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# A technology of global governance or the path to gender equality? Reflections on the role of indicators and targets for girls' education

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**ABSTRACT**

Since 2000, girls' education has been an increasingly high-profile concern in international development policy. At the same time, there has been a trend towards the greater production and reliance on quantitative data, indicators and targets in national and international education policy. Scholars have raised concerns about the rise of 'performance-based' approaches to accountability in education, and potential counterproductive effects of this for social justice and equality. However, few studies have explored how this trend plays out in practice within international organisations, particularly in relation to the heightened focus on girls' education. This paper explores the implications of the increasing reliance on quantitative measures for policy actors and draws on a set of interviews with key stakeholders working in organisations concerned with gender and education to explore their divergent understandings of accountability processes. The paper concludes by reflecting on the prospects for a transformative approach to measuring gender equality and girls' education.

## Introduction

Girls' education is frequently hailed as a 'silver bullet' for development, illustrated by the often-repeated statement that 'if you educate a girl, you educate a nation' (see, for example, UK Government 2021). Indicators associated with achieving 'gender equality' in education figure centrally in the United Nation's Sustainable Development Goal 4 (SDG 4), the education goal. These have been interpreted as being part of a contemporary global education measurement regime, which has resulted from an explosion in the production and use of education data in governing (Grek 2020). Among academics, practitioners and activists working in the field of education and development, however, the benefits of quantitative indicators in global goals and campaigns are contested, especially for developing insight into a problem as complex as gender injustice, which requires different forms of information in order to capture the range of relationships and

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intersecting issues involved (Unterhalter, Longlands, and Peppin Vaughan 2022). Critical scholarship on 'datafication' in education has raised questions not only about the accuracy of indicators and implications for accountability, but also around how quantitative measures may constitute and reinforce existing power relations and shape global governance (Ball 2012; Klerides, Kotthoff, and Pereyra 2014), which can seriously compromise the implementation of effective accountability processes to support meaningful change at various levels (King 2017; Klerides, Kotthoff, and Pereyra 2014). Given the heightened focus on girls' and women's empowerment in contemporary global education campaigns, a key question, therefore, is what are the gendered implications of the evident and increasing reliance on comparative education data in SDG 4?

In this paper, we take as a starting point various critiques of the usefulness, validity and ethical dimensions of international metrics of education (e.g. Auld, Rappleye, and Morris 2018; Sellar and Lingard 2013), and the related implications of 'datafication' for accountability frameworks (Grek 2020; Grek, Maroy, and Verger 2020; Williamson 2017; Williamson, Bayne, and Shay 2020) and focus specifically on how such dilemmas play out in global policy and practice on gender equality and girls' education. In the first part, we bring comparative education literature on metrics together with feminist literature to ask: how have measurement regimes associated with the SDGs affected accountability processes for gender equality and girls' education, and what understandings of accountability are actors and organisations working with? What possibilities are there in the current system for alternative approaches to accountability and how gender equality is measured, and under what conditions can improvements in education data help support substantive change towards gender equality?

## Girls' education and the political technology of comparative education data

The last two decades have seen rapid growth of the collection of educational data, with wide-ranging implications for every level of educational governance. Grek (2020) and Williamson (2017) identify a turn towards 'datafication'. This is the process of turning information from schools (test scores, teachers' tasks, administrative data, and whole school measures of 'performance') into statistical data. These can be entered into databases, compared, turned into charts and visualisations, analysed and used to assess relative performance at a number of different levels from the global to the local. Testing methods and digital technologies have catalysed 'datafication' Examples include the cross-national Programme for International Student Assessments (PISA), national school league tables, and individual school and student dashboards (Gorur, Sellar, and Steiner-Khamsi 2019; Lewis and Lingard 2022; Williamson 2017). Such technologies aim to support countries to improve education policies and outcomes, but have been critiqued as new means of surveillance and control rather than a tool that can help address inequalities (Davis, Kingsbury, and Merry 2012).

Scholars have explored different forms and implications of datafication in education, such as the trend towards seeing students as 'data subjects' (Selwyn, Pangrazio, and Cumbo 2022) and the role of digital data in the politics of education

reform at the national and international level (Williamson, Bayne, and Shay 2020). Grek (2020) and Grek, Maroy, and Verger (2020) explores 'data-based governance' – how the increasing amount of data enables goal-based focus on governing to specific outputs and outcomes, and the setting of targets by international organisations.

The new global architecture of targets and measurement can have both direct effects on policy, and indirect effects on discourses. The SDGs have a more expanded approach to education compared to the Millennium Development Goals (MDGs) and were formed through a wider process of consultation and participation of different groups (Dodds, Donoghue, and Roesch 2016). Nevertheless, the SDG targets and associated indicators (see Box 1), including those relating to gender inequalities and equalities, have also been subject to significant critique (Esquivel 2016; King 2017). Fukuda-Parr (2022) for example, highlights how despite the existence of a pandemic preparedness indicator in the SDGs, Covid-19 responses not only proved the indicator to be inaccurate, but the lack of subsequent debate about this failure proves the significance of power structures and vested interests associated with indicators in setting agendas and determining epistemic infrastructures.

| Box 1. SDG 4: Education targets and indicators. | |
|---|---|
| Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all | |
| Target | Indicators |
| 4.1 By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes | 4.1.1 Proportion of children and young people (*a*) in grades 2/3; (*b*) at the end of primary; and (*c*) at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex<br>4.1.2 Completion rate (primary education, lower secondary education, upper secondary education) |
| 4.2 By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education | 4.2.1 Proportion of children aged 24–59 months who are developmentally on track in health, learning and psychosocial well-being, by sex<br>4.2.2 Participation rate in organised learning (one year before the official primary entry age), by sex |
| 4.3 By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university | 4.3.1 Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months, by sex |
| 4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship | 4.4.1 Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill |
| 4.5 By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations | 4.5.1 Parity indices (female/male, rural/urban, bottom/top wealth quintile and others such as disability status, indigenous peoples and conflict-affected, as data become available) for all education indicators on this list that can be disaggregated |
| 4.6 By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy | 4.6.1 Proportion of population in a given age group achieving at least a fixed level of proficiency in functional (*a*) literacy and (*b*) numeracy skills, by sex |
| 4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development | 4.7.1 Extent to which (i) global citizenship education and (ii) education for sustainable development are mainstreamed in (*a*) national education policies; (*b*) curricula; (*c*) teacher education; and (*d*) student assessment |

| 4.a Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all | 4.a.1 Proportion of schools offering basic services, by type of service |
|---|---|
| 4.b By 2020, substantially expand globally the number of scholarships available to developing countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes | 4.b.1 Volume of official development assistance flows for scholarships by sector and type of study |
| 4.c By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries | 4.c.1 Proportion of teachers with the minimum required qualifications, by education level |

Source: UN Statistics Division (2022).

