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The role of education in the sustainable development agenda: Empowering a learning society for sustainability through quality education

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1 Education as a catalyst for change and sustainable development

“Education is key to the global integrated framework of sustainable development goals. Education is at the heart of our efforts both to adapt to change and to transform the world within which we live. A quality basic education is the necessary foundation for learning throughout life in a complex and rapidly changing world” (Irina Bokova, Director General of The United Nations Educational, Scientific and Cultural Organization (UNESCO), in UNESCO 2015: 3).

Education has a long history as an international priority, and the right to education was first enshrined in the *Universal Declaration of Human Rights* in 1948. Improving education and ensuring all people are afforded a high standard of education will be reaffirmed as a key global goal of development under the post-2015 development agenda. The recent synthesis report of the UNSG on the post-2015 development agenda stated that “high-quality education and life-long learning” and the capacity of teachers are key factors in empowering youth as a “globally connected engine for change” (UNSG, 2014: 21-2). In fact, many people around the world believe that education is the most important goal for this agenda. At *My World 2015*, individuals can rank their top priorities for the agenda. Over 7.6 million people have voted, and of the sixteen potential priorities, provision of good education is consistently ranked as the highest priority across all cohorts and has received prioritisation by over two-thirds of all voters.¹

It is clear that education will remain important in the post-2015 development agenda, but how best to integrate and frame education's role in strengthening sustainable development must be further explored. To effectively promote these aspects, an international development goal on education must continue to support increases in both educational access and attainment. This goal must also be ambitious in its efforts to achieve essential improvements to the quality of education in order to catalyse the transformative learning needed for realising a sustainable future for all. Additionally, education serves as a means of implementation (MOI) that cuts across all of the SDGs and will support the overall achievement of the post-2015 development agenda, for which education is recognised as having one of the highest long-term returns on investment of all development goals.

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This chapter examines the current proposal for SDG 4 on education and the Education 2030 agenda with a critical perspective on how they may best galvanise the achievement of sustainable development in an integrated and inclusive manner. Section 1 highlights the benefits that education has for human development and sustainable development, and section 2 reviews the two parallel tracks in education related to these historical distinctions and argues that these two tracks must be harmonised within the post-2015 development agenda for overall effectiveness. Section 3 considers how education could be operationalised under the SDGs and considers the key MOI for the education sector. The chapter concludes by recommending two ways in which SDG 4 and the Education 2030 agenda may be strengthened to support achievement of a learning society for sustainability. First, an enhanced understanding on the importance of quality education – elucidated in the framing of education for sustainable development – should be integrated throughout the implementation of SDG 4 and the Education 2030 agenda. Second, an appreciation of education as a cross-cutting means of implementation for advancing achievement across the post-2015 development agenda should be further coordinated under the SDGs framework and its implementation.

1.1 Education's value in human development

The International Commission on Education for the Twenty-first Century highlighted the importance of education in supporting human development. "The Commission does not see education as a miracle cure or a magic formula opening the door to a world in which all ideals will be attained, but as one of the *principal means available to foster a deeper and more harmonious form of human development* and thereby to reduce poverty, exclusion, ignorance, oppression and war" (Delors, 1996: 11). Education serves as an important means of implementation for sustainable human development due to the number of positive benefits it brings across the development goals.

Quality improvements in education provide an even more significant boost to economic growth compared to simply increasing attainment

Improvements in education clearly aid in poverty reduction and economic growth. At an individual level, each additional year of schooling strengthens individual earning potential by an average of 10% (Polacheck, 2007). At a national level, an increase in average school attainment by one year has a demonstrated correlation to a 0.58% increase in national GDP per capita growth rates. However, quality improvements in education provide an even more significant boost to economic growth compared to simply increasing attainment. A one standard deviation increase in average test scores (using international student achievement tests) is associated with a 2% higher GDP per capita growth rate (Hanushek & Woessmann, 2008).

The benefits that education improvements have across the development goals are most notable in those countries where achievement of these goals is most lacking. One study estimated that a 12% reduction in global poverty could be achieved merely by ensuring that all children in low-income countries leave school with basic reading skills – this is the equivalent of lifting 171 million people out of poverty (EFA Global Monitoring Report 2011: 8). The OECD projected that lower and middle income countries could enjoy a 28% higher GDP per year over the next 80 years by achieving basic education and basic skill levels for all youth by 2030 (Hanushek and Woessmann 2015: 61).

social equity. Education has a more positive influence on health than either income or employment (Lochner, 2010). Attainment of primary education leads to a 50% reduction in child mortality rates, and educated mothers are generally more responsive to children's health needs (EFA Global Monitoring Report, 2011; Mattos, MacKinnon, & Boorse, 2012). Strong links between increased education and improvements in civic participation and political stability have also been demonstrated (Center for Global Development, 2006). For example, the World Bank reports that a 10% increase in secondary school enrolment rates is correlated with a 3% reduction in the risk of civil war (Collier and Sambanis 2005: 34). Education for women boosts agricultural productivity; and in Sub-Saharan Africa if all women attained a primary education, agricultural yields could increase by 25% (IFPRI 2005).

