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System level indicators for an education Sustainable Development Goal

Exploring possibilities for the teachers target

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Sustainable Post-2015 Education Agenda

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Learning for Sustainable Futures: Making the Connections

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Abstract

The new education development goal will include a target for teachers and a target for the learning environment. Suggested indicators for the teacher target are measures of input, typically the number and proportion of trained teachers. Quantitative input or outcomes indicators account for education quality at the level of individual learners and hence, seem compatible with a rights-based approach to quality. However, a look back at rights-based frameworks for conceptualising quality developed within the EFA movements, shows that these also included system level processes and policies that create an enabling context for classroom level teaching and learning. Achieving sustainable development calls for collective and not just individual learning. Outcome and input indicators give valuable information on equality but will not on their own ensure learning contributes to sustainable futures.

This paper explores the potential of qualitative conduct indicators that specify conditions for policy or system level functions focusing on the targets that relate to teacher professionalism and teaching and learning processes. It is argued the teachers target within the Education Sustainable Development Goal constructs teachers as malleable inputs, whose behaviours can be changed through pre-service or one-off input of teaching. System level indicators could focus on creating conditions to develop a shared professionalism that is sustained by teachers themselves. Such indicators would specify criteria used to evaluate teachers' work and freedoms in ways that are compatible with the right to education and education for sustainable development. System level indicators, however, are not without their difficulties. They can be used to limit possibilities for education systems in line with the current ideologies of powerful actors, as is seen in the World Bank's SABER programme. We take a look at the approach taken by OECD's TALIS before proposing the form that indicators for teaching and learning processes and professional teachers may take.

Note

This paper is extracted from a longer paper, *Indicators for All? Monitoring Quality and Equity for a Broad and Bold Post-2015 Global Education Agenda*, commissioned by the Open Society Foundations that set out to reclaim rights-based thinking on for the current proposals for the education Sustainable Development Goal (SDG).

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1. Introduction

The UN appears to be poised to set a goal for education that looks beyond access to target the outcomes of schooling. At the time of writing, the most significant proposals are for an education and lifelong learning goal that emphasizes quality as well as access:

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. (Open Working Group for Sustainable Development Goals 2014: 13)

Yet, looking back over 25 years of a global Education for All (EFA) agenda, it is clear that the conceptualization of quality has narrowed from a broad vision that sought to consider all aspects of an education system to a narrow focus on learning outcomes.

This paper sets out to reclaim rights-based thinking on quality and apply it to the contemporary task of identifying indicators for a post-2015 education Sustainable Development Goal (SDG). Much debate on post-2015 targets has assumed the logic of results-based management. In education, this means that attention has focused on learning outcomes and how to measure them (Center for Universal Education at Brookings 2011; Learning Metrics Task Force 2013; UNICEF/UNESCO 2013). Within a rights-based approach, however, quality is about more than access and outcomes. It inheres in processes that respect and promote children's rights within education. This brings into focus the system level structures that shape processes and enable learning as well as the environment of schools and classrooms and what happens in these spaces.

Much of the discussion in this paper focuses on developing qualitative indicators for teachers and process of teaching and learning, that may supplement the 'teachers' target and the 'learning environment' target (see Part II: Looking forward: rights-based indicators for the teachers and teaching and learning processes – p. 11). These targets need to be understood with reference to the education for sustainable development (ESD) target, which links the education goal to the overarching purpose of all 17 SDGs.

Setting out a bold and broad agenda for quality at the global level risks subsuming to the global level decision-making on policy that is best conducted at the national level. Global agendas have repeatedly been critiqued for imposing one-size fits all solutions on diverse education systems that have evolved for diverse socio-cultural and political contexts. In so doing, they fail to support public and professional debate at national and sub-national levels that sustains and expands quality and our understanding of quality. Hence, in this paper, we set out to formulate indicators that can be adapted and elaborated at national and sub-national levels (Ahmed 2014).

The paper is organized into two parts. The first part looks back at experience with EFA goals and targets and understandings of quality within the EFA movement to arrive at a framework for formulating indicators. Suggestions for post-2015 indicators relating to teacher professionalism are set out in the second part of the paper. The paper concludes by arguing that indicators should be used not just to monitor a pre-determined agenda but to support stakeholders across all levels to create and implement a broad and bold agenda for education.

Part I: Looking back: indicators and quality within EFA

The education goal and its targets within the Open Working Group proposal look much more like the EFA goals than the education MDG. The EFA goals did not include a goal for teachers, this section therefore focuses on conceptual work towards a rights-based framework and metrics for quality. Shifting conceptualizations of quality within EFA led to the construction of conceptual frameworks. Little work, however, was done towards formulating targets and indicators that would turn these into evaluative frameworks. A framework put forward by Pigozzi (2008) is given particular attention in this section because the distinction it makes between the level of the learner and the level of the system. In order to assess the possible unintended consequences of system indicators, we overview programmes conducted by the Organization for Economic Cooperation and Development (OECD) to develop indicators for cross-national comparison. A key concern here is whether system level indicators would do off the space for national adaptation and elaboration of indicators. Section 3 concludes with a framework for designing indicators.

Conceptualizing and targeting quality in EFA

Rights-based understandings of quality

The EFA quality goal and the Dakar Framework for Action

The perils of rapid expansion were recognized in 2000 and the sixth EFA goal was intended to send out a clear message that expansion has to go hand-in-hand with quality improvement. However, in doing so it conflated quality improvement with the achievement of measurable learning outcomes:

Improving every aspect of the quality of education, and ensuring their excellence so that recognized and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills. (World Education Forum 2000: 17)

The Dakar Framework for Action refers to quality in terms of processes – “what takes place in classrooms and other learning environments” – and benefits to the learner:

A quality education is one that satisfies basic learning needs, and enriches the lives of learners and their overall experience of living. (World Education Forum 2000: 17)

Eight process and input factors are associated with a good quality education:

- (1) healthy, well-nourished and motivated students;
- (2) well-trained teachers and active learning techniques;
- (3) adequate facilities and learning materials;
- (4) a relevant curriculum that can be taught and learned in a local language and builds upon the knowledge and experience of the teachers and learners;
- (5) an environment that not only encourages learning but is welcoming, gender-sensitive, healthy and safe;
- (6) a clear definition and accurate assessment of learning outcomes, including knowledge, skills, attitudes and values;
- (7) participatory governance and management; and

(8) respect for and engagement with local communities and cultures.