Critical questions have been raised about the increasing use of internationally comparable data in education; and the indicators associated with SDG 4 (see Box 1) are an oft-cited example. First, those opposing the use of comparable data caution that they are too narrow in scope – lacking sufficient insight into, masking or distracting attention from serious issues at local levels – and are thus limited in the necessary information they can provide to policymakers and practitioners to inform substantive change (Auld, Rappleye, and Morris 2018; Sellar and Lingard 2013; Unterhalter 2019).[1] The validity of the what is measured has also been queried, with authors such as Biesta (2010) questioning whether the *normative validity* of data (measuring what we value) is increasingly being replaced by *technical validity* (measuring what is easier to measure) (see also Honing and Pritchett 2019). SDG 4 aims to 'ensure inclusive and equitable quality education and promote lifelong learning opportunities for all' (see Box 1). Yet while the range of targets and specific indicators associated with it have galvanised the collation of internationally comparable education data across national governments and several key international agencies, they have also been criticised as inadequate measures of the overall goal (Unterhalter 2019; Wulff 2020).

The argument is made that global indicators serve to direct policy towards quick, 'cosmetic' actions designed to improve scores, for example on access, and allow policy makers to ignore deeper issues such as the quality, breadth or relevance of education provision, or the complexities and intersecting nature of inequalities that impact on the most marginalised groups and communities (Fukuda-Parr, Yamin, and Greenstein 2014; Goldstein and Moss 2014; King 2017; Unterhalter 2019). Scholars have highlighted how global targets and indicators help constitute or reinforce existing power relations, even if the producers of such indicators are not typically recognised as wielding power (Davis, Kingsbury, and Merry 2012; Klerides, Kotthoff, and Pereyra 2014). International assessment programmes, such as PISA, establish trends, which, in turn, have a bearing on national education sector planning and policy that may push them out of alignment with local needs or concerns, thus undermining the authority and professionalism of local teachers (for example, the study of the effects of PISA in Spain by Bonal and Tarabini 2013).

Davis, Kingsbury, and Merry (2012), argues that indicators, rather than simply being a tool for measuring progress and informing future policy, can act as a 'technology of global governance', having impact on who is considered 'expert', who is governed and how, how decision-making and standard-setting happen, and also the ways in which governance can be contested. Morris (2012) and Sellar (2018), have explored how comparisons can

be 'used and abused' to promote particular domestic agendas, or, alternatively, can be part of a 'strategy of domination'. Klerides, Kotthoff, and Pereyra (2014) perceive that a wide range of actors including the EU, the OECD and UNESCO effectively operate at the global level as 'neo-empires of knowledge in education', promoting their own agendas, which also calls into question the historical and political roots of regulatory privilege (Ball 2012; Klerides, Kotthoff, and Pereyra 2014).

Such distributions of power and narrowing of agendas have serious implications for the possibilities of mobilising for better data that can measure and help address substantive inequalities in line with the broader visions of SDG 4. As Unterhalter, Longlands, and Peppin Vaughan (2022) argue, we cannot meet these visions unless we understand and engage meaningfully with the complexities of inequalities and forms of injustice that are difficult to measure in education, such as gender inequalities, which necessarily requires in depth, critical discussion with a range of stakeholders who experience and have some understanding of these inequalities and injustices at local, national and international levels. We must ask critical questions, therefore, about the increasing amounts of data on gender and education that are being produced and monitored, including which particular measures of 'gender equality' are being prioritised, what are the effects of existing targets in terms of changes to policy provisions, and which agendas might be underlying such moves?

Important issues with regards to gender equality and girls' education are also raised by the increasing role of comparable indicators in accountability processes, especially at the global level. Although accountability is a somewhat elusive and contested concept, there is general agreement that accountability frameworks, including those for education, must define who is accountable for what and to whom and set clear procedures for monitoring and evaluating the behaviour of those who are held accountable (UNESCO 2018; Ehren and Perryman 2018; Ocampo 2015; Dann 2013). The deployment of accountability processes at an international level is complicated, however, because many international development commitments, including the SDGs, are voluntary and not legally binding, and lack clear accountability structures (for example, Donald and Way 2016).[2] This raises questions about how processes work in practice, despite the absence of legally binding mechanisms. The gathering and review of data is one such process.

How accountability in education affects gender equality and girls' education depends on the model of accountability. For Biesta (2010), accountability in education has changed from a fundamentally democratic and professional notion into a managerial one. As a result, the focus has shifted from the ends and aims of education, to questions about the efficiency and effectiveness of learning processes. Biesta argues that these managerial accountability regimes reduce opportunities for responsible action and change the relationships between stakeholders. This has been identified as 'performance-based accountability' or a 'public management approach' in contemporary education systems (Carnoy, Elmore, and Siskin 2003; Grek, Maroy, and Verger 2020), which involves an amalgam of various techniques, tools and processes, including datafication, aimed at motivating schools to achieve particular outcomes or results, typically around learning. Holmén (2022) demonstrates how higher education institutions are increasingly governed through performance measurement rather than regulation, borrowing ideals from the managerial leadership of large corporations rather than from representative democracy. Defining accountability as a top-down, performance-based model, framed

around meeting specific targets for gender and education, could have significant implications for how resources for gender equality are allocated. It also runs the risk of policy becoming detached from the local experiences and realities of gender inequalities in education.