1.2 Education's value in sustainable development

Education is also an important means of implementation for sustainable development, and it provides an important construct where the perceived tensions between economic, social and environmental development can be harmonised and integrated into a single concept and pursuit of sustainable well-being for all. This goes beyond education being named as a single SDG, thus requiring better understanding of education's role as a cross-cutting means of implementation to strengthen achievements across many other goals. "The SDGs call on governments to take a fresh look at the content of education. Education will be the lynchpin of a sustainable development agenda whose success relies on individuals, throughout their lifetime, acquiring relevant knowledge and developing positive attitudes to address global challenges" (EFA Global Monitoring Report 2015: 294). A broadened understanding of education practiced across formal, non-formal and informal education creates a strong mechanism for supporting social learning/change, which enables synergies between education and other critical elements of an enabling environment including lifelong learning, professional career development, community learning, and public participation.

Jacques Delors and the International Commission on Education for the Twenty-first Century were quite clear on the importance of education as a highly influential process of social framing:

“There is a need to rethink and broaden the notion of lifelong education. Not only must it adapt to changes in the nature of work, but it must also constitute a continuous process of forming whole human beings – their knowledge and aptitudes, as well as the critical faculty and the ability to act. It should enable people to develop awareness of themselves and their environment and encourage them to play their social role at work and in the community” Delors (1996: 21).

With its ultimate goal being societies competent in the principles of sustainability and striving to live within the carrying capacity of the planet, implementation of education for sustainable development should be culturally-relevant, locally appropriate, occurring across all levels and sectors of society.

As a social process, ESD can aid in engendering a culture respectful to the principles of sustainable development. ESD includes a large number of concepts, theories, policy prescripts and practical methods/tools aimed at reshaping education systems to address the socio-economic and ecological dimensions of sustainable development (Lenglet, Fadeeva, & Mochizuki, 2010). ESD promotes educational reform towards quality education to enhance students’ lifelong learning, critical reflexivity, cooperative learning relationships, and holistic interpretations of knowledge. “Quality education is about what and how people learn, its relevance to today’s world and global challenges, and its influence on people’s choices. Many now agree, quality education for sustainable development reinforces people’s sense of responsibility as global citizens and better prepares them for the world they will inherit” (Buckler and Creech 2014: 28). ESD addresses important thematic topics such as climate change and sustainable consumption, but it also advances value and skill-based learning. Applying action-oriented and problem-based learning, ESD supports critical examination of worldviews to enable learners to achieve sustainable living through practical, daily actions and

develop their capacities to become effective agents of social change.

This chapter argues that education, and ESD specifically, should be viewed as an essential MOI for achieving necessary capacity development and human/social capital to realise the transformative targets of the SDGs. Carneiro notes that, "Education systems are a source of *human capital* (Becker), *cultural capital* (Bourdieu), and *social capital* (Putnam)" (1996: 202). For example, Lutz, Muttarak, and Striessnig (2014) argue that investment in education can be more effective for increasing a country's adaptive capacity to climate change than investments in physical infrastructures, especially in situations where the impacts of climate change remain highly uncertain. For sustainable consumption, education helps individuals to better understand the environmental and social impacts of their daily lifestyle choices. Education also supports cooperative learning and critical examination which leads to collective reimagining of lifestyle practices and identification of sustainable solutions (UNEP, 2015).

2 Harmonising education agendas through an integrated sustainable development approach

Over the past two decades, the agendas for human development and sustainable development have run in parallel to each other. The SDGs provide the first substantial attempt by the global community to reconcile and integrate these processes, and the situation for education is a prime example of this effort (see Figure 5.1). The importance of education for human development led to several international initiatives over the past few decades aimed at improving educational access and attainment globally. Reaffirming the Jomtien Declaration (1990) on Education for All (EFA), the World Education Conference in 2000 set targets to achieve universal free and compulsory primary education, halve global illiteracy rates, eliminate gender disparities in education, and improve early childhood care and education by 2015. This aligned directly with the objectives of the UN Millennium Declaration (2000), Millennium Development Goal (MDG) 2 – to achieve universal primary education by