(World Education Forum 2000: 17)

Rights-based quality frameworks

Between 2000 and 2008, rights-based organizations suggested frameworks for conceptualizing quality based on the principles enshrined in the Convention on the Rights of the Child that replicated some of the eight factors in Dakar. UNICEF's "five key elements that affect the quality of learning" (UNICEF 2008) borrowed from a list published by the GCE (GCE 2002) and orientated it towards education for girls. Outcomes was just one of five principles for judging education quality, the others related to children's readiness for learning, the learning environment, content and processes (see Figure 1). So whilst, teachers did not feature, processes of teaching and learning were included.

Figure 1. Five key elements that affect education quality

1. What students bring to learning. What experiences does the learner bring to school, and what particular challenges does she face? Has she been affected by emergencies, abuse, daily labour or AIDS? Has she had a positive, gender-sensitive early childhood experience within her family, her community and her preschool? How different is the language of her home from the language of her school? Has she been sufficiently oriented to the rhythm of schooling?
 2. Environment. Is the learning environment healthy, safe, protective, stimulating and gender-sensitive?
 3. Content of education. Are the curriculum and materials relevant? Do they impart basic skills, especially in literacy and numeracy? Do they promote life skills and knowledge areas such as gender, health, nutrition, AIDS prevention, peace, or other national and local priorities? How does the content of curriculum and learning materials include or exclude girls?
 4. Processes. Are teachers using child-centred teaching approaches? Do their assessments facilitate learning and reduce disparities? Are classrooms and schools well-managed? Are the methods of teaching, learning and support – whether from supervisors, teachers, parents or communities – enhancing or undermining girls' achievement?
 5. Outcomes. What outcomes of basic education do we expect for girls? How can we document how well girls are learning and how well the curriculum furthers their future growth? Learning outcomes should be linked to national goals for education and should promote positive participation in society.
- (UNICEF 2008)

More recently, the Beyond2015 campaign provided a definition of education quality based on a review of several key documents published by rights-based organizations, including the Delors Report (Delors *et al.* 1996), the Dakar Framework for Action, the 2005 EFA GMR, the work of UNICEF and GCE. The review emphasized cultural and value-based outcomes from education less readily measurable than skills and knowledge:

Quality education, therefore, builds knowledge, capabilities and life skills and values, and develops the creative, social and emotional capabilities of learners. It fosters broad cognitive and personal development, including critical and higher order thinking, problem-solving, self-discipline, and can support active citizenship, leadership and more. Quality education must also be non-discriminatory; equality is in itself a key component of quality education. (Beyond2015 2013: 11)

The authors also noted that consistent attention was paid across the rights-based literature to three systemic elements of a quality education: teachers and teaching; curriculum and content; and the learning environment. It called for qualified, skilled teachers who are knowledgeable with respect to both their subject area and pedagogy, including learning assessment. It stated that a comprehensible, relevant and meaningful curriculum should be inclusive, promote learners' rights, make use of children's mother tongue and include play, sport and creative activities as well as life skills. "Learning environment" in this review referred to school infrastructure and facilities.

Hence, within the EFA movement an understanding was developed by rights-based organisations of a quality education as one that generates outcomes beyond literacy and numeracy, which benefit learners throughout their lives and the societies in which they live. For individuals, instrumental benefits include basic learning needs, particularly skills in literacy and numeracy, but stretch much further. A quality education builds a broad range of knowledge, skills and values that encompass the cognitive, social, emotional and creative domains. It develops capabilities for contributing towards national development goals and positive participation in society, including leadership and citizenship skills, knowledge and skills related to gender awareness, health, nutrition, peace and respect for the culture of others. These outcomes are realized through classroom and school processes that are directly experienced by the learner, processes that recognize and respect what the learner brings – her socio-cultural background, identity and prior knowledge; that engage with the learner's community; that ensure the learner is well-nourished and ready to learn; that create a safe and healthy learning environment for girls and boys; and processes that are equitable. These processes are enabled through a series of system level inputs and processes: adequate physical infrastructure; well-trained qualified teachers, relevant curriculum and learning materials, participatory governance and management, and accurate assessment of learning.

Within the EFA movement, therefore, there existed a broad and bold vision for education quality. The new education SDG has the potential expand this agenda further through integrating it with the sustainable development agenda (Barrett forthcoming). However, the imperative to find measurable indicators risks cropping the agenda reducing it to numerical targets for enrolment and measurable learning outcomes; less measurable outcomes of knowledge, skills, values and attitudes for ESD and peace/citizenship; and inputs of infrastructure and teachers.