Grek (2010, 2020) has explored the impact of 'datafication' on the nature and enactments of new accountability regimes under SDG 4, with the rapid increase in quantitative data leading to a huge expansion and integration of a particular form of accountability not only in the services and functions of national and international organisations, but also ways of thinking and operating, such as around standardisation, quality assurance and organisational strategies. Fontdevila and Grek (2020, 47), in their study of the UNESCO Institute of Statistics (UIS), one of the pivotal agencies in international educational data collection and collation, argue that while accountability is largely undefined in SDG 4, data collection and collation has primacy, particularly around learning outcomes. For example, they highlight how two separate types of accountability process – democratic and technical – can be identified within UIS, resulting in internal struggle within and between organisations (Högberg and Lindgren 2021; Lingard, Baroutsis, and Sellar 2021).

What this literature suggests, therefore, is that despite claims that better data leads to greater understanding and more focused interventions, particular iterations of performance measurement and management may not lead to improvements in practices and individual lives. There are few accounts of how practices of measurement and accountability are experienced and whether opportunities for a progressive approach can take on board social justice concerns, particularly in relation to gender equality.

Girls' education has been highlighted in the SDGs, accompanied by prominent international campaigns (Unterhalter 2016). Yet despite the policy attention and increased availability of data, progress on gender equality in education has been piecemeal and unclear (DeJaeghere, Parkes, and Unterhalter 2013; Unterhalter et al. 2014) . More broadly, a number of authors have raised concerns over the lack of progress on gender equality (Klasen 2020; Sen and Mukherjee 2014), with the SDGs themselves critiqued as having framings of gender that mean the transformation potential is low (Esquivel 2016).

Scholars have questioned the role of data and measurement in achieving gender equality, especially in the light of the 'gender data revolution' and the mobilisation of powerful organisations to address the lack of sex-disaggregated data (Fuentes and Cookson 2020). Some have critiqued these moves as a 'measurement obsession' creating negative effects, with too many demands to produce evidence of impact affecting locally generated priorities, and data not fit for purpose in capturing the complexities of gender inequalities (Kabeer 2020; Liebowitz and Zwingel 2014; Pérez Piñán and & Vibert 2019). Razavi (2019) argues that the high level of emphasis placed on quantitative indicators under the SDGs represents a 'slippage in ambition', which has stymied any substantive discussion and contestation over what gender equality is, at the same time pushing away the prospect of more meaningful forms of accountability (see also Unterhalter, Longlands, and Peppin Vaughan 2022). Concerns raised by these feminist scholars over the increasing use of data in quantifying and assessing 'gender equality' in development resonates with those raised about datafication, accountability and education quality.

The focus on measurement in relation to girls' education means advances have focussed on girls' school enrolments and completion, with many countries achieving

gender parity (equal proportions of girls and boys) in these aspects (Psaki, McCarthy, and Mensch 2018; UNESCO 2018). Yet gender parity measures in education are not able to give a comprehensive picture of gender related inequalities in education (Unterhalter 2005; Unterhalter and North 2011). Unterhalter (2019) explores the limited meanings of gender equality in SDG4 indicators and targets (Box 1); for example, the heavy reliance on gender parity measures (e.g. in terms of particular proficiency levels, or school completion), the narrow definition of quality education, or the role of structural inequalities. She notes that ongoing reliance on gender parity data alone can cause perverse effects by channelling resources away from areas that may need prioritising, but which cannot be easily measured (see also Unterhalter 2014).

Most countries have workable data on gender parity in enrolment and attendance in primary school, and there have been substantial developments in EMIS and in documenting learning outcomes in reading and mathematics. But data availability is uneven relating to gender and intersecting inequalities, including conditions in schools, attainment and learning outcomes beyond numeracy or literacy, or opportunities gained through education (Faul, Montjouridès, and Terway 2021). There has been little use of data to understand and address the intersections of gender with other areas of educational inequality associated with, for example, wealth, rurality, and primary language – even when such data can be generated using existing SDG assessments and surveys; additional forms of data analysis are needed for a comprehensive understanding of gender equality in education (Unterhalter, Longlands, and Peppin Vaughan 2022).

Given increased attention to girls' education in donor polices, which has happened concurrently with the accelerated reliance on, and power emanating from, comparative data and the rise of performance-based accountability, what processes have been associated with accountability for gender equality and girls' education initiatives at the global level? The formal accountability mechanisms under the SDGs are vague and undefined, thus some insight on this issue can come from an investigation into how policy actors working in international organisations understand the relationships between data and accountability in practice.

## Voices from the field: how the impact of 'datafication' is experienced by those working on global campaigns on girls' education?

International organisations occupy a central position in relation to measurement and accountability. They fund large programmes which create and deploy widely used measures of progress in gender equality and girls' and women's education.

This section draws on Interview data collected at the global level in 2019–2020 with twelve key policy actors working in roles relating to gender, education and measurement in different international organisations (UN agencies, donor agencies, and non-governmental organisations). Interviews were conducted as part of the Accountability for Gender Equality in Education (AGEE) project.[3] We have not specified the particular organisations due to anonymity and confidentiality concerns, but participants were selected on the basis of the relevance of the organisation with regard to the field of girls' education and gender equality as well as their own expertise and proximity to international policy work on gender, education and measurement. By nature of the location of the organisations, participants were largely based in cities in the Global North. Interviews were

semi-structured, with questions exploring participants' perspectives on issues linked with data, accountability, gender equality and education.

Data collection and knowledge-making in education and development are conducted in a context of significant inequalities in resources and status, as well as histories of colonial relations (Shahjahan 2016; Walker and Martinez-Vargas 2020). In designing the AGEE research reported here, we have tried to critically reflect on our own positions as researchers from an elite university in the Global North, aiming to work in partnership with colleagues in the Global South, as well as navigating hierarchies of the international education policy community. AGEE's consultative processes, have been a central part of the research design, to invite critical reflections on both existing indicators for gender and education and the construction of a new measurement framework for gender equality in education. We also acknowledge, however, that these research activities have inequitable power relations and historic inequalities embedded in them, and that critical self-reflection remains an ongoing process as the project proceeds.