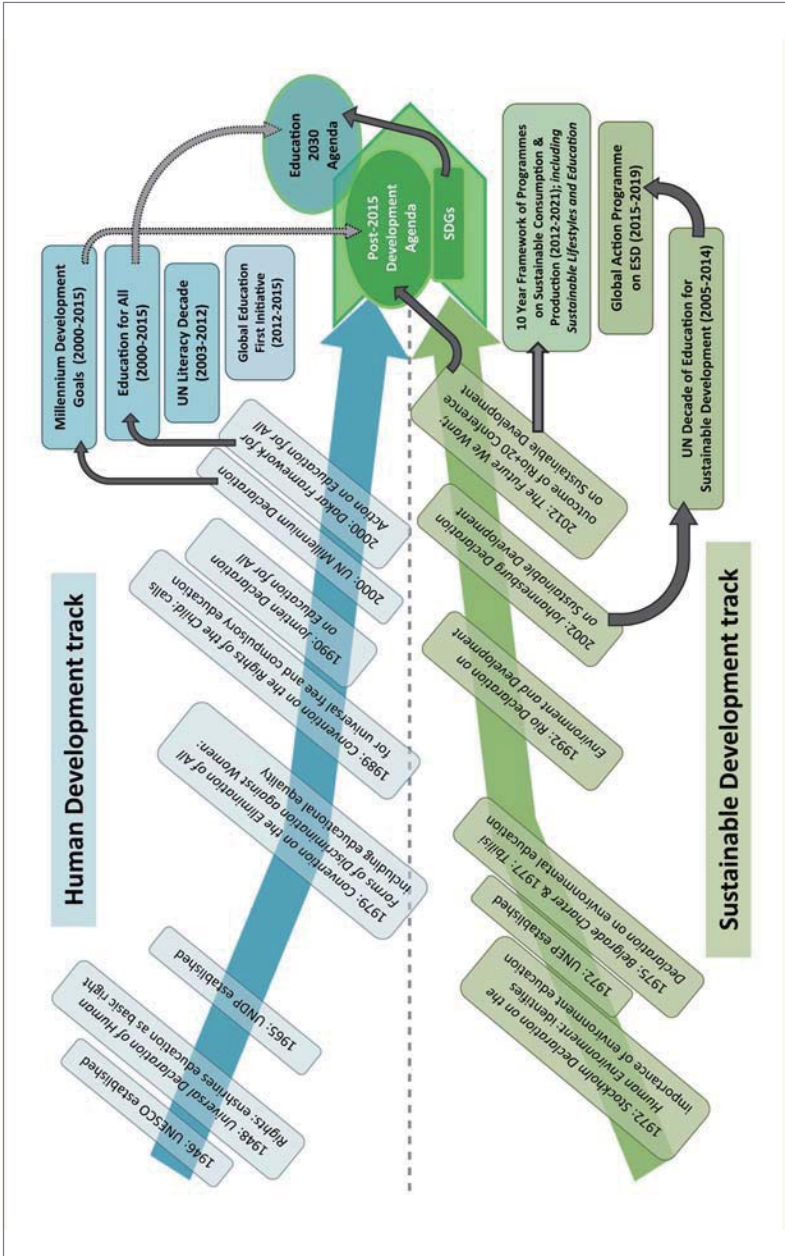


Figure 5.1 Two parallel development tracks and their influence on education

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2015, and MDG 3 – to eliminate gender disparity at all education levels. In support of these goals, the UN Literacy Decade also ran in parallel from 2003 to 2012.

The goals of MDG 2, MDG 3, and the Dakar Framework for Action on EFA detail the quantitative educational improvements that the international community strived to achieve over the past fifteen years, especially in regards to educational access, attainment and equity. These goals also call for qualitative improvements in education, but difficulties in qualitative measurement saw these aspects neglected during subsequent target setting processes. The UN Decade of Education for Sustainable Development (DESD, 2005-2014) aimed to advance these educational improvements by incorporating the principles, practices and values of sustainable development into all facets of education and learning. With other goal-setting processes focused on quantitative educational improvements, DESD was intended to enhance qualitative reforms to education systems and "...promotes a set of underlying values, relational processes and behavioural outcomes, which should characterize learning in all circumstances" (UNESCO, 2005).

ESD evolved from environmental education (EE), and added to it an integrated sustainable development perspective with stronger focus on social and economic dimensions. EE came to international prominence in the *Stockholm Declaration* in 1972 and was further elaborated in the *Belgrade Charter* in 1975 and the *Tbilisi Declaration* in 1977. However, since the *Rio Declaration on Environment and Development* in 1992 recognised the importance of education as a primary mechanism for achieving sustainable development, there has been a gradual blending of EE and ESD. The World Summit of Sustainable Development in 2002 and the subsequent agreement on DESD further propelled ESD and 'learning for a sustainable world' as an overarching objective of education.

In addition to the two major agendas of EFA and ESD that ran in parallel over most of the past fifteen years, there are several other important international education initiatives that are influencing the future education agenda. For example, the United Nations Secretary General (UNSG) launched the Global Education First Initiative (GEFI) in 2012 to renew and strengthen international efforts to reach global education goals. This is notable as the first time that the UNSG has endorsed education as a UN priority – directly recognising the significance education plays in meeting all human development goals in a sustainable and inclusive manner. The priorities of GEFI are threefold: 1) to put every child in school; 2) to

improve the quality of learning; and 3) to foster global citizenship (UNSG, 2012). In response, UNESCO identified Global Citizenship Education (GCED) as one of its strategic areas of work from 2014 to 2017. Another complimentary initiative is the Sustainable Lifestyle and Education (SLE) programme, part of the UN's ten year framework of programmes on sustainable consumption and production (10YFP on SCP) – agreed at the Rio+20 Conference on Sustainable Development (2012) as a global action framework to accelerate a shift towards SCP. The SLE programme framework identifies three work areas: 1) developing and replicating sustainable lifestyles; 2) educating for sustainable lifestyles (ESL); and 3) transforming current and shaping future generations' lifestyles. Under work area 2, priorities include mainstreaming sustainable lifestyles into formal education; making ESL a focus in all learning environments (i.e. formal, non-formal and informal); and empowering youth for sustainable lifestyles (UNEP, 2014).

2.1 Reviewing current achievements

The MDGs and EFA goals spurred considerable efforts to improve education globally, and significant progress has occurred. Primary education enrolment and achievement rates increased, especially in developing countries where enrolment rose from 82% in 1999 to 90% in 2010. More children now attend school than ever before, and in sub-Saharan Africa alone where net enrolment rates rose from 58% to 76%, this represents 43 million more children in school. More girls are also attending school, and gender parity is nearly achieved with the enrolment ratio between girls and boys rising from 91 in 1999 to 97 in 2010 in developing countries (United Nations, 2012). The combination of debt relief and funding initiatives allowed many developing countries to achieve free primary school education. Development aid supported infrastructure and capacity development for education, particularly for building schools and training teachers (CIDA, 2013; McArthur, 2013).