Defining system level indicators

Whilst much work has been done that defines a broad rights-based framing of quality, less work has been done to construct a system of indicators for monitoring quality. Pigozzi (2008), former Director of the Division for Education Quality at UNESCO, went the furthest in seeking to develop a set of indicators for quality derived from a rights-based framework. Her framework revolves around learning as the heart of the educational endeavor but identifies two levels of organisation that enable learning. The first level, the level of the learner, closely resembles the UNICEF framework in

Figure 1. However, a second level, that of the learning system, is wrapped around this, also with five dimensions:

- Structures management and administration to support learning
- Implements relevant and appropriate policies
- Promotes the establishment of legislation supportive to learning
- Restructures resources for learning
- Measures learning outcomes (Pigozzi 2008)

Pigozzi goes on to suggest targets and indicators, which she terms “indicators” and “measures,” respectively. Many of her “measures” indicate what is to be measured without identifying data sources. For both the level of the learner and the level of the system, indicators are a mix of quantifiable outcome and qualitative conduct indicators. The latter relate to actions or policies taken towards achieving a target. For example, measures for the dimension “seeks out the learner” include disaggregated Net Enrolment Rates (NER) (outcome) and “affirmative actions in place for the hard to reach” (Pigozzi, 2008: 13) (conduct). At the system level, taking “Restructures resources for learning” as an example, the suggested measures:

Figure 2 Indicators and measures for “restructures resources for learning” (Pigozzi 2008: 14)

Indicators	Measures
Human resources	<ul style="list-style-type: none"> • Sufficient, qualified teachers at each level and subject • Systems in place for development of education professionals
Time resources	<ul style="list-style-type: none"> • Length of school year • Teacher time allocated for preparation • Time on task for teaching
Financial resources	<ul style="list-style-type: none"> • Appropriate % of GDP on different levels of education • Unit costs • Equitable allocation of resources across income levels and geographic spread

Some proposals generated by the post-2015 debate include system level conduct indicators. For example, GCE (2014) suggests a finance target indicator: “Development of a fully costed national education plan and a financing strategy” (GCE 2014: 5). The Post-2015 Education Indicators TAG (2014) suggest “nine years of free and compulsory basic education in legal/institutional frameworks” as an indicator for the basic education target. However, system level indicators have not been developed systematically across the targets.

Langford (2012) notes that conduct indicators can set out an action-oriented agenda that focuses on steps to be taken, rather than a compliance agenda that constantly looks backwards at what has been achieved so far. Hence, they can enhance the contribution development goals make to planning. However, putting in place policies does not ensure their implementation, as seen, for example, with policies prohibiting corporal punishment across a number of sub-Saharan African countries. Langford suggests four circumstances under which a conduct indicator might be used:

- where there is consensus that a particular intervention is a necessary and largely sufficient condition for achieving an outcome

- the target is derived or aligned with international standards or obligations concerned with conduct
- outcome indicators are less robust than conduct indicators
- an outcome indicator can only be interpreted with the use of a conduct indicator (Langford 2012: 24)

Pigozzi's index of quality is a long way from providing a full set of indicators that can be used as part of a global monitoring architecture. However, it is significant in taking seriously the view represented in the Dakar Framework for Action that teaching and learning is enabled by education systems and taking a first step in developing indicators for those systems.

In summary, three main lessons can be drawn from Pigozzi's work and other rights-based frameworks for education quality. First, monitoring of quality needs to ask searching questions of the system as well as learner level. Second, devising indicators that address the system level is far from easy. Third, conduct indicators have a role to play in monitoring quality.

Problems with system level indicators

OECD programmes have arguably taken the lead in designing system level indicators for the purpose of cross-national comparison. The definition of system level indicators entails considerable challenges, the scale of which is, for example, indicated by the logistical and procedural efforts in OECD programmes to ensure "cross-culturally valid" data (see OECD Technical Reports published by, for example, the PISA and TALIS programmes). Yet, the issue of cultural bias remains one of the most heavily criticized aspects of OECD programmes. The critique suggests that despite the claims made to objectivity, policy recommendations emanating from OECD programmes are based on a normative developmentalism, which disregards local, national and regional diversity in institutional arrangements as well as the fact that education systems are embedded in socio-cultural environments with distinctive traditions, norms and practices (Alexander 2000; Goldstein 2004; Nardi 2008).

In recent years, the World Bank has shown considerable interest in education systems (World Bank 2011). Its Systems Approach for Better Education Results (SABER) programme is intended to provide a set of benchmarks for assessing education systems. Initial work on this has focused on benchmarking policies, with recommendations suggesting a single direction of travel. The World Bank's (2011) Education Strategy and SABER have both been critiqued for promoting neoliberal policies in education (Robertson 2012; Robertson *et al.* 2012; Verger *et al.* 2012). Critics point out that the recommendations for decentralisation and liberalisation of the education sector stand in contradiction to the strong centralised planning that characterizes governance in countries such as South Korea, Singapore and Cuba, which have improved equity and quality.

The settlement of a global educational policy field in recent decades has also involved the rise of a new group of for-profit policy actors that have issued high-profile reports. In this respect, the McKinsey reports (Barber & Mourshed 2007, Mourshed *et al.* 2010) and Pearson's Learning Curve project (The Economist Intelligence Unit 2014) stand out as amongst the most influential. These reports are prone to critique even more than the OECD programmes due to their endorsement of one-size fits all policy solutions (Morris in press). On this basis, Coffield (2012) argues that the models proposed in the McKinsey reports are unsophisticated, impracticable and undemocratic.

The logic that underpins all these approaches to systems benchmarking is still one of results-based management that defines quality in terms of outcomes. Indicators are justified on the basis of their association with improved learning outcomes as measured through performance in standardized tests and ultimately in terms of the assumed association with improved national competitiveness within the global economy. These assumptions are distinct from the logic of a rights-based perspective. As demonstrated above, within human rights perspectives outcomes are just one dimension of quality and processes and inputs have intrinsic value for enacting rights within education, independent of associated outcomes. Indeed, the distinction between processes and outcomes dissolves when outcomes such as attitudes and skills for contributing to peaceful societies are considered (McCowan 2013).

Nonetheless, the critique of benchmarking within the work of OECD and the World Bank and the McKinsey reports has pertinence for the use of system level indicators within a global monitoring framework. It demonstrates that systems level indicators, just like measures of learning outcomes, can work to diminish the agenda for education quality. Indeed, the very definition of indicators as a driver for education reform is likely to have constitutive effects in the realms of culture and political life (Dahler-Larsen 2012). The stakes are raised in this respect when system level indicators are to be negotiated and defined at the international and global level.

