fuchs, Otto and Yu, 2020[121]). In other countries, such as in some states in **Australia** and Länder in **Germany**, gender relations are also included in textbooks giving representation to diverse genders and gender identities. The representation of the LGBTQI+ community is mainly included in textbooks with respect to the legislation of same-sex marriages, anti-discrimination laws and global activism (Ibid.).

Some available guidelines

UNESCO (2009[112]) provides a methodological guide to promote gender equality through textbooks. The guide refers to the category of gender by assessing whether textbooks promote a balanced representation of men and women and their roles in society. Within the gender category, UNESCO also looks at how diverse gender identities are represented on top of the binary heteronormative classification of gender between male and female.

The guide finds particularly important the way assignments and exercises are phrased in textbooks. This includes whether a dominant gender is used when addressing students, as gendering is particularly important to assess the inclusiveness of textbooks. Some languages do not differentiate between genders in their grammar, while others do., The guide by UNESCO also insists that LGBTQI+ individuals should be equally represented in textbooks and provides examples of strategies used across countries to remove gender bias and stereotypes from textbooks and other teaching and learning materials, such as those included in Table 2.1.

Table 2.1. UNESCO's guidelines to design and assess gender-balanced textbooks

Intervention area	Examples of strategies
Guiding questions to assess balanced gender representation in textbooks	• Are the texts appropriately gendered? • Is there a balanced representation of gender –boys and girls, men and women –in pictures and illustrations? • Are there any elements of gender bias in the text that favour one gender over the other? • Are there stereotypical representations of gender or different sexual identities?
Textbook design and use	• Including more women in textbook design, such as writing, editing and illustrating • Guiding and training teachers on how to use the materials provided free of bias and stereotypes • Appropriately including genders when directly addressing students in assignments and exercises in textbooks.

Source: UNESCO (2009[112]), Promoting gender equality through textbooks: A methodological guide, https://unesdoc.unesco.org/ark:/48223/pf0000158897_eng (accessed on 11 January 2022).

Other comprehensive guidelines for learning materials are provided by other stakeholders, including textbook publishers. For example, **Pearson's Gender Equality Guidelines** (2020[122]) provide comprehensive strategies to promote gender equality through roles, behaviours and appearance, language, and referencing. Table 2.2 reports these and other strategies included in Pearson's guidelines to dismantle gender stereotypes in textbooks. Among these, textbooks should promote a balanced representation of genders and flip gender stereotypes by, for example, representing women in roles traditionally associated with masculinity and vice-versa. Textbooks should also promote the use of gender-neutral job titles and a balanced use of personal pronouns.

Table 2.2. Pearson's Gender Equality Guidelines

Intervention area	Examples of strategies
Roles, behaviours and appearance	• Balanced representation of genders. • Avoiding unconscious bias in behaviours and characteristics associated with genders. • Flipping gender stereotypes (e.g. associating women and girls to more traditionally masculine roles and men and boys to more traditionally feminine roles). • Consider and dismantle bias in fictitious data and graphs.
Language	• Using gender-neutral job titles. • Balancing the use of personal pronouns to promote balanced representation of genders. • Using non-gender terms when referring to relationships (e.g. partner or spouse). • Avoiding feminising and masculinising inanimate objects. • Omitting the gender of the subject if it is not important to the meaning of the sentence.
Referencing	• Considering and acknowledging how in certain fields there was traditionally a focus on contributions by men. • Including – to the extent possible – balanced references to the work produced by female and male authors in the field.

Source: Pearson (2020[122]), Pearson Gender Equality Guidelines, https://www.pearson.com/content/dam/one-dot-com/one-dot-com/uk/documents/news/2020/pearson-gender-equality-guidelines.pdf (accessed on 11 January 2022).

When it comes to referencing, Pearson's Gender Equality Guidelines recommend that textbooks should acknowledge how, particularly in certain fields, the focus has traditionally been on contributions by men. Critically highlighting the issue of how, particularly in certain fields, curricula have focused on knowledge produced by specific groups, including men, can be a strategy for teachers to discuss with students about gender stereotypes and bias in the curriculum (Brussino, 2021[69]).

Digital technologies can also be leveraged to find innovative ways to include marginalised groups in educational curricula. For example, in the **United States**, "Lessons in Herstory" is an app that, through augmented reality (AR), aims to teach untold female figures in US history as only 11% of stories included in history textbooks in the United States are about women (Daughters of the Evolution, 2022[123]).