However, many challenges remain. Progress in enrolment has slowed in recent years, and a serious barrier remains to reach the most disadvantaged children. In fact, 24% of children of primary school age in sub-Saharan Africa and 7% in Southern Asia were not in school as of 2010 (United Nations, 2012). The priority on educational access ignored the content of learning and teacher competency, and the fact remains that many students finish school without basic competency in numeracy or literacy (McArthur, 2013; UNESCO & UNICEF, 2013; United Nations,

2013). The present deficit of 1.9 million teachers globally and the capacity gaps created by under-trained teachers, particularly in developing countries, continue to contribute to poor learning outcomes (UNESCO & UNICEF, 2013). Gender disparities continue to exist in some regions. The total share of girls among out-of-school children is 65% in Western Asia and 79% in Northern Africa (United Nations, 2012). While rapid population growth in some regions overstretchers limited resources, a worrisome decline in aid for education development has appeared in recent years (UNESCO Institute for Statistics, 2013).

Under the framework of DESD, notable improvements were also achieved. Many countries implemented ESD related policies and measures, and a better understanding of the value of ESD was generally elaborated. However, the reformative aspects of ESD related to qualitative improvements for education systems remain least addressed in practice and deserve attention in the post-2015 development agenda. Efforts to properly monitor and evaluate the benefits and achievements from ESD remain inconsistent. Additionally, the need to further institutionalise ESD and better align the education and sustainable development paths remains a challenge (Buckler & Creech, 2014).

2.2 The future of education and the SDGs

The importance and prioritisation of education within the post-2015 development agenda is well supported with the clear indication that SDG 4 will provide a standalone goal with the aim to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all” (Kutesa 2015: 12). SDG 4 provides a basis for the educational improvements the global community will strive for under the post-2015 development agenda and includes seven main targets and three additional targets on means of implementation. This is further strengthened by the general agreement on the “Education 2030 Agenda” and the draft Framework for Action – Education 2030 (UNESCO, 2015a) at the World Education Forum 2015 (19-22 May 2015) which provides a detailed plan of implementation for SDG 4 and specifies the monitoring and reporting mechanisms for this goal. Additionally, the Education 2030 agenda is structured to incorporate the existing trends and initiatives in international education (identified earlier in this section) into one common agenda.

With the strong consensus and support mechanisms for SDG 4 agreed at the World Education Forum 2015, preparations for formalising this goal are generally progressing well. Nonetheless, a few critical questions need to be furthered addressed regarding how education will be aligned meaningfully with the post-2015 Development Agenda. These include:

1. What mechanisms will be put in place to achieve effective financing for education?
2. How can effective monitoring and reporting on SDG 4 be ensured to capture both the qualitative and transformative attributes of education?
3. How can advancement of “quality education” be actualised as a key priority of SDG 4?
4. What efforts are needed to empower education as a cross-cutting means of implementation for sustainable development (in addition to being a specific, standalone goal)?
5. How to once-and-for-all align the two parallel purposes of education, one for improving human development and the other for advancing sustainable development, into a single integrated paradigm?

3 Operationalising education within the post-2015 development agenda

“We further reaffirm that full access to quality education at all levels is an essential condition for achieving sustainable development, poverty eradication, gender equality and women’s empowerment, as well as human development, for the attainment of the internationally agreed development goals, including the Millennium Development Goals, and for the full participation of both women and men, in particular young people.”

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SDG 4 (see Annex 2 for the current proposed text of the SDGs) complements and replicates many of the previous targets laid out in MDG 2 including those relating to access, attainment, literacy and gender equality. However, SDG 4 also presents a more holistic and aspirational role for education within the future development agenda through the inclusion of stronger targets on early childhood care and education, relevant skills for decent jobs, and education for sustainable development, sustainable lifestyles, and global citizenship (Kutesa, 2015). Additionally, strong emphasis is placed on the quality of education. This is not entirely new as EFA goal 6 addressed the quality of education. In subsequent target setting for EFA goal 6 though, the need for quantifiable measurements meant that the survival rate until grade 5 was used as a proxy indicator thus weakening the focus on quality improvements in actual implementation. SDG 4's stronger emphasis on quality education will hopefully ensure its inclusion within future implementation plans, but the identification of appropriate indicators to accelerate quality education improvements still remains elusive within the proposed Framework for Action (UNESCO, 2015a).

Concerns have been expressed about whether some of the targets are too ambitious and others outright unrealistic or non-relevant. For example, Target 4.1 is deemed unrealistic to meet in the proposed timeframe due to the addition of achieving free, universal secondary education by 2030 when the past fifteen years of effort on MDG 2 and EFA goal 2 to achieve free, universal primary education stalled half way through this period and still 58 million children today do not receive primary education (EFA Global Monitoring Report, 2015). In fact, it is suggested that at current rates of progress, universal lower secondary education will not be achieved in lower and middle income countries until after 2050 and universal upper secondary education will not be achieved within this century (EFA Global Monitoring Report 2015: 282, 286). Thus, achieving Target 4.1's aspirational milestone of free, universal secondary education by 2030 would require doing so within only 17% of the projected business-as-usual timeline.