The sections below will explore the potential of system level indicators to supplement learner level indicators within a rights-based post-2015 agenda that sets a floor and not a ceiling for education quality (Ahmed 2014). However, given the critiques of existing systems level indicators, there is a need to proceed with caution. Candidate indicators should be assiduously assessed according to their potential to support context-sensitive problem solving at the national and local level by allowing for adaptation and a variety of approaches within an overarching rights-based framework. The next section, therefore, sets out some questions to guide the assessment of indicators.

A framework for designing indicators

To conclude Part I, we take the rights-based vision for education quality together with the distinctions between levels and types of indicators presented to start constructing a framework for designing indicators (see figure 3). The table starts with outcomes indicators that are explicitly linked to the overarching sustainable development agenda, consistent with the UN conceptualization of sustainable development as having four dimensions – social, economic, environmental and economic. Having set out what education should achieve, the table moves onto processes that are consistent with these outcomes. We adopt here the position, that ends and means in education should be continuous or harmonious (McCowan 2013). The list of processes is not supposed to be illustrative and is not exhaustive. At this stage, we do not formulate indicators but simply match up some of the characteristics identified with a quality education within rights-based literature with the different types of indicator discussed. We also suggest whether indicators can be set at the international or national level. Most indicators set at the international level will require adaptation and elaboration for the local level. This also applies to outcomes indicators because the sustainable development benefits of education are by nature situated and cannot be defined with precision at a universal level. The processes through which indicators are developed across levels should be consistent with principles of participatory governance. Participatory formulation of national and sub-national indicators will be easier if international indicators are communicable and salient.

Figure 3. A framework for designing indicators

Level of system	Level of learner	Types of indicator <i>Set at international or national level?</i>
OUTCOMES		
<p>Curriculum aims to develop knowledge, skills, values and attitudes that enable learners to contribute to sustainable development, as set out in the 16 other SDGs.</p> <p>e.g. improved nutrition and sustainable agriculture; empowerment of women and girls; peaceful and inclusive societies; sustainable economic growth; conservation of ecosystems; combat climate change</p>	<p>Social dimension - Knowledge and skills for participating in civil society – literacy, numeracy, leadership, knowledge skills, values and attitudes for responsible citizenship, including emotional skills.</p> <p>Economic dimension – knowledge and skills for employment and productive work that contributes to sustainable development.</p> <p>Cultural dimension – participating in artistic, cultural (including sports) and intellectual life of society.</p> <p>Environmental dimension – knowledge, skills, values and attitudes for environmental conservation and restoration.</p>	<p>conduct – policy <i>International, elaborate at national level</i></p> <p>outcomes – quantitative <i>Mainly at regional or national level because benefits of education are situated. Aggregated monitoring of some limited learning outcomes may be possible, e.g. literacy and numeracy, attitudes.</i></p> <p>processes – qualitative (because some outcomes are continuous with processes) <i>National or sub-national, as benefits related to SD are situated</i></p>
PROCESSES		
<p>Participatory governance, including open debates of educational issues in the public media</p> <p>Accurate assessment of learning that constructively supports learning</p> <p>Ethical codes for school governance and teachers</p>	<p>Learners are enrolled into appropriate education programme</p> <p>Ensure learner is well-nourished and ready to learn</p> <p>Recognize and respect learners’ language, culture,</p>	<p>conduct – policy <i>International, elaborate at national level</i></p> <p>processes – qualitative <i>International, elaborate at national level where it is possible to more</i></p>

Level of system	Level of learner	Types of indicator <i>Set at international or national level?</i>
<p>consistent with the rights of the child effectively implemented</p> <p>Transparent mechanisms for monitoring that ensure accountability (upwards and downwards) between levels of the system</p>	<p>skills and knowledge.</p> <p>Engage with the learner’s community, including different forms of knowledge in the community</p> <p>Maintain safe and healthy learning environments for girls and boys</p> <p>Formative assessment</p> <p>Appropriate pedagogies</p> <p>Participatory school management</p>	<p><i>precisely define aspirations for processes</i></p>
INPUTS		
<p>Trained, qualified teachers</p> <p>Adequate financing</p>	<p>Numbers of teachers</p> <p>Infrastructure of schools</p> <p>Relevant learning materials suitable to level and language skills of learner</p> <p>Free school meals as needed</p> <p>Clean drinking water and sanitation</p>	<p>Processes - qualitative (e.g. quality of teacher education) <i>International, elaborate at national level</i></p> <p>Input – quantitative <i>International level. Will need to be adapted according to capacity to collect and analyze data at national level and baseline from which a country is starting.</i></p>

Part II: Looking forward: rights-based indicators for the teachers and teaching and learning processes

The second part of this paper focuses on indicators for one of the post-2015 targets, the teachers' target. Within the OWG proposal this is expressed as:

By 2030, increase by [x] per cent the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing States. (Open Working Group for Sustainable Development Goals 2014: 17)

This is more limited and readily measurable than the Muscat proposal, in which the corresponding target was expressed as:

All governments ensure that all learners are taught by qualified, professional-trained, motivated and well-supported teachers. (Global Education for All Meeting 2014: 3)

The goal for “inclusive and equitable quality education” has no target that directly references processes of teaching and learning but rather follows an input (teacher supply; school building infrastructure) and output (relevant learning outcomes). However, the rather long-winded ESD target has profound implications for processes:

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 (Open Working Group for Sustainable Development Goals 2014: 17)

It is argued in this part of the paper that the OWG proposal constructs teachers as inputs for quality, moulded through training, rather than professionals, who are agentic in improving quality. Policy research is briefly overviewed to suggest what may be possible for monitoring and learning, with particular attention given to the *Teaching and Learning International Survey* (TALIS) conducted by the OECD. The next section proposes the form that indicators could take that go further than looking at teacher training to consider the system level conditions that enable teaching and learning processes compatible with the ambition of the ESD target, that enable teacher professionalism, conceived as a characteristic of the body of teachers rather than individuals needed for innovative practice. It is argued that input indicators for teachers should be supplemented by qualitative system level indicators focused on the criteria for evaluating their work, enabling conditions for growing teacher professionalism across the teaching body and decent living and working conditions.