2.2. Building capacity to address gender stereotypes

Preparing teachers, the school staff and students with competencies and skills to dismantle gender stereotypes in the classroom is key to promoting gender equality. Previous work of the Strength through Diversity project has focused on building capacity to promote diversity and inclusion in education. Brussino (2021[69]) provides an analysis of policies and practices to prepare teachers for inclusive teaching taking into account different dimensions of diversity, including gender, gender identity and sexual orientation.

The overview of policies and practices carried out in this paper shows that across countries there are different policies and practices implemented at different levels to prepare teachers, school staff and students to promote gender equality. There are fewer strategies in place that directly aim to address gender stereotypes through initial teacher education and training. The overview also includes strategies carried out to prepare parents and caregivers as they also play an important role in fighting gender stereotypes.

2.2.1. Preparing and evaluating teachers and school staff

Preparing prospective teachers for topics related to diversity and inclusion is key to ensure that individuals entering the teaching workforce have knowledge and skills to teach in 21st century classrooms (Brussino, 2021[69]). This includes equipping teachers with tools to address conscious or unconscious gender stereotypes and biases. Most education systems include compulsory or elective courses in initial teacher education (ITE) on topics related to diversity and inclusion (Brussino, 2021[69]), such as on gender equality, where content on gender stereotypes is mainly included. Gender stereotypes are often covered within courses on gender equality.

Several countries offer training for teachers and educational staff to promote gender equality in the classroom. This is the case in **Sweden**, which provides training on gender-awareness for teachers and educators to reflect the gender equality objective included in its national curriculum (see Section 2.1.1). Similarly, the **French Community of Belgium**, the state of **Queensland in Australia** and states in the **United States** provide training for teachers to promote gender equality in the classroom, including training on reducing gender stereotypes (OECD, 2015[8]). The province of **Saskatchewan, Canada**, highlights the importance to support educators and other educational stakeholders, including community actors, to gain a more solid understanding of gender and sexual diversity, and to build safe, equitable and inclusive learning environments for all students (OECD, 2021[124]).

There are also cross-country projects implemented by different educational stakeholders to challenge gender stereotypes in education, such as several projects co-funded by the European Union and implemented across different countries. "Mind the Gap" is a project run in **Belgium, Italy, Portugal and Spain** to prepare practitioners and educators to address gender stereotypes in education, and includes training on unconscious gender biases. The project is mainly funded by the European Union (80%) and has been running since January 2021, and will run up to December 2022. The activities provided to teachers and educators include training, workshops, resources and guidelines for teachers and educators, meetings with parents, students, teachers and other stakeholders to exchange experiences and awareness-raising activities (AIDOS, 2021[125]).

Similarly, "BREAK! – Overcoming gender stereotypes in Europe Through Cross-Media Learning" was a project implemented between 2017 and 2019 in **Estonia, Iceland and Lithuania**. The project provided materials for teachers with strategies to address gender stereotypes in the classroom. The project was developed by the Estonian Gender Equality and Equal Treatment Commissioner's Office together with Estonian Public Broadcasting, Tallinn University, the Foundation Innove, the Estonian Ministry of Education and Research, the Office of the Equal Opportunities Ombudsperson of Lithuania and the Centre for Gender Equality in Iceland. It was mainly funded by the European Commission (BREAK!, 2019[126]). Among others, the project issued guidelines for teachers on addressing gender equality and stereotypical

career choices with students and produced the cross-media project TV series "Why Not?" to help tackle gender stereotyping in the classroom (Ümarik et al., 2019[127]).

Another initiative implemented across different European countries is the "Education for Equality (E4E): Going Beyond Gender Stereotypes" project, which aims to support the eradication of gender stereotypes by developing tools and strategies for education systems. The project is funded by the Erasmus+ Programme of the European Union and was piloted in 2016. Among other activities, the project aims to provide training and toolkits for preschool and primary teachers to address gender stereotypes. An example is the E4E Teachers Tool Kit for Gender Equality in preschool and primary school education, which is a guide that provides exercises and activities to support children and adults to acknowledge and overcome gender roles and expectations based on activities carried out in **Austria, Italy, Spain and Sweden** (E4E - Education for Equality - Going Beyond Gender Stereotypes, 2021[128]).