The EFA Global Monitoring Report 2015 also warns that a set of overly ambitious and unrealistic targets will hinder countries in developing effective implementation strategies and potentially lead to a situation where resources become too divided to achieve meaningful progress in any single target. This mirrors Ban Ki-Moon's statement that, "[The Agenda] should include concrete goals together with measurable and *achievable* targets Countries must not be overly burdened by an

agenda *that creates additional challenges* rather than alleviate burdens” (UNSG 2014: 17-8). Returning to Target 4.1, this calls for universal completion of secondary education and for its free provision. However, in Target 4.2 on pre-primary education, the call is only to ensure access for all, but does not require it to be free or compulsory. The EFA Global Monitoring Report 2015 is critical about the lack of inclusiveness and equitability in the differences between these goals, “Some of the proposed targets promote forms or levels of education that especially benefit the most advantaged students, possibly leading to inequitable public spending” (2015: 286).

It is intriguing that even though SDG 4 is a sustainable development goal, the term ‘sustainable’ is used for the first and only time in Target 4.7. Without playing down the importance of the other targets, Target 4.7 is the only outcome oriented target explicitly linked to sustainable development, therefore capturing the transformative aspiration of the post-2015 development agenda (EFA Global Monitoring Report 2015: 289-90). This target could be further strengthened by drawing on the lessons learned during DESD that beyond including sustainable development topics in the curriculum, ESD also provides an effective reformative approach for education aimed at driving quality education improvements. “ESD is influencing learning pedagogies and advancing approaches that help learners to ask questions, analyze, think critically and make decisions in collaboration with others. Innovative approaches to learning are contributing to changes in knowledge and understanding among learners that will support sustainable development in the future” (Buckler and Creech 2014: 30).

3.1 The MOI for education

The MOI for education are the aspects that will facilitate an enabling environment and foster successful implementation of SDG 4 and the Education 2030 agenda. Implementation of SDG 4 should occur from global to local scales, engage participatory and transformative partnerships, and involve multi-stakeholder collaboration (UNSG, 2014). National, regional and global mechanisms will need to be developed to respond to these MOI.

The proposed SDG Targets 4.a, 4.b, and 4.c are expressed as MOI: a) safe and effective learning environments, b) educational scholarships for developing countries to increase enrolment in higher education, and c)

strengthening the supply of qualified teachers. Additionally, SDG 17 details nineteen MOI that apply across all SDGs. These include finance, technology, capacity building, trade, policy and institutional coherence, multi-stakeholder partnerships, and monitoring and evaluation (Kutesa, 2015). The draft Framework for Action – Education 2030 (UNESCO, 2015a) also elaborates four implementation modalities: 1) governance, accountability and partnerships; 2) effective coordination; 3) monitoring, reporting and evaluation for evidence-based policies; and 4) financing. This last list will structure the discussion below on MOI and their alignment with the education goal, and this will first address financing as it is an enabling requirement for achieving all other MOI (see Table 5.1 for an overall summary of MOI recommendations).

3.1.1 Financing education

The broad ranging and ambitious nature of the 169 targets proposed by the Open Working Group on the SDGs means that a significant amount of financing will need to be mobilised through a diversity of mechanisms and sources (UNEP Inquiry, 2015), or both the practicality of achieving these goals and the credibility of the international agreements on the

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SDGs will be severely undermined. Therefore, effective financing will be critical in achieving quality education that is inclusive and equitable, provides lifelong learning, and also strengthens sustainable development. Optimising all financial streams “domestic public, domestic private, international public, international private and blended finance” and coordinating them for greatest impact is critical (UNSG 2014: 26).

Traditional sources for education funding are: government (domestic) resources; foreign aid (from multilateral and bilateral donors/agencies); and private

entities (households, individuals, private organisations) (EFA Global

Monitoring Report, 2012). It is commonly agreed that governments, through public expenditure, hold the key mechanism and main responsibility for long-term, sustainable financing of education. In 2006, the High Level Group on EFA recommended that governmental spending between 4-6% of GNP and 15-20% of public expenditure should be allocated to education. These benchmarks were then included in the Muscat Agreement on Global Education for All Meeting in May 2014 (EFA Global Monitoring Report 2015: 241). However, in lower and middle income countries where large investments are still required for overall infrastructure improvements in education systems, international aid and financing remains crucial. If all countries achieved these ambitious targets for domestic spending on education, it is projected that there would still be a shortfall of USD 22 billion annually over the next fifteen years to achieve the basic education targets by 2030 (EFA Global Monitoring Report 2015: 296).

Historically, a general trend of increasing finance for basic education by governments was observed over the past decade until recently. Between 1999 and 2010, domestic spending on education increased in 63% of countries and accounted for larger shares of total national income. Notable increases were recorded in many lower income countries (EFA Global Monitoring Report, 2012). Despite these significant increases in education financing through domestic resource mobilisation, considerable shortfalls in the required resources to achieve EFA persist in many lower and middle income countries. Moreover, the education sector only experienced limited success in mobilising additional international financial support under the MDGs (EFA Global Monitoring Report, 2012).