In this section, we first discuss views of those interviewed on the trend towards greater reliance on quantitative data and indicators, and the role of data in accountability on gender and education. The data reveal concerns over the accuracy of current indicators, and how this affects processes of accountability. Second, we look at how participants understand accountability in relation to girls' education, and draw out two key approaches to accountability discussed in the interviews. We note comments both on top-down, performance-based models, and an alternative, more dialogic version in which data might be used to hold authorities and those in power to account. Finally, we examine the prospects for the future as reflected on by participants and whether and how improved data on gender and education may (or may not) relate to strengthened forms of accountability for gender equality, and the conditions and resources needed for this to come about.

Interviews revealed how respondents have experienced and negotiated the trend towards the increased production and reliance on quantitative data in the field of gender and education, in particular the emphasis on achieving results on gender parity.

Some interviewees saw quantitative measures as central for accountability for gender equality in education, suggesting that current targets and indicators on gender and education demonstrate that progress is slowly happening. It was felt this could have a positive effect and change people's perceptions:

> We need to make sure that we highlight some of the positive developments as well. … I think the fact that that target is there, those indicators are there … that is really, really big … … this sense that, hey, whoa, maybe we have actually come a bit on the way … Like maybe there is good stuff happening … [Int6]

Indeed, for some, the definition of gender equality was spoken of purely in terms of indicators:

> Gender equality is not only a question of stereotypes, it's really concrete and pragmatic when you have a roadmap with milestones, with indicators and with more or less results that we can measure, otherwise it's only a wish or a political statement. [Int8]

Nevertheless, a key theme across the interviews was concern over the accuracy of existing indicators for measuring gender equality, in particular, the limitations of 'gender parity'. In accountability processes, the question of what is important to

measure carries yet more weight, as there can be significant implications for those held responsible for results.

Some participants considered that gender parity data has an important role, as a 'first step' of understanding the current levels of gender equality and inequalities in education, and as a central part of accountability processes. Nevertheless, one respondent felt that parity data is not taken seriously enough in terms of international action (as opposed to rhetoric), and could be used in a more detailed way to support meaningful change (particularly if used with intersectional data):

> [*Parity data are] not as important as they should be … I think that the international community is a lot better at broadcasting the benefits of girls' education to the wider public than it is about holding actors accountable for ensuring that girls can go to school, stay in school and learn and have an empowering experience while they're there.* [Int9]

However, when asked about what it is important to measure and evaluate for gender equality in education, most respondents articulated the limitations of gender parity and a need to move beyond it to realise SDG4, discussing a range of alternative measures and concerns:

> *We spend a lot of time worrying about gender parity but it's much more about a policy-impacted environment that enables girls' empowerment.* [Int 1]

> *We take gender equality to refer to equal rights, responsibilities and opportunities as women, men, girls and boys. We do include equal power to shape their own lives and contribute to society [but] we see it as including the narrower equity focus as well … also a transformational commitment to make equal rights and equal power a reality.* [Int 3]

> *Over the years [we] moved from a parity point of view to a more comprehensive understanding of what equality really would be … [from] gender equality in education … towards more of a gender equality through education.* [Int 6]

These viewpoints about what gender equality in education entails, relating to agency, comprehensive understandings of equality (including equal rights), transformation, or particular conditions or processes, or some kind of final state (such as empowerment or equality of decision-making), and how it should be better measured and supported by data, thus suggest a widespread need to rethink the reliance on gender parity data as an adequate or accurate measure of gender equality.

There was also recognition that some forms of education might perpetuate gender inequalities, and thus the importance of assessing whether education has a transformative dimension:

> *It is about seeing education as a transformative platform … [advancing] gender equality in and through education … [meaning] education is changing or shifting some inequalities that exist in the broader community, but also inequalities that education is perpetrating … so it is both shifting education on in terms of curriculum, teaching practice, the way recruitment [and] professional development [works], within education, but also using education and through that changing some of the broader norms* [Int 5]

This, again, highlights that understandings of gender equality and education are much more comprehensive and complex than current measures suggest.

More worryingly, many respondents expressed reservations that current measurement regimes not only were limited on what they can reveal about experiences in schools

because of the reliance on gender parity, but may also mask and perpetuate other inequalities and negative experiences:

> If you just pursued a target of gender parity, you could be inviting girls to danger if other things aren't happening. [Int9]

> Often the measure isn't very well understood or used … gains in one sense don't necessarily mean there aren't losses in another … while [gender parity] is a measure that is important to keep, we still need to build understanding around what it means and what it doesn't mean. [Int10]

Moreover, for some, the heavy reliance on gender parity data can deflect attention from collecting other data on underlying inequalities, which impacts whether and how these inequalities are addressed:

> There's definitely a potential for the parity index to be misleading if you're just looking at it in isolation … And that would influence discussions on accountability as well. [Int12]

In particular, and especially with respect to some SDG4 indicators, there are concerns both that the emphasis on gender parity data can take away scrutiny of quality education from a gender perspective, but also that the focus on learning outcomes is largely limited to literacy and numeracy:

> In particular, looking at 4.7, that's kind of got everything inside it about teaching and skills development around gender equality, global citizenship, etcetera … it's hard for countries to be accountable to some of those targets without having a strong set of indicators around them. [Int10]

One respondent noted the diversity of definitions of 'gender equality' in education that can be present, even within an organisation, affecting approaches to measurement and data collection:

> We are probably quite far from a consensus in the sense that we have people within the organisation that have worked on gender issues for a long time and with a more progressive, radical point of view, and then [other] colleagues that have worked here a long time without paying much attention to gender, and for them [gender equality] probably remain[s] at the access level. [Int 6]

Thus, the interview data help reveal the complex nature of gender equality in terms of how it is or should be defined and measured as well as the role of data in shaping perceptions and/or agendas. While there was consensus amongst respondents that moving beyond gender parity data to consider broader aspects of gender inequality is important for accountability, there was more divergence in perspectives on what gender equality in education should entail, and therefore what and how data on gender equality and inequalities should feature in accountability processes.