Indicators for teachers and educational processes

In the lead up to 2015, two different genres of literature have highlighted the importance of teachers to education quality – reports and research written or commissioned by rights-based advocacy organizations and large scale comparative studies oriented towards informing policy.

Teachers within the rights-based tradition

Proposals for a target on teachers as part of an education SDG address a key concern of rights-based organizations with educational processes and outcomes. The inclusion of quality targets is also consistent with comprehensive understandings of quality in the Dakar Framework and Jomtien Declaration. However, this is the first time an attempt has been made to back quality targets with measurable indicators (Rose 2015) and there is still some way to go to formulate indicators. The EFA Steering Committee TAG (2014) only suggested input indicators for teachers, namely the percentage qualified to national standards and the percentage with pedagogical training. It also recommended disaggregation by gender. UNESCO Institute of Statistics already collects data on teacher qualifications and the 2014 EFA GMR (UNESCO 2014) highlights the challenge teacher supply presents for expanding enrolments rapidly from a low base. Teacher supply creates an intergenerational link between the quality of education systems present and future, and thus relates to sustainability. Expanding an education system faster than its capacity to supply teachers can depress quality, leading to drop-out and grade repetition and postponing the point at which universal access is achieved, as seen in the first decade of universal primary education in Malawi and Uganda (Lewin 2009). A teacher target therefore may work to slow down the rate of educational expansion, ensuring that expansion is achieved alongside quality improvement and universal basic education is achieved more quickly.

The Global Campaign for Education (GCE) has made teachers one of its main themes its proposal (GCE 2014) for post-2015 targets and indicators a target that not only specifies an expectation for teachers to be qualified but articulates criteria for teacher training:

By 2025, all children are taught by qualified teachers who have training in pedagogy, rights and gender sensitivity, in an accessible and safe environment.
(GCE 2014: 3)

There are two suggested indicators for the teacher component of this target, the first of which combines a quantitative input with qualitative conduct components:

Percentage of children taught by trained and qualified teachers, with clear and transparent national benchmarks for qualified teacher status which includes training in pedagogy, rights and gender sensitivity. (GCE 2014: 3)

The conduct component of this indicator guards against the possibility of expanding numbers of qualified teachers by reducing the rigour of training (for example, by lowering entry requirements or shortening the duration of training). Implementation of a conduct indicators depends on the exercise of professional judgment. How that judgment is exercised, and by who, is critical in determining how such an indicator would work in practice to improve quality. Much depends on establishing a shared understanding of benchmarks for pedagogy, rights and gender sensitivity. Such qualitative indicators pose a challenge to monitoring, certainly at the global scale. However, they may be viewed as an opportunity for implementation as they can be used to stimulate professional debate through which understandings of complex subjective concepts are developed and disseminated. It matters, therefore, that debate is conducted not just amongst international experts meeting in metropolitan centres but also at different levels within education systems, including within teacher education institutions.

Proposals for a target for teachers put forward by GCE, the Global Education for All Meeting and the Open Working Group all constructed teachers as an input and assumed an unproblematic relationship between training and the practice of qualified teachers. This, however, is not borne out by education research. Small scale qualitative research looking at the practice of what are often rather loosely termed “learner-centred practices” across diverse contexts has shown how the efforts of teachers, particularly newly trained teachers, to implement change is constrained by various factors, including their own preconceptions about teaching and learning, the “hidden curriculum” of teacher education colleges, the school environment (large class size, absence of materials or little preparation time), the conservatism of more experienced and influential colleagues, school culture and unreformed inspection practices (Lewin & Stuart 2003; Vavrus 2009; Mtika & Gates 2010; Sriprakash 2010; Schweisfurth 2013). In short, teacher training does not work on its own to change practices and needs to be backed by appropriate resources and school-based supervision to support teachers to change their practice. Professionalisation, as Johnson *et al.* (2000: 190) observe, “is essentially a systemic issue rather than an individual one.” However, the nearest that the post-2015 proposals come to recognizing this is Muscat’s reference to “well-supported” teachers (Global EFA Meeting 2014: 3). Indeed, the OWG proposal does not mention the word ‘professional’ at all in relation to teachers.

It is worth noting that the phrase “teacher training” is used in the post-2015 proposals rather than “teacher education.” The latter is taken to signify that teaching is a profession, entrance to which is dependent on higher education qualifications. In many low-income countries, qualified teacher status is a tertiary level qualification at a lower academic level than a university degree, delivered through specialist teacher colleges. The use of the phrase “training” may be construed as a signal that the teachers’ target is directed towards low rather than high income countries. “Training” can further be interpreted as suggesting teacher preparation involves acquiring technical skills rather than professional expertise and judgment. This view of teacher preparation, however, overlooks the complexity of teaching as a socio-culturally embedded activity that involves engagement with children and young people from diverse backgrounds and with diverse abilities. In the context of international development initiatives, teacher training may also discursively reinforce a view that knowledge and expertise flows from Western metropolitan centres out to lower income countries and rural areas. This runs counter to arguments regarding the role of indigenous knowledge, knowledge networks and social learning that underpin sustainable development (Bredlid 2013; Sterling 2001).