Another programme, Reflect, which builds from teachers' knowledge, teaching methods, self-efficacy beliefs and implicit theories, was tested in **Austria** to consider how teachers can promote achievement and motivation without gender-stereotype restrictions (Kollmayer et al., 2020[129]). Training is intensive and takes place over the course of two semesters, which includes supervision. The pilot programme was found successful in helping teachers recognise how their teaching may be affected by gender stereotypes and promoting their students' interests without regard to their gender.

The **European Commission** has recently published a toolkit for primary school teachers to fight gender stereotypes in the classroom, based on the example of the transport sector. The toolkit provides teachers with self-assessment tools to evaluate their own stands regarding gender-sensitive pedagogy and the issues covered in the toolkit. This self-assessment exercise aims to develop teachers' self-reflection and awareness of the complexity of gender stereotypes before engaging in classroom activities with their students. The toolkit also offers guidelines to carry out learning activities on gender stereotypes in the classroom as well as continuing self-assessment tools that teachers can use to reflect on how the activities carried out in the classroom may have influenced their pedagogical strategies as well as their perception of the issues tackled (Janečková, Santos Tambo and Bivar Black, 2021[130]).

Increasing diversity of the teaching workforce is also a key to eradicating gender stereotypes in teaching staff and education more broadly. Brussino (2021[69]) provides an overview of strategies in place across countries to promote diversity in the teaching workforce, including promoting teacher diversity with respect to gender across different education levels. Among others, this entails encouraging men to pursue a teaching career in pre-primary and primary education and promoting women to leadership roles more frequently. An example of an intervention carried out across OECD countries is the *Mehr Männer in Kitas* ("More Men in Early Childhood Education and Care") project in **Germany**, which aims to attract boys and men in the teaching profession by making career choices based on personal interest instead of gender stereotypes. The project also supports policy makers in developing strategies to achieve this (OECD, 2015[81]).

2.2.2. Preparing students

Across countries and education systems there are several programmes in place to equip students with the knowledge and tools to challenge gender stereotypes. These strategies are often integrated within the curriculum or delivered through other learning activities. Examples of existing strategies to raise awareness and prepare students to dismantle gender stereotypes are included throughout this overview, particularly in the section on school-level interventions (see Section 2.3).

2.2.3. Engaging parents and caregivers

As the roles parents play in the formation or eradication of gender stereotypes are key (see Section 1.1.2), promoting interventions to support parents/caregivers in limiting and fighting gender stereotypes at home

is important. In **Australia**, Our Watch, an organisation that works to promote gender equality and fight gender-based violence, has developed "Because Why", a platform that aims to provide practical resources for parents to understand and challenge gender stereotypes. The online platform provides articles, practical strategies, and guiding questions and answers along three main areas:

1. "Understanding the issue": Understanding gender stereotypes.
2. "Making change": Explaining what parents can do as a family to reduce and limit the influence of gender stereotypes.
3. "Everyday Q&A": Questions and answers providing suggestions to parents on how they can approach gender stereotypes at home.

Table 2.3 reports some of the resources provided by Because Why in its three main areas of work (Because Why, 2022[131]).

Table 2.3. Strategies to support parents in dismantling gender stereotypes by Because Why, Australia

Area	Examples of topics and questions
Understanding the issue	• The impact of gender stereotypes. • Defining gender stereotypes. • Can being girly be good for boys?
Making change	• How I do break down gender stereotypes at home? • Tackling gender stereotypes in kids' books, TV and film. • Child's play: ways to challenge gender stereotypes.
Everyday Q&A	• I would like to model gender equality for my kids, but my partner and I have ended up having very "traditional roles" in our family. • What do you do when a friend or family member reinforces gender stereotypes in front of your children? • How can I let my son know it's OK to cry? How can I let my daughter know that it's OK to be angry?

Source: Because Why (2022[131]). Because Why, https://www.becausewhy.org.au/ (accessed on 13 January 2022).

Gender roles and norms become more deeply socialised during adolescence (see Section 1.1.2). It is therefore important to support parents of adolescents with suggestions on how to challenge gender stereotypes at home. The United Nations Children's Fund (**UNICEF**) provides resources and suggestions for parents of adolescents to support gender-responsive parenting. Tips provided by UNICEF cover different areas, including:

i. Mitigating gender stereotypes and biases.
ii. Engaging fathers or male caregivers in positive parenting, raising awareness on the effects of harmful gender socialisation and providing positive models of gender behaviours at home.
iii. Providing a safe and nurturing environment (UNICEF, 2021[132]).