Some respondents spoke of potentially perverse effects of current measurements in accountability processes under the SDGs that encourage actions that go against the broader goals and targets:

> There's a danger that people try and introduce these perverse incentives for people to behave in ways which aren't necessarily meeting the objectives or broader mandate of the organisation … It's a difficult balance … the more specific and strict you have quantitative targets … the more potential there is to introduce perverse incentives. [Int12]

> *… Someone told me that one airline wanted to improve the efficiency of how luggage was delivered to their customers … And they say, well, you need two: one indicator is the time that goes between the airplane landing and the first customer picking up her luggage … So that was the indicator. And what the airline did was that the airplane landed, and one person ran to the airplane, grabbed the first baggage and rushed to the conveyor and put it there … So for the rest of the luggage … The first suitcase came on time, the rest – who knows? Even in private firms they can do this … they work on the indicator not on the issue of how they address the whole subject.* [Int7]

If there are punitive measures, staff and systems can focus only on improving a narrow range of measures, regardless of any other detrimental effects that might follow. Indeed, as has been widely documented, for example, the focus on and push for universal primary education under the MDGs and achieving gender parity in terms of enrolment was not matched with a similar concern for the provision of good quality education, and thus either did not address or exacerbated other forms of gender inequality (Unterhalter 2014; Psaki, McCarthy, and Mensch 2018).

A further related concern articulated in the interviews is that the use of current data, targets and indicators under the SDGs, although in theory more comprehensive than the MDGs, can take away impetus (and resources) to look at, and gather data on, other aspects of gender equality in education.

> *You only look at those things and anything that's outside it, no matter how important, could get lost, because pragmatically we know there is a nexus between how much it's going to cost to get the information and whether or not the information [is] available.* [Int7]

> *With our results framework, we've got so many indicators already, nobody wants to think about other things … So things we've been saying about gender equality, we're not looking at those because they're not in the results framework.* [Int3]

Such frustration that the narrow nature of current indicators could work against further action was also expressed by another respondent, who suggested that once gender parity is achieved, those in power could see the situation as 'job done':

> *Where do you go when your permanent secretary for education tells you that there are no gender issues in this country, so let's not make it one?* [Int3]

Having clear indicators that connect with more substantive understandings of gender equality are thus important not only for better monitoring but also for developing awareness of what needs to change and stimulating action to ensure such necessary change happens.

But *how* data is used depends on the approach to accountability, which can vary with location and context – for example, whether data is used primarily for monitoring, rather than if there is a deeper analytical and political engagement with data to understand and address issues. As the interviews illustrate, a critical dimension is who is using the data and under what conditions, e.g. whether civil society use it for lobbying or education planners use it to set agendas:

> *Basically, the people who are going to use this information know it and those who need it in their everyday work have the information and can use it … . [But] using this information is where we tend to struggle … The production has been relatively easy.* [Int2]

> *It depends on the quality of the media, freedom of civil society organisations and so on to organise around these issues.* [Int12]

*It's incredibly complicated, where the onus for accountability, and the politics of it, the political economy of the country … especially if you are talking about gender equality.* [Int5]

*What we see at the country level is there is no deliberate structure to use that information, people are on the receiving end of it [but] will not necessarily act on it.* [Int3]

While more data is being produced under the drive for accountability, how and whether it is used depends, participants noted, on the politics around gender in each context, and whether there are structures in place to support its use. This resonates with the different approaches to accountability identified in the literature, in particular, the more top-down performance-based approaches, and the more democratic, dialogical approaches. It suggests that the impact of improvements in data on gender equality and education will be mediated by the dominant understandings of accountability.

Although most respondents identified accountability around gender and education as a key factor in achieving the SDGs, many spoke about challenges, including the difficulty in defining what and who an accountability process should entail, with variation between more managerial, performance-based and democratic visions. First, in describing what accountability constitutes, respondents spoke of how an effective process works (or should work) on multiple levels, with the involvement of stakeholders across different fields, according to their areas of responsibility.

*Accountability has to start at a really low level, with school management committees, PTAs – those kinds of groups – understanding what experiences are within institutions, within schools they are linked to or have some responsibility for* [Int 2]

*Almost everybody is accountable in different ways … and for different things … doing what you say you're going to do and taking responsibility for getting to where you've indicated you wish to be.* [Int 10]

These excerpts highlight that accountability is not a single or simple process, but instead is complex and manifest in a cluster of relationships; as Fontdevila and Grek (2020, 55) state, under SDG 4, accountability involves 'continuous co-construction' involving a wide range of individual and organisational actors (2020, 55).

Furthermore, defining accountability in gender and education, and what it should involve, was seen as even more complicated – as elusive, and challenging:

*Oftentimes, roles and responsibilities are not clearly defined … if people are not clearly aware of who has to do what for what purposes, then there is a breakdown in the logic, and it is difficult to achieve the results that are being planned for … [it] also needs [a] feedback loop in terms of learning from the monitoring data.* [Int 4]

*Accountability is harder to define than gender equality – in terms of resources assigned to education, the effectiveness and efficiency of those resources … Specificity is very important.* [Int 7]

*Who is involved is a much easier question to answer than what accountability is* [Int 10]

This elusiveness may stem from the lack of detailed articulation in the SDG framework, without being a clearly specified, key part of institutional practice, or having allocated budgetary resources. But it can also be linked to the inadequacy of data that can

measure and contribute to understanding the complexity of gender inequalities in education, and thus the narrow agendas for change.