Using the term “professional development” rather than “training” opens up pathways for implementing the teachers’ target, which capitalise on knowledge and expertise within the teaching force. Professional development is ongoing and can be more or less formal, ranging from collegial interactions and mentoring relationships to university degrees. Whilst training is typically a self-contained systematic programme of activity rolled out by a government institution or external body, professional development may be developed and led by practicing teachers within or outside of schools. Professional associations, for example of subject specialist teachers, bring together individuals with the greatest enthusiasm for innovating and extending expertise; these individuals can be agentic in developing ideas and disseminating them through the teaching population. So whilst “professional teachers” may seem a higher bar to achieve than “trained teachers” it distributes the responsibility away from centres of administration to the teaching body as a whole,

tapping into the most widely distributed resource for improving teaching and learning - teachers themselves (Samoff *et al.* 2011).

Some research by rights-based organizations has looked at the living and working conditions of teachers. VSO (2002), for example, studied teacher motivation across three countries. The research on teachers' living conditions and salaries (e.g. Marphatia *et al.* 2007) is an important strand to this work, highlighting teachers' working and living conditions as human rights issues in themselves, whilst having profound implications for educational quality. Studies remain relatively small scale compared to Large Scale Educational Assessments (LSEAs) (see below) and whilst they identify and expand understanding of a key issue, more work is needed to identify potential data sources. System level data may be fairly straightforward to collect, but analysis depends on professional judgment. What levels of remuneration mean in practice for the lifestyles and livelihoods of teachers serving in diverse contexts and their professional conduct and practices, however, is harder to ascertain and may continue to be the subject of small scale qualitative research (e.g. Tanaka 2010; Buckler 2014; Tao 2014). Policy research on teachers, by comparison, particularly in OECD countries, is already capturing data on teachers and proposing benchmarks.

Teachers within policy research

The other set of literature that places a primacy on teachers as determinants of education quality is large-scale policy-oriented research. Since the beginning of the 2000s, the teaching profession has become a focus for global policy debate and, arguably, the emphasis on the role of teachers for educational reform has never been more pronounced than now (Connell 2009; Robertson 2012). OECD with the programme *Teaching and Learning International Survey* (TALIS), the World Bank with *SABER-Teachers*, and UNESCO are the main policy actors in the international arena, each with their distinctive profile. OECD's large-scale international survey TALIS is the most comprehensive in terms of collecting detailed cross-national data (Robertson 2012; Robertson 2013). We briefly review this study in order to identify the kind of data that could potentially become available for a broader range of countries over the next 15 years. Two rounds of the survey have been conducted so far, in 2008 and 2013, with 24 and 34 middle and high-income countries or economies participating respectively. It is anticipated that future rounds will include more countries, OECD members as well as non-members.

TALIS basically consists of two questionnaires, one for teachers and one for school heads in lower secondary schools. In addition to this primary target group, for TALIS 2013 participant countries were given the option to include primary and upper secondary school teachers and heads, and to link TALIS data to PISA. Linking the two data sets makes it possible to explore associations between TALIS variables and student learning outcomes. The policy foci in TALIS are determined by a joint priority-rating exercise by participating OECD member countries (see figure 4).

What is immediately apparent is that TALIS draws on the school effectiveness narrative that it shares with PISA. This places the teaching profession and the quality of teaching at the crux of education reform and economic growth. The key argument is that teachers as “the front-line workers” play a crucial role in the modernization of education systems because, within schools, “teacher- and teaching-related factors are the most important factors that influence student learning” (OECD 2014: 32).

At the same time, TALIS serves the purpose of bringing “the voice of teachers” into the debate. Symptomatically, the global teacher union Education International has endorsed and been involved in the survey programme. However, it would seem that the voice of teachers is circumscribed and framed by the overarching narrative of school effectiveness and student performance as assessed in PISA. This means that some of the critical points concerning insensitivity towards the distinctiveness of socio-cultural environments can also be raised against TALIS. On this basis, Sobe (2013) associates TALIS with the construction of a simplistic and reductive “global reality of teacher professionalism” driven by standardization, codification and identification of educational “best practices.”

Figure 4. TALIS policy themes

TALIS 2008 – three main themes	TALIS 2013 – five main themes
School leadership	School leadership, including new indicators on distributed or team leadership
Appraisal of and feedback to teachers	Appraisal of and feedback to teachers
Teaching practices, beliefs and attitudes	Teachers’ pedagogical beliefs, attitudes and teaching practices, including new indicators on the profile of student assessment practices
+ Professional development of teachers as “an important theme” due to synergies with three main themes and European Union interest	Teacher training, including professional development and new indicators on initial teacher education
+ Aspects of other themes: school climate, division of working time and job satisfaction	Teachers’ reported feelings of self-efficacy, their job satisfaction and the climate in the schools and classrooms in which they work

(OECD 2009; OECD 2014)

In relation to the questions that we should ask of indicators of quality, TALIS is clearly a major research exercise based on a sophisticated conceptual framework. TALIS thus offers a wealth of insights into the state and nature of the teaching profession and teachers’ thinking of their practices and status in society. In terms of putting a focus on teachers’ work conditions, self-efficacy and status, TALIS indicators have much to offer. However, to what extent TALIS is compatible with a rights-based view of education remains unexplored although its basis in school effectiveness is distinct from a rights-based view. Since TALIS has so far only been conducted twice, we know little about how it contributes towards improving education quality. The involvement of civil society, represented by teacher unions and business organizations, in the conception and implementation of TALIS is a positive. However, in future, the impact and direction of the programme on national policy is likely to be determined by its relationship to PISA in future rounds, leading again with a notion of quality as performance in standardized tests in a limited number of subject areas.