Table 2.4 provides examples of some of the suggestions included by UNICEF on the mentioned areas of focus.

Table 2.4. Suggestions for gender-responsive parenting by UNICEF

Area	Examples of tips and suggestions
Mitigating gender stereotypes and biases	• Showing love and affection; encouraging adolescents to express their feelings and be emotionally open; discouraging toxic/stereotypical masculine behaviour. • Actively supporting the development of confidence and self-esteem and refraining from imposing beauty standards and body image. • Providing comprehensive and accurate information on gender and sexual identities, including sexuality education, to allow adolescents' development of their own sense of identity and agency.
Engaging fathers or other male caregivers in positive parenting, raising awareness on the effects of harmful gender socialisation and providing positive models of gender behaviours at home	• Modelling gender-equitable behaviour and roles at home that challenge traditional gender stereotypes. • Avoiding the use of language or expressions that reinforce derogative gender stereotypes (e.g., "he is too weak"; "she is too bossy"). • Taking part in parenting training, such as on topics to address unconscious gender biases.
Providing a safe and nurturing environment	• Encouraging adolescents to turn anger and frustration into activities such as problem-solving, positive communication and physical activity instead of aggression or bullying. • Monitoring the use of digital devices and social media, e.g. minimising the play of violent or sexualised digital games and content. • Modelling respectful, healthy and safe sexuality behaviours and practices.

Source: UNICEF (2021[132]), Tips for parents of adolescents to support gender-responsive parenting, https://www.unicef.org/eca/media/16451/file/Tips_for_parents_of_adolescents_to_support_gender_responsive_parenting.pdf (accessed on 24 January 2022).

2.3. School-level interventions

What happens in the school has a great influence on the extent to which students are socialised regarding gender stereotypes. Strategies to challenge traditional gender stereotypes include taking a whole-school approach, engaging parents/caregivers and intervening on the use of language, play and technology.

2.3.1. Challenging gender stereotypes through a whole-school approach

In **Scotland**, **United Kingdom**, the Institute of Physics together with Skills Development Scotland and Education Scotland provides two action guides for primary and secondary schools to improve gender equality and challenge gender stereotypes. The guides offer suggestions of actions to take through a whole-school approach to reduce gender stereotypes in schools. Guidelines include classroom actions such as stimulating class discussions (e.g., discussions around toys, sports and professions associated with gender stereotypes in primary school settings) and classroom interactions and layouts (e.g., seating arrangements and cooperative learning strategies both at the primary and secondary levels). Other school-level interventions suggested in the guidelines include learning and teaching materials, preparing teachers and the school staff on topics related to gender stereotyping, unconscious biases and gender equality as well as engaging the whole-school community, including parents/caregivers (Institute of Physics, 2018[133]; Institute for Physics, 2018[134]).

In Navarre, **Spain**, "Skolae" is a holistic programme that aims to dismantle gender stereotypes developed by the Department of Education of the Government of Navarre in 2017. The programme aims to teach students to recognise and address inequality based on different dimensions of diversity, including gender

and gender identity, and is incorporated into the curriculum at all education levels. It won the 2019 UNESCO Prize for Girls' and Women's Education. The programme operates through a whole-school approach by including the school community, families and broader community. In particular, Skolae delivers didactic activities to students aged between 3 and 18; it has been implemented in 116 schools (30% of the regional education settings) reaching more than 17 000 students and training more than 2 300 teachers (UNESCO, 2019[135]).

Several school-level interventions are implemented through partnerships with non-governmental organisations and other actors. For example, in the **United Kingdom**, Lifting Limits is an organisation that provides resources to schools to challenge gender stereotypes. It promotes a whole-school approach integrating gender equality in the school curriculum, culture and routines. Among others, its whole-school approach aims to support schools in:

i. understanding the role they play in limiting or reinforcing gender stereotypes
ii. representing genders in non-stereotypical roles
iii. promoting awareness and skills in teachers and school staff's to challenge gender stereotypes in school, with students, parents and colleagues
iv. improving the representation of women in the curriculum and resources offered to students.

Similarly, You Be You is another UK-based organisation working with schools to dismantle gender stereotypes through school and home-based activities. With primary schools, You Be You develops cross-curricular lessons together with teachers and psychologists. The organisation also trains teachers in how to understand the role that stereotypes play inside and outside of the classroom (You Be You, 2022[136]).