For several respondents, a 'performance-based' understanding of accountability seemed to dominate, particularly in relation to the assessment of performance and results towards the SDG goals, with gender equality as something measureable by a straightforward, linear scale of achievement:

> *Mutual accountability should come from dialogue at a country level and from monitoring different activities that aim to get to results, including gender equality.* [Int 4]

> *Every stakeholder has to know on what he is accountable, what aspect or concrete aspect he has to follow and then to report on the result.* [Int 8]

While these accounts might imply accountability processes are relatively uncomplicated, with any necessary relationships and consensus easily formed and reached, other comments were more explicit about challenges involved. Reflecting on how the current nexus of data and accountability processes relate to transnational governance and regulation, one respondent commented that:

> *[Accountability is] a huge undertaking, mainly because gender equality in education is not about one figure, it could be a huge – several different domains and sources of information.* [Int5]

Such recognition of the broad and complex range of actors that are or should be involved in accountability on gender and education highlights the potential complications in a 'results-based' approach to accountability which revolve around the question: 'accountable to whom?' For example, requirements to external funders can eclipse building accountability mechanisms at local or national levels, and developing in-country capabilities. One respondent emphasised the complexities of accountability relationships when various organisations are involved, including external agencies:

> *What we really want to be working towards is this mutual accountability for results principle, in-country, so, you know, not accountable to us but accountable to their constituencies.* [Int3]

In addition to achieving results, dialogue was also seen as an important part of the process, although there was less detail beyond that, resulting in a loose articulation of a performance-based approach to accountability.

The top-down approach to accountability can overlook or ignore the knowledge or expertise of key local stakeholders, including teachers. This raises questions about how such an approach can either fully understand the complexities of gender inequalities in local contexts or gain traction amongst those who necessarily need to be engaged in facilitating change at the local level. One respondent, for example, emphasised how teachers increasingly feel undermined:

> *The mobilisation and proactive position taken by some unions is very much to be understood in relation to a discourse where teachers are blamed, whether for poor learning outcomes or the number of girls that have been sexually harassed in the classroom or on their way to school and so on … … when it comes to professional development, and support in the profession, I don't know that there's been much of a demand for more data or information. I think, teachers feel like they don't need the data because they know the realities that they live, and they see that there's very little support and investment in the profession … . It's unfortunate because I do think that teachers in many countries feel like they are under constant attack … there's so much*

*criticism that it may be difficult for teachers to engage in some of these conversations in a more positive way … there is an overall feeling that accountability has become a one-way street when it actually should be mutual and there should be accountability in all directions: teachers should be held accountable but so should public authorities* [Int6]

However, for other respondents, a different understanding of how accountability processes work, or could work, was apparent, with more emphasis on equal relationships and dialogue to foster greater understanding:

*Simple things, like, to what extent do we know about gender inequality within the teaching profession, across the board; or to what extent do we know about financing around gender issues … At the national level, the whole education sector planning process, civil society, members of the left, women's organisations, the government and also the broader community, the school community would be equal actors.* [Int 5]

This kind of process may therefore involve scrutiny of authorities and those in power, to assess, for example, whether or not governments and agencies are following through on their commitments. However, roles and responsibilities are often not clearly defined:

*In a normative and human rights law sense, governments should be accountable for commitments … to meet their obligations under international law … heads of state and global institutions [should] be accountable to pledges and promises made … Need to think about who is being scrutinised as well as who is doing the scrutinising* [Int 9]

In this way, several respondents emphasised that accountability should not only involve people in many levels but also dialogue and a process of fostering mutual understanding. This vision of accountability is more democratic and discursive, and, as discussed in the literature review above, stands in contrast to critiques of 'top-down' managerial and performance-based versions. Moreover, differences in descriptions of accountability (democratic vs managerial) may also relate to Fontdevila and Grek's (2020) account of tensions and competing versions of accountability under SDG4 in some UN agencies. Nonetheless, in whichever way accountability processes are understood (whether top-down or bottom-up), what does seem to be consistent is recognition of the need for good understanding of what the issues are in order for such a process to work effectively and meaningful change to occur.

Some level of consensus among the different accountability actors needs to underpin this, which raises further challenges. For example, some respondents emphasised how contextual factors can affect how accountability works in practice, including the need for all stakeholders to buy into the ideas in the first place; if gender equality in education is only understood in certain terms, and if there is reluctance to explore other understandings, then accountability processes will not work beyond that. For example:

*That's quite a profound barrier in some contexts … for the accountability mechanism to work, people have to buy in to the fact that this is something worth being accountable for* [Int1]

In this way, the politics around gender and education in each context were seen to affect how and whether people are involved at all levels, as accountability processes will only work if everyone is committed to the values and goals behind the initiatives. Yet, regional and cultural differences in approaches to gender and education are likely to be significant; for example, one respondent spoke of the relationship between religion and gender in

many contexts (e.g. Latin America) and how gender issues are hugely political, which affects accountability processes. While governments may have signed up to the SDGs or other gender equality targets on paper, in practice accountability processes will not work without some level of consensus:

> You may have governments, in any country, trying to reach [gender] parity but that doesn't mean that society is agreeing on those approaches [Int7]

These differences can affect relations between international organisations and their country partners; for example, if monitoring frameworks decontextualise the issues significantly. This suggests the need, in accountability processes, for a flexible measurement framework that can capture common issues linked with gender equality and inequalities in education as well as local differences.

While the interview data suggest divergent perspectives both on measuring gender equality in education, and also on how accountability for gender equality in education should work, the overarching need for some kind of accountability process to support gender equality in education was not questioned. Rather, the issues revolve around who to involve, how to involve them and what data is required to facilitate meaningful change.

## Prospects for the future

Given the challenges discussed above, we ask what the prospects are for working with the trend towards increased reliance on quantitative data in a way that is able to engage with a more substantive definition of gender equality and involve a broader range of perspectives and actors in a more discursive and democratic form of accountability.

When asked to reflect on whether and how change might come to the current measurement system, and what this might look like, respondents highl ighted significant barriers that would need to be overcome. These include, limited resources, lack of political will and motivation around gender, and civil society engagement.

Respondents also emphasised the need for improvements in data. Some suggestions were around improving data linked with the range of measures that gender parity could be applied to; for example, getting more disaggregated data, and also broadening the range of comparable data to look at processes and outcomes as well as inputs. Beyond this, however, many spoke of needing other types of data than parity measures, in order to develop deeper insight into how gender operates within institutions and systems. For example:

> Consistently, violence and gender is at the heart of it, not just about sex for grades, the exploitation of underage girls by teachers, but also young female professors and lecturers in higher education … young female teachers getting posted to rural contexts, and, in the teaching profession, the lack of female leadership, even though the teaching profession is majority female in many countries. These are things that get masked by the parity question. It's about norms but also institutional practices, things that are taken for granted. [Int5]

In reflecting on what is currently not measured (or not included in measurement frameworks), respondents suggested a range of additional data for improving accountability for gender equality in education. These are listed below in Box 2.