For lower income countries where education remains significantly underfunded, the multilateral donor agencies (MLAs) are extremely important. Despite the continued flow of educational financing from some important donors², the donor base for education remains narrow, and many bilateral donors are decreasing overall funds for education (EFA Global Monitoring Report, 2015). Although multilateral aid for education increased between 2002 and 2011, the share allocated to basic education declined in favour of higher education funding, so this needs to be addressed in the future.

² World Bank, African Development Bank, Asian Development Bank, the European Commission, UNICEF and the Global Partnership for Education.

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Reviewing the distribution of country programmable aid (CPA) among five types of aid categories (i.e. water and sanitation, agriculture, health, population and reproductive health, and education), the share of aid to education that actually reaches the recipient countries is significantly lower than in other sectors. Of the total direct aid to education, only 68% of it reaches recipient countries. The main reason for this is that 25% of total direct aid to education is spent in donor countries through scholarships to support students from recipient countries to study at their universities (EFA Global Monitoring Report 2015: 273). There is actually little evidence that such scholarships help to build knowledge or teaching capacity within the expected recipient countries, and concerns have been raised that such practices may either lead to domestic brain drain or an increase in inequality for these countries (EFA Global Monitoring Report 2015: 290). Thus, the fact that SDG Target 4.b calls for an increase in such scholarships and is the only education target to specifically address bilateral and multilateral financing is troubling as it may lead to further decreases in the amounts of CPA actually reaching those countries most in need of developing the capacities of their education systems.

One of the key factors that hinders effective financing is the lack of a global aid architecture for education that coordinates donors (EFA Global Monitoring Report, 2015). To improve efficiency of financing, national education accounts have been proposed for better coordination and oversight as well as a more complete picture of education funding (Rose & Steer, 2013; Schmidt-Traub & Sachs, 2015). There are also calls to establish a Global Education Fund aiming to disburse USD 15 billion annually by 2020 which could draw on the organisational and operational experiences of the Global Partnership for Education (Schmidt-Traub & Sachs, 2015). Furthermore, financial support from the private sector could contribute significantly to achieving global education goals, although currently they account for only a fifth of the funding compared to government sources (EFA Global Monitoring Report, 2012). It is vital to explore the potential of new financing sources and to establish innovative funding approaches to fill financing gaps and strengthen how/where such aid is spent (EFA Global Monitoring Report, 2012; UNESCO, 2015a; World Bank Group, 2013). Although there is growing optimism regarding global support for education, caution should be exercised in relation to the perception that once a global fund is initiated “it would quickly attract supporters from around the world” because the “turnover rate” on investment in education is longer term and would dissuade donors who normally have expectations for quick, short-term results from investments (Sachs, 2015).

Another issue hindering educational financing at the domestic level is the substantial share of the budget that must be allocated to secure teachers' salaries and the limited funds that directly support other key elements such as textbooks and desks which determine the quality of learning the students receive. Not to detract from importance of well-paid teachers, but in many lower income countries the non-salary expenditure for

Good governance of education depends on inclusive participation of key actors and development of multi-faceted partnerships

education is less than 5%; and this is further exacerbated in a number of countries where corruption remains a major problem for effective mobilisation of resources (EFA Global Monitoring Report, 2015). Thus, appropriate national mechanisms to manage budget allocation and its effective governance are urgently required.

3.1.2 Governance, accountability and partnerships

Governments play the key role in implementation, management and financing of effective and equitable national education systems. "Governments should integrate education planning into poverty-reduction and sustainable development strategies where appropriate, and ensure that policies are aligned with their legal obligations to respect, protect and fulfil the right to education" (UNESCO 2015a: 14). Good governance of education depends on inclusive participation of key actors and development of multi-faceted partnerships, and it is the role of governments to ensure that the governance processes for education are participatory and transparent. "The main parties contributing to the success of educational reforms are, first of all, the local community, including parents, school heads and teachers; secondly, the public authorities; and thirdly, the international community. Many past failures have been due to insufficient involvement of one or more of these partners" (Delors 1996: 26). Inclusivity, participation and accountability are recommended as essential criteria for good governance of education (UNSG, 2014; UNESCO, 2015a).

Institutional factors of governance include legal mandates and legislation, but these also require effective policy coherence and coordination. Governments will need to “guide the process of contextualising and implementing the Education 2030 goals and targets” into the mandates for education (UNESCO 2015a: 14), and SDG 4 targets should be aligned with countries’ individual policies and strategies for sustainable development. Advancing education within the context of the SDGs also necessitates inter-ministerial collaboration and cross-sectoral coordination. Furthermore, streamlining the flow between policy and implementation in education requires delegation of responsibilities and authority at all levels of the policy process from national governments

Partnerships can support evidence-based policy making, practical planning and applicability, applied and relevant learning, transparency and accountability

down to individual schools and classrooms. Additional consideration on how education mandates influence practice across various sectors is needed. Formal education policies act as direct mandates for responsible public institutions, while non-formal education policies often require governments to strongly facilitate the engagement of civil society, community and private sectors (Didham & Ofei-Manu, 2012a).