2.3.2. Challenging gender stereotypes through language and play

In the **United Kingdom**, the National Literacy Trust and Let Toys Be Toys provide tips and resources for teachers to challenge gender stereotypes in the classroom through language, literacy and play. These strategies include using inclusive language and challenging incidents of gender stereotypes when they arise by turning them into opportunities for learning and discussion. Previous work by the OECD Strength through Diversity project analyses how language can support the development of more inclusive classroom environments (Brussino, 2021[69]). Other strategies to be carried out in the classroom to limit gender stereotypes include allowing students to try out roles that interest them in play performances, and using creative writing to explore, discuss and challenge gender stereotypes (Let Toys Be Toys, 2019[137]).

In **Canada**, the "Hi Sam: Sensitizing Youth Through Play" project aims at challenging gender stereotypes and promoting gender and identity exploration. The project was launched by the organisation Gender Creative Kids Canada in 2020 and funded by the Québec Ministry of Justice as part of the 2017-2022 Government Action Plan against Homophobia and Transphobia. The programme was developed for primary schools to support the sexual education programme of the Québec Ministry of Education, which requires the discussion of gender norms and stereotypes starting from primary schools. The project provides a pedagogical guide for primary schools to help trans and gender fluid children and their families by promoting safer and more inclusive education settings. The guidance and activities included in the guidelines developed by the project are based around the educational tool Sam, which is a doll transitioning from a female to trans-identified person (Gender Creative Kids, 2022[138]).

2.3.3. Challenging gender stereotypes through digital technology and media literacy

In **Canada**, MediaSmarts is a not-for-profit organisation for digital and media literacy that provides learning strategies for digital and media literacy on different topics, including gender representation. The organisation offers resources in the form of games, guides, lessons plans, tip sheets, tutorials and

workshops. Guiding lessons and teaching material are made available to teachers on their online platform including lessons on advertising and male violence, exposing gender stereotypes, gender stereotypes and body image, and girls and boys on television (MediaSmarts, 2022[139]).

In **Finland**, Plan International, a humanitarian and development organisation promoting children's rights and gender equality, has developed the ""Sheboard" app. The app aims to promote a conversation on discriminatory language linked to gender stereotypes and challenge gendered language. The app questions the way people use gendered language and aims to promote a more gender-neutral language by helping people reflect on and change the way they talk to and about girls (Plan International Finland, 2021[140]). Another example of an app developed to challenge gender stereotyping is "Lessons in Herstory"", a project launched in the **United States** presented in Section 2.1.2.

The **Flemish Community of Belgium** has developed "Gender Click for Boys", an interactive website aimed at targeting upper secondary school students to challenge gender stereotypes about boys and men (OECD, 2015[8]).

2.3.4. Challenging gender-biased educational and professional pathways

In the **French Community of Belgium**, the "Girls day, Boys day" project by the "Direction of the Equality of Chances" (*Direction de l'Egalité des Chances*) of the Ministry of the French Community of Belgium aims to introduce primary and secondary school students to educational and professional pathways that do not comply with traditional gender stereotypes. The project aims to push students to make their educational and professional choices based on their interests, thereby challenging gender stereotypes, in particular by encouraging girls into STEM and boys in teaching, social and care services. The project provides guidelines for educators on activities to challenge students' gender stereotypes when reflecting on professions and career pathways. The project takes also place in other countries, including **Austria, Germany, Luxembourg, the Netherlands and Switzerland** (Girls Day Boys Day, n.d.[141]).

Inspiring Girls is an international organisation operating in 28 countries around the world (as of December 2021) which aims to motivate school-aged girls through the testimonies and experiences of inspiring women. The organisation presents inspiring women as role models to secondary school students to encourage girls and boys through their stories to follow their aspirations overcoming gender stereotypes often associated with educational or professional pathways (Inspiring Girls, 2022[142]).

Similarly, in **Italy**, "Girls Code It Better" is a project carried out in lower and upper secondary schools to fight gender stereotypes and promote STEM educational and career pathways for girls. The project is organised in clubs that meet at schools one afternoon per week. Through these clubs, girls learn how to code, develop apps and videogames, design robots and learn how to use 3D printing. Students are guided by a Coach Teacher (a teacher working in the school) and a Coach Maker (a local artisan or technician that produces creative services or outputs) (Girls Code It Better, 2021[143]).