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**Box 2.**   **Views on what additional data is needed in SDG4 for accountability in gender equality in education.**

- what roles and identities girls move into after education; what kinds of work (parity measures)
- girls' leadership
- girls' life-skills
- violence, gender and exploitation in relation to education
- financing and education budgets
- indirect costs of education
- curricula and textbooks
- teacher behaviour and activities; teacher 'performance'
- 'performance' along the lines of PISA etc., learning outcomes for literacy, numeracy
- learning outcomes beyond literacy and numeracy
- child labour and how this affects school
- Access to technology in schools

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One respondent emphasised that moves towards more and better data would empower people to strengthen accountability:

> It can make people feel like they finally have the right to make certain demands or say certain arguments … in that sense, having the data is a big step. [Int6]

The issue of resources, however, was cited by several as an obstacle to reforming and improving data in gender and education. One respondent highlighted lack of resources is often underlain by a lack of political will, while others similarly noted that improving data and statistics is often not seen as a priority when allocating resources within governments and organisations, particularly if in competition with other pressing policy issues:

> In some LDCs [least developed countries], eradication of poverty is the first issue, all the other issues are appearing as, "bah, statistics, that's for later". [Int9]

Gender concerns, in particular, are often marginalised – under-resourced as well as undervalued. Limited administrative resources, for example, can hamper collecting gender data, particularly in lower income countries. Furthermore, improving accountability on gender and education requires improved reporting, but this can be a challenge if reporting is not compulsory:

> If it's voluntary, why should I bother? … That is something we have to work on …  [Int11]

> It's comparing the amount of noise there is on nice brochures and videos and so on about girls' education and how few organisations are actually spending money on people who work on these issues … it's an observation in itself about gender but it also has an impact on the potential for accountability because those individuals who really know this stuff at a very granular level are very overstretched. [Int9]

These points echo concerns highlighted by scholars, such as Donald and Way (2016), about the weakness of accountability structures under the SDGs. Furthermore, even if political rhetoric around working towards gender equality is strong, it is often not followed through with budgetary support. As one respondent explained:

> Thinking about political economy questions … where does responsibility within a ministry for gender equality and education lie? How much power do they have? What committees discuss these issues? How much influence do those committees have? What budgets are allocated? I always used to want to write a paper called 'Why Are Women's Ministries So Often Found in Sheds'? … Because if you go to a lot of African countries, you'll find some vast, big finance ministry and a vast, big ministry of planning, and then the women's ministry is in a Portakabin at the

*bottom of the garden and it's doing, you know, women's issues, social work, da-di-da-di-da. Women and children last.* [Int9]

Political will around gender issues determines budgets and therefore opportunities for reforming measurement on gender and education. Yet, as another respondent suggested, the current political moment is tricky and not conducive for pushing for more substantive reforms on gender and data. There does not currently seem to be sufficient support for the cross-sector collaboration required to meet the gender equality goals of the SDGs:

*The mood is not exactly what it has to be or what it was in the past, it's a bit [of] a difficult period … on SDG 5 [*'Achieve gender equality and empower all women and girls'] *we have a lot of things to do before we [are] able to be accountable or to measure the progress will take more time.* [Int 8]

Meanwhile, other respondents spoke of 'fatigue' around data and indices, which can inhibit accountability processes:

*These indices are a bit of a holy grail, and everybody feels really passionate about their one or the one that they're associated with … their impact, obviously, depends on utility and whether or not you've done work to get buy-in to use them.* [Int 9]

In reflecting on what could be done, however, several respondents suggested that the involvement of civil society, especially women's civil society groups, is key to effective accountability processes, including for understanding issues and determining how data is used, and should be supported:

*Understanding that that work is valuable and needs resourcing at all of the levels of accountability that I talked about is important.* [Int9]

*Women are less present in decision-making … the question is: those who are present, who are they? Are they from the poorest backgrounds, are they black, are they, you know, all these things? So how to make those who are invisible, including in women's groups, be also visible?* [Int11]

Of course, effective involvement necessarily entails not just the presence of different individuals or groups around the table but also their active participation.

As mentioned in the interviews, however, limited resources and capacity can negatively affect the involvement of diverse groups, particularly, women's groups:

*They [women's groups] need to be brought into these processes of data production and data use more. Their views need to be collected and taken into account. But, most importantly, they have to be resourced enough to use this information to do what they have to do.* [Int2]

*They're informed, they're capacitated to participate meaningfully in education policy processes, they can understand what the process is, they can understand the interests of stakeholders, they can articulate things clearly and use this data and information to advocate with policymakers … all of us recognise the important role that civil society has in demand for good governance [and] accountability for results, but they may not always have the capacity to do that in a meaningful way … So that's one very big piece for our accountability work, making sure that civil society has the capacity to engage.* [Int3]

Nevertheless, the disjuncture between gender issues in education, and the activities of women's rights organisations working outside of the field of education, is an issue that has been noted elsewhere at both national and international levels; in fact, it is seen as one reason why the MDGs did not reach their potential in terms of progress towards

gender equality in education (Peppin Vaughan 2019; Unterhalter 2016). This disjuncture hinders both improvements in data, and whether education-related data is used to hold authorities to account.

Indeed, one respondent highlighted that building international networks and communities around gender equality is important for a more gender transformative approach to data and measurement processes.