Both the final monitoring reports for EFA (EFA Global Monitoring Report, 2015) and DESD (Buckler & Creech, 2014) identify multi-stakeholder partnerships as decisive for progress made and view such partnerships as vital in increasing implementation capacities of education systems. Calls have been made for the inclusion of families, communities, youth, students, and teachers in partnerships for policy development and decision making; while civil society, the private sector, foundations and the research community are identified as key actors in mainstreaming and implementing education policies (UNESCO, 2015a). These partnerships can lead to a holistic and integrated understanding of education systems and through this support evidence-based policy making, practical planning and applicability, applied and relevant learning, transparency and accountability.

Accountability is particularly important for the governance of education. It must be framed across the entire educational process – meaning it must be integrated into education governance and decision-making

structures; it must be part of the review process in education planning; and it must be a focus in the assessment of schools, teachers and student performance. In terms of governance, accountability needs to ensure that policies are properly put into action, responsibilities are fulfilled, and resources are effectively mobilised. For the management of education systems, the quality of curricula, schools, and teachers should all be benchmarked against specific criteria and qualifications. Within educational practice, mechanisms “may include accountability measurements such as practice standards and targets, value and behaviour change, ESD knowledge gain and assessment tools for monitoring and evaluation” (Didham and Ofei-Manu 2012b: 87).

3.1.3 Effective coordination

Multi-level coordination of education serves as an extension of the governance MOI. Effective coordination can ensure that policy-level goals for inclusiveness, equality, effectiveness and quality are met in the management and implementation of education. A ‘whole government’ approach is needed to ensure that what is practiced within schools and communities contributes to the development of knowledge-based societies and the necessary skills/capacities to realise sustainable well-being for all (UNESCO, 2015a). Effective coordination starts at international and regional levels to tackle common challenges and scale-up good practices. At national, sub-national, and local levels, effective coordination will ensure multi-stakeholder engagement, common mechanisms for planning, financing and evaluation, as well as appropriate implementation methodologies. Additionally, “there is need for stronger leadership, coordination and synergy within governments as regards education development and its integration into wider socio-economic development frameworks” (UNESCO, 2015a: 16). National governments must ensure effective coordination and planning from international down to local level. This is a prerequisite for successful adaptation and contextualisation of the Education 2030 agenda for their countries and for efficient mobilisation of necessary capacities and resources needed for implementation.

3.1.4 Monitoring, reporting and evaluation for evidence-based policies

Monitoring and evaluation (M&E) is a crucial MOI because it reveals achieved progress in a timely manner and enables corrective actions when results are unsatisfactory. M&E thus enables an iterative cycle for regular review and improvement of implementation. The final report of DESD highlights the need to improve M&E mechanisms as one of the main challenges for ESD and argues for a stronger effort to elucidate the causal relationship between education and sustainable development. "To date, there has been limited use of monitoring tools to assess the quality of ESD programmes, the extent of their implementation, and the ESD learning outcomes they generate. M&E must be improved to secure the evidence for continued and expanded investment in ESD, and for reflexive engagement with ESD as an emerging educational reorientation process" (Buckler and Creech 2014: 32).

M&E is essential across all SDGs, and it necessitates a massive undertaking to identify appropriate indicators, collect, manage and evaluate essential data, and ensure timely assessment so adverse results may be quickly resolved. The key purpose of M&E deserves emphasis, "to engender a process of both individual and institutional learning by creating an action-reflection cycle that supports the continual review and improvement of ... implementation and practice" (Didham and Ofei-Manu 2012b: 103). Within the Education 2030 agenda, the expertise from the EFA global monitoring mechanisms will be renewed as the Global Education Monitoring Report. National governments are to take the primary responsibility for establishing and incorporating the mechanisms for effective monitoring and accountability into their respective policy and planning strategies (UNESCO, 2015a).

With quality education improvements a key objective in learning for sustainable development, the M&E of SDG 4 is more arduous than previous education goals. This requires "a multi-dimensional approach, covering system design, inputs, contents, processes and outcomes" (UNESCO 2015b: 17). Monitoring global progress towards universal access and attainment in education is statistically straightforward (although still difficult to conduct), but assessing if education empowers societal change towards sustainability is more demanding. Lessons from DESD show a tendency "to measure inputs, such as the development of strategies, plans, coordinating mechanisms and resources, as well as

intermediate outcomes, such as changes in policy and curricula. Whether these have led to the desired changes in learning attainments or whether learners are now contributing to the sustainability of communities and nations has been difficult to assess” (Buckler and Creech 2014: 184).

This challenge requires looking beyond traditional M&E mechanisms and pursuing a strategic approach to assess the quality and performance of educational systems – not only in regards to the level of knowledge dissemination, but also in terms of the lifelong learning skills and adaptive/problem solving capacities that are individually and collectively gained. In one sense, an M&E process is inherently limited by its data collection and assessment methods because this predicates what type of information can be collected. However, in another sense the M&E process is determined by the selected targets and indicators it must report on, and this further directs actual work prioritisation and implementation as efforts are commonly aimed at demonstrating improvements only in areas which are specifically measured.

In order to understand if education is contributing to the sustainability of society, M&E processes must look beyond indicators that solely track progress on MOI, key system inputs and general access and attainment data. One useful division of indicators established during the DESD include three types of indicators (concrete examples will be given in the subsequent paragraphs):

- *Status Indicators:* assess variables that determine the position or standing of ESD in a country. Baseline indicator types belong to this category.
- *Facilitative Indicators:* assess variables that assist, support or encourage engagement with ESD. Context, process and learning indicator types are in this category.
- *Effect Indicators:* assess variables relating to initial, medium and long-term achievements during the DESD. Output, outcome, impact and performance indicators belong here (UNESCO APRBE 2007: 30).