Moving forward

From their early years, children are influenced by gender stereotypes and norms passed down by parents, teachers, schools, the media and other social institutions. These stereotypes, in turn, have a strong impact on the way children develop their identities and perceptions of the world. The influence begins before they are cognitively able to assess the labels, as adults are dressing them in stereotypical clothing and presenting them with gendered toys from birth. Later on, gender stereotypes are further reinforced during primary and secondary education years inside and outside of the classroom. These stereotypes can affect the educational and professional choices that students make, thereby stressing gender gaps and inequalities in societies. Not only can these stereotyped presentations cause isolation for non-binary and transgender children; they can also pressure cisgender students to conform to behaviours and choices that limit their social and academic outcomes (see Section 1.1.2). Challenging the way children and youth are affected by gender stereotypes is not only important during childhood, but also during adolescence as gender stereotypes can have an impact on the way students make educational and professional choices and feel included in society.

While most countries share priorities of promoting gender equality and narrowing gender gaps in education, data from PISA 2018 suggest that many systems might be far from achieving this. Evidence from PISA 2018 not only shows differences in academic performance between boys and girls, including in STEM disciplines (OECD, 2019[4]). Results from the survey also highlight gender gaps due to girls' fears of failure and attitudes towards competition favouring boys (Givord, 2020[2]). Variations across countries suggest that these differences are not preordained and that the way students are socialised can have an impact on the academic, social and emotional outcomes and reinforce or reduce traditional gender stereotypes (Ibid.).

This paper examined gender stereotypes through the analytical framework developed by the OECD Strength through Diversity project (Cerna et al., 2021[13]), which looks at key policy areas to promote more equitable and inclusive education systems, including governance arrangements, resourcing schemes, capacity building, school-level interventions and monitoring and evaluation. Policy gaps are particularly strong in terms of monitoring and evaluating programmes in place across systems and translating smaller scale projects implemented by non-governmental organisations and civil-society organisations into scaled-up practices and broader policies.

Acknowledging these gaps and identifying policies and practices across OECD countries can be useful to understand how education systems can contribute to dismantling gender stereotyping inside and outside of the classroom. This can be achieved by intervening on key policy areas, including governance and curriculum arrangements, capacity building and school-level interventions.

Across OECD education systems, there are different strategies to tackle gender stereotyping through curriculum arrangements. In terms of curriculum objectives, some countries explicitly recognise the eradication of gender stereotypes as an important objective to be achieved through learning in primary and secondary education. Other countries lay out broader objectives of gender equality that can include the eradication of gender stereotypes. With respect to textbook policies and guidelines, increasingly attention is paid to the way teaching and learning materials are designed to challenge traditional gender stereotypes

and promote more diversity and inclusion. Among others, this implies making sure that the content represented and the language used are free of gender bias and stereotypes. It also includes increasing the participation of women in textbook design.

Preparing teachers and school staff with knowledge and skills to address gender stereotypes is a key policy area. Across countries, projects specifically targeting the reduction of gender stereotypes are carried out at different levels and often in partnership with different educational stakeholders, including NGOs and CSOs. Gender stereotypes are often covered within broader training on gender equality. Ensuring that students are prepared to challenge gender stereotypes is another important capacity-building intervention. This can be achieved by directly targeting students through programmes or projects, or indirectly by preparing teachers, the school staff and parents. Education systems and other organisations have increasingly developed guiding materials for parents/caregivers to learn about gender stereotypes and their own unconscious biases. These resources also include tips and suggestions on how parents/caregivers can do so daily at home.

Schools are one of the main settings in which children and youth are socialised. School-level interventions are therefore of primary importance to ensure that school practices are free of gender biases and stereotypes, and that students can reach their full potential. Classroom strategies include raising discussions around the effects of gender stereotypes, dedicating lessons to the topic, but also challenging gender stereotyping through language, play and sports. Whole-school approaches can also help reduce gender stereotypes at school by engaging and informing parents/caregivers and community more broadly.

Moving forward, further efforts should be made in promoting projects and programmes that aim to dismantle gender stereotypes in primary and secondary education. To make sure that policies and interventions can be effective, taking student diversity into account is key. Promoting policies and actions that foster partnerships with local communities and other organisations is important to respond to local contexts and needs. In some countries, education policy makers and other stakeholders should also acknowledge that younger generations are increasingly embracing an approach towards gender that goes beyond a more traditional binary and heteronormative understanding of it. In these countries, when developing policies and practices, education stakeholders should consider this generational perspective in order to effectively engage with students on topics related to gender equality and gender identity, including dismantling gender stereotypes.

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