The McKinsey reports (Barber & Mourshed 2007; Mourshed *et al.* 2010) and “Learning Curve” study (The Economist Intelligence Unit 2014), discussed earlier, have also surfed on the wave of global political attention directed towards the teaching profession. Indeed, they have arguably been instrumental in directing political gaze towards teachers. Private consultancies and corporate philanthropists have gained considerable political influence despite having little in-house educational expertise (Ball 2012). As mentioned above, their research has been critiqued by scholars for promoting one size fits all solutions that do not recognize the cultural and political specificity of education systems (Coffield 2012; Crossley 2014; Morris 2015). Some have further observed the financial or political interest these organizations, which operate beyond national spaces of representation and democratic accountability, have in expanding their influence in global education governance (Ball 2012; Robertson *et al.* 2012). What is worth noting is the presence and influence of these organizations within the field of education internationally, their active promotion of the learning outcomes agenda, their involvement in policy research scrutinizing the role of teachers, and their participation in the post-2015 education debates (Robertson 2012; McLean 2013).

Regional LSEAs can also and in some cases do collect data from teachers. SACMEQ includes a teacher questionnaire for Grade 6 teachers of literacy and mathematics, and also administers the pupil tests to teachers. The teacher questionnaire elicits information on classroom processes, teacher qualifications and job satisfaction. However, associations between teaching processes and learning outcomes are elusive and tend to be weak. There are several reasons why this may be. Some analyses suggest that for schools serving low socio-economic groups, resources have a stronger association with learning outcomes than process variables (Smith 2011). In any context, children's learning outcomes are influenced by teaching processes encountered over their whole school career and cross-sectional surveys only capture data from their current teacher. Fine-grained qualitative research on teachers shows that teachers' espoused values and the claims they make about their practice can diverge from observed practices (e.g. Osborn *et al.* 2000; Schweisfurth 2002). This is a reminder of Alexander's (2008) assertion that it is not teachers *per se* that lie at the heart of quality but what they *do*. Teachers' responses to questionnaires, therefore, like learners' performance in standardized tests, should be regarded as a proxy indicator that gives only partial information on quality. Despite their growing sophistication and yield of large complex data sets, large-scale surveys remain blunt instruments for researching teaching and learning processes.

Indicators for quality teaching and learning processes –a focus on supervision

Alexander (2008; 2015) has argued that teaching and learning processes, or pedagogy, lie at the heart of education quality. It is neither feasible nor desirable to monitor classroom processes at the global level. This is properly the work of the system level, carried out through its inspectorate and/or other forms of school supervision, supplemented by institutional evaluation processes such as school self-evaluation (Carlson 2009). There are also examples of community involvement in assessing the quality of schools and holding teachers to account for school quality (Prew & Quaigrain 2010). Global monitoring could focus on the system level functions of regulating and monitoring quality. Together with curriculum and assessment, this would directly address the terms by which teachers' work is judged and evaluated. A more feasible strategy therefore may be to invest in supporting education systems to develop their own systems of school supervision. Whilst, criteria for quality in processes of teaching and learning are negotiated within these systems, this process of

negotiation should involve engagement with the right to education, as defined in UN conventions, and the sustainable development agenda set out in the UN development goals.

There are different models of school supervision. These have evolved over time, are embedded within the structures of education systems, are contingent on assumptions and models of teacher education, and work in concert with internal and local school evaluation processes (de Grauwe 2008). Influencing the forms and organisation of school supervision is certainly well beyond the remit and purpose of international targets. The OWG targets, particularly the ESD target, however, do suggest criteria for judging quality. An indicator for monitoring processes of teaching and learning therefore would need to be open enough to accommodate these diverse models of school supervision, whilst indicating criteria for evaluating quality. Formulating indicators at the national level, should therefore involve a process of debate, within which the international agenda is just one point of reference.

School supervision is crucial to education quality. Research evidence from under-resourced education systems shows that, together with poor remuneration and perceived lack of social status, neglect by over-stretched district authorities is a cause of demoralisation amongst teachers, most especially in rural schools (VSO 2002; Barrett 2005; Mpokosa & Ndarahutse 2008). A small isolated community of teachers working in difficult conditions with the minimum of teaching and learning resources can slip into poor professional or, sometimes, unprofessional and unethical practices (Anangisyé & Barrett 2005). They are denied the rewards of a career path if access to in-service training and promotion or transfer to another school is controlled by local education officials, with whom they have little contact. In some countries, it is not uncommon for local education offices and/or school inspectors to be so stripped of funding that they have no vehicles or petrol for vehicles (de Grauwe 2001) making it almost impossible to reach all the schools in a large rural district.

A relentless focus on the level of the individual learner has led to a neglect of the level of the system, both within the logic of results-based management and rights-based approaches, has diverted attention away from the level of the systems. Whilst the World Bank (2011) is promoting a systems approach it still judges quality in terms of the learners' performance in assessment. Hence, strategies such as performance-related pay are proposed for controlling the quality of teaching. Unsurprisingly, policy benchmarking within SABER is underpinned by a neoliberal ideology that prioritizes the economic dimension of development, which is then associated with learners' performance in assessments. Scholars with a greater concern for the environmental and social dimensions of sustainable development have characterized development as social learning (Morgan 2009; Scott & Gough 2010). This would call for indicators for the ESD target that recognize collective learning and the social benefits to educations.

In figure 5, we suggest a combining quantitative input and qualitative process indicators for teacher supervision that mimic the structure of the GCE proposal for a teachers' indicator. Thus a quantitative input indicator that sets expectations for the frequency of contacts between a school and its supervisors (e.g. all schools are visited regularly by an external supervisor, with particular attention to schools in rural and remote locations) works in combination with a qualitative process indicator that sets expectations for the criteria use to evaluate schools (e.g. schools are evaluated according to transparent criteria consistent with the right to education and with the principles of

education for sustainable development). Benchmarks for the measure of frequency of supervision would need to be set at the national level as it will depend on the structure and organisation of school supervision. Education systems can collect robust data on frequency of school visits, evaluations or inspections, which can be readily disaggregated by school location. Such an indicator may work to ensure that distribution of resources for school supervision units takes into account the logistic and other challenges of the locality they serve. So, for example, inspectors serving rural districts with dispersed populations have transport suitable to the terrain.