> *Bringing people together / networks is important for alternative perspectives:*
>
> *gathering people is an important thing to do as well, just in terms of making sure people are aware of the different ongoing efforts, making sure those who fight for gender equality in their respective organisations know there are allies in other organisations. Making sure there is a kind of safe space for debating and discussing issues and challenges.* [Int6]

Therefore, while it is clear from the interviews that data is seen as centrally important to both 'technical' and more 'democratic' approaches to accountability in gender and education, the prospects for moving towards the latter are complex and rest on a number of factors, including not only collecting better, more detailed data, but also political will, civil society involvement and resourcing, and the ability for networking across different gender constituencies. While this is certainly challenging, however, if we simply continue down the path of top-down, performance-based accountability approaches to monitoring progress towards gender equality in education that themselves rely on narrow understandings and measures of gender inequalities based on gender parity, then it is clear we will not achieve the goal of substantive gender equality in education and the wider gender equality visions of the SDGs.

## Transforming accountability for gender equality and girls' education: data, democracy and participation

As this paper demonstrates, 'datafication' has clearly impacted targets and indicators for gender and education. But does more data help accountability towards achieving gender equality in education, and if so, under what conditions? The AGEE interview data suggests that, while having more and improved data on gender and education could offer clear advantages, there is a strong need to go beyond gender parity. Gender equality is seen as something more substantive than equality of numbers, and many of our respondents articulated the need to track the more 'transformative' dimensions of education. But respondents also expressed frustration that current measurement practices – particularly the focus on gender parity, but also the practice of setting targets and indicators under the SDGs – can be counter-productive and produce perverse effects.

In line with critical studies discussed in the first part of the paper, the interviews reveal varied understandings of accountability in international organisations focusing on gender and education: some approaches are more managerial; some more democratic. In this way, aligned with Fontdevila and Grek's study (2020), organisations with responsibilities for delivering on the SDG indicators can be seen to be grappling to reconcile participatory, bottom-up approaches for accountability in education with the more globally dominant performance-based, top-down approaches. All respondents implied accountability is something complex, necessarily involving the participation and buy-in of actors at all levels of policy, if it is to be meaningful. Local politics around gender was seen as

something which affects accountability processes, and power dynamics in aid relationships can be a complicating factor in setting particular processes and agendas in stone and stymying the development of others.

So, what are the opportunities, if any, for moving towards greater agreement on a more participatory and democratic model of accountability? Studies from the wider education field suggest some cause for optimism. Fontdevila and Grek (2020) identify friction at UIS caused by the 'double responsibility' of reconciling both top-down and bottom-up approaches but also argue that this this tension may actually provide an opportune moment for contributing to the debate about how data is constructed and used. Similarly, Selwyn (2018, 740), reviewing recent scholarship on datafication and accountability in education, reflects on the prospects for 'thinking otherwise', and suggests that rather than protesting the increasing reliance on digital data, we need to think about how it might be 're-appropriated for more democratic, publicly minded purposes'. Smith and Benavot (2019) argue for the importance of 'structured democratic voice' in accountability in education, with more involvement from civil society and the public, as a key factor for sustained and substantial improvements in education. Lessons could be learnt from attempts in other areas of policy to form alternative measurement frameworks through participatory methods, with the aim of improving public discussion and holding authorities to account, for example, the UK's Equality and Human Rights Commissions 'Equality Measurement Framework' (Burchardt and Vizard 2011), and the Women's Capabilities Index (Greco, Skordis-Worrall, and Mills 2018).

We can see a similar opportunity in the policy field of gender and education for developing a more democratic, discursive and transformatory approach to accountability for gender equality in education. For those interested in a more substantive and participatory approach to gender equality in education, there is certainly a possibility for moving beyond the critique of 'datafication', and prospects for positively harnessing this trend.

No examples of this in existing practice were offered in the interviews. Nevertheless, theoretical work on more comprehensive measures of gender equality which could transform accountability processes, such as the work undertaken by the AGEE project, argue that such indicators need to go beyond parity to capture information about gender inequalities in school experiences and institutional processes, as well as norms and values around gender in wider systems (Unterhalter, Longlands, and Peppin Vaughan 2022). The additional measures suggested by our participants (see Box 2) support this point, highlighting aspects of education where gender inequalities can exist, yet are largely not taken into account in current targets and indicators. At the same time, data can only be improved through deeper and more equitable engagement with the diverse range of groups involved in gender and girls' education at all levels, in order to be able to meaningfully measure and address gender inequalities in education and hold people to account for progress towards gender equality in education. When reflecting on prospects for change, however, many respondents spoke of lack of resources and political will around reforming indicators. They identified civil society as important to include, both for unique insights into the nature of gender inequalities in education on the ground, and also to play a crucial role in lobbying for new and alternative forms of data collection. Therefore, it is not necessarily just the inadequacy of data that is the problem, but how it is produced, interpreted and used (or abused). Ongoing work by the AGEE project aims to help address these issues with its focus on using democratic,

collaborative and participatory methods to develop, refine and put into practice an alternative measurement framework for gender equality in education that moves beyond gender parity and incorporates some of the suggested additional measures.

While some feminist scholars have raised concerns over the framings and increased emphasis on measurement under the SDGs (Fuentes and Cookson 2020; Liebowitz and Zwingel 2014; Razavi 2019),

there have also been successful research projects in recent years which demonstrate that quantitative research can be combined with feminist research approaches to promote good practice. Examples include those on violence against women and UNDP's gender indices (Beneria and Permanyer 2010; Leung et al. 2019). Although similar work in the field of gender and education is sparse, as this paper argues, there is evidence that there are significant opportunities and that a more bottom-up, transformative and democratic approach to data and accountability is possible.

## Notes

1. For example, looking specifically at the gender targets in the MDGs, Antrobus (2006) argued that rather than helping progress, they operated in practice as 'major distraction gimmicks', with inadequate targets and simplistic quantifications taking attention away from the more substantive agenda of the Beijing Platform for Action.
2. Although the SDGs contain a greater focus on accountability than previous global objectives, such as the MDGs, through the 'follow up and review' mechanism UN Resolution A/RES/71/313.
3. AGEE (Accountability for Gender Equality in Education) is an innovative project to develop an indicator framework for gender equality in education through critical participatory discussion at local, national, and international levels. The AGEE project is an equal partnership between universities in Malawi, South Africa and the UK, working with selected UN agencies, bilateral donors and a range of civil society organisations. AGEE has been funded by the ESRC and the FCDO. For further details see: https://www.gendereddata.org/.

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