The qualitative component may be outlined at the international level but would need to be elaborated at the national level so as to be contextually relevant. It is not readily measurable or robust but intended to prompt scrutiny and debate over the criteria by which teachers' work is judged. Within a school supervision framework, criteria used to judge education quality extend beyond classroom teaching and learning to school processes more generally, including the hidden or informal curriculum that regulates student behavior, school environment and resources, and the participation of students and local community members in school decision-making processes. Theorists have highlighted these as being essential domains of concern for both the right to education and education for sustainable development but well beyond the focus of the learning outcomes agenda. The effectiveness of school inspections or evaluations to improve quality depends on the information being communicated in a clear way to teachers and the communities served by schools. Hence, indicator could be constructed that availability and accessibility of school information.

Many countries already have functioning supervision systems and expectations for professional development that have been developed over decades drawing on extensive professional experience and national benchmarks should be able to build on the discourse already associated with these systems. We have argued that the international agenda should be a point of reference for deciding quality criteria within school supervision systems, it is important to be mindful that the business of re-contextualising a complex set of indicators international indicators for local use can divert time and resource. It may also open the door for external technical experts to influence local decision-making to the extent that ownership and contextual relevance are undermined (Elgert & Krueger 2012).

Indicators for teacher quality

Other indicators appearing in figure 5 relate to the conditions for teacher professionalism. These include the quality of teacher education, having a representative teaching force consistent with the overarching goal of "inclusive and equitable quality education" for all and living and working conditions for teachers and the freedoms and means to establish professional associations. Taken together the indicators are more elaborate and contain far more qualitative components than the wording of the targets in the OWG proposal, which is directed towards identifying readily measurable targets. They do stand as a set of considerations for more discursive forms of global monitoring, similar to that already consistently demonstrated within the thematic chapters of the EFA GMR. At national and sub-national levels they may serve as suggestions that inform discussion of more ambitious and elaborated frameworks for monitoring progress towards inclusive and equitable quality education for all, although each requires further elaboration to address local priorities and imperatives.

Figure 5. Indicators for professional teachers and teaching and learning processes

Indicator	Notes	Type of indicator
OWG Target 4.7a: Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all		
schools are evaluated according to transparent criteria consistent with the right to education and with the principles of education for sustainable development	<i>Mechanisms and institutions for achieving these determined at national level</i> <i>Links to ESD target</i>	<ul style="list-style-type: none"> • System level • Process • Qualitative
Information on school quality is publicly available and accessible to parents and the local community.		
Representatives of parents and local community participate in decision making and the life of the school.		
OEG Target 4.7c: increase by [x] per cent the supply of qualified teachers		
Every learner is in a class with a teacher to learner ratio greater than one to fifty.	<i>Lower threshold that may be raised at national/local levels.</i>	<ul style="list-style-type: none"> • Learner level • Input • Quantitative
Every learner has a teacher, who engages in regular continuing professional development.	<i>Benchmarks for frequency of individual and school-based CPD should be set within education systems.</i>	
Teachers are drawn from all sections of society, including the most marginalized groups.	<i>Quantitative benchmarks for a representative teaching force to be set at national and sub-national level.</i>	<ul style="list-style-type: none"> • System level • Input • Quantitative
Teacher education and professional development promotes the right to education and education for sustainable development.	<i>Links to ESD target</i>	<ul style="list-style-type: none"> • System level • Process • Qualitative
Teachers' remuneration, living and working conditions meet the criteria of decent life and work.	<i>Links to Goal 8 – "Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all" (OWG, p. 17).</i>	<ul style="list-style-type: none"> • System level • Input • Qualitative
Teachers have the freedom and resources to form professional associations for the purpose of improving teaching and learning, maintaining ethical standards and protecting their rights as employees.		<ul style="list-style-type: none"> • System level • Process • Qualitative

Conclusion: re-visioning global monitoring

Human rights treaties and 25 years of work exploring what they mean for education quality have already created a bold and broad agenda for education quality and equity. But it is an agenda that is at risk of being cropped “back to basics” by the current preoccupation with learning outcomes and a narrow results-based approach to monitoring. If education is take the broader sustainable development agenda seriously it will have to expand rather than reduce of the broad rights-based EFA vision for quality.

The discussion in this paper is marked by a wariness of over-using technologies of quantification that assume the authority of objectivity or neutral measurement at the global level. Deployed within a context where global actors are able to gain increasing influence over education governance, indicators that are narrowly concerned with quantifiable measures of learning can close off possibilities for education quality and pathways for improving educational processes. A key question for us is whether it is possible to formulate indicators that transform global monitoring into a process that supports and enables stakeholders at all levels to find ways to transform educational processes in line with the right to education and in ways that contribute to sustainable development more broadly. TALIS has shown how consultative process can inform the design of indicators within an international survey that includes groups representing the interests of teachers.

Finally, we recognize that no set of indicators can ensure quality and equity. It therefore matters how indicators are implemented. A more complex agenda, particularly one that includes process indicators that are subject to professional judgment, opens up opportunities for international technical experts, well-versed in the reasoning that emanates from the world’s cosmopolitan centres, to re-contextualize indicators for national and local actors, who then have a limited sense of ownership of the indicators. Indicators will work more constructively to create education quality consistent with the demands of ESD if they are re-negotiated, elaborated and re-vision-ed within education systems through processes of constructive debate that evolve understandings of education quality. This demands relentless reflexivity, including on the part of international experts. Such reflexivity is too often squeezed out within the culture of performativity and results-based management that dominates much of the development field internationally. Just as education systems should create the conditions for teachers as professionals to be active in creating as well as implementing a vision for education for sustainable development, so global monitoring should be aimed at creating the conditions that support policy-makers and education professionals to contribute towards an expansive and expanding agenda for quality and equity.

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