While M&E of global development has mainly focused on status indicators because they are relatively easy to collect and evaluate, further consideration on potential facilitative and effect indicators useful in the context of SDG 4 is needed if actual learning outcomes are to be understood.

Traditional status indicators are commonly used and understood. They will naturally address the MOI themselves and institutionalised data on access and attainment. Facilitative indicators aim to capture and comprehend needed system capacities for implementing quality education. Three such essential targets allow the elaboration of clear indicators: strengthening teacher training (e.g. Target 4.c), ensuring safe and effective learning environments (e.g. Target 4.a), and improving the quality and relevance of curricula (currently there is no set target). Teachers, the direct interface between the education system and the students, are the most influential actors in ensuring that children are gaining quality education and effective learning. Ensuring all teachers reach a basic standard of training is thus essential (through pre-service qualification, in-service training and continuing professional development). Standards for teacher training can further facilitate quality education by including specific requirements (and thus also indicators) on pedagogies and teaching methodologies, holistic and interdisciplinary teaching approaches, and use of formative and summative assessment at classroom level. Safe and effective learning environments can be enhanced and schools can become models of sustainable practices if criteria, achievement targets and indicators are established for: 1) applying environmental management principles to school operations and facilities; 2) schools engaging with local communities and contextualising learning activities to address local needs and challenges; and 3) schools providing real-world and experience-based learning opportunities. The quality and relevance of curricula is reflected in: 1) application of clear learning methodologies; 2) use of progressive learning objectives (i.e. scaffolded learning); 3) use of a 'life-cycle' approach in defining skill-based education; and 4) good coverage of the knowledge-based competencies relevant to sustainable development (Didham and Ofei-Manu, 2013).

Teachers are the most influential actors in ensuring that children are gaining quality education and effective learning

Effect indicators are least reflected in the current SDG 4 text and the Framework for Action – Education 2030. International performance based assessment can provide one method to assess learning outcomes, and the proposed effort by

OECD to integrate a sustainability perspective into future PISA testing is welcomed. There are additional effect indicators that can strongly aid in achieving transformative learning for sustainability. These include:

provision of cooperative and participatory learning approaches, development of critical analysis and problem solving skills, and inclusion of values-based learning components (e.g. through global citizenship and peace education). Cooperative and participatory learning can be monitored based on: 1) the amount of time students spend on collaborative learning activities and projects; and 2) the level of student engagement in setting education syllabus, lesson plans and contents. Critical analysis and problem solving skills can be monitored based on: 1) the amount of time students spend on examining real-life problems and developing/testing solutions; and 2) the use of performance based assessment to demonstrate skill-based learning. Monitoring of values-based learning can use the cumulative amount of time spent on: 1) teaching on multi-cultural perspectives; 2) service learning and opportunities for volunteerism; and 3) capacity building for civic engagement (Didham and Ofei-Manu, 2013).

Table 5.1 Education means of implementation (MOI) and recommendations

Key Means of Implementation	Recommendations
<p>Financing</p>	<ul style="list-style-type: none"> ● Governments have key responsibility for the long-term, sustainable funding of education, and they should play the lead role in coordinating the optimisation of all financial streams. It is recommended to allocate to education 4-6% of GNP and 15-20% of public expenditures. ● International aid and financing will be crucial for meeting the large investment gap in lower and middle income countries for infrastructure improvements in education systems. ● The low level of CPA to education reaching recipient countries needs improvement. Decreasing aid allocation to basic education, in favour of higher education, raises concerns that SDG 4's wide-reaching targets will overstretch limited resources. ● Development of a Global Education Fund would facilitate a global aid architecture, better donor coordination, and improve the financing efficiency of national education accounts. ● Increases in private sector funding could significantly contribute to global education goals. ● New financing sources and innovative funding approaches should be developed to fill financing gaps and strengthen the efficacy of disbursement. ● National mechanisms for effective budget allocation and managing its governance are urgently needed to ensure that all parts of the education system receive adequate funding.

<p>Governance, Accountability and Partnerships</p>	<ul style="list-style-type: none"> • Governments play the leading role in implementation, management and financing of education systems, but good governance of education depends on the inclusive participation of key actors. • Inclusivity, participation, transparency and accountability are essential criteria for good governance. Governments should also uphold the rights of its citizens to education. • Inter-ministerial collaboration, cross-sectoral coordination and delegation of responsibilities/authority at all policy levels are needed to strengthen planning and implementation processes. • Multi-stakeholder partnerships can improve implementation capacities of education systems. • Accountability must be integrated into education governance and decision-making structures, the review process in education planning, and in the assessment of schools, teachers and student performance. The quality of curricula, schools and teachers should all be benchmarked against specific criteria and qualifications.
<p>Effective Coordination</p>	<ul style="list-style-type: none"> • Multi-level coordination should be used to extend the governance MOI into the management and implementation of education. • A 'whole government' approach in the implementation of education should be facilitated to ensure the policy goals for <i>inclusiveness, equality, effectiveness</i> and <i>quality</i> extend to schools and communities and contribute to the development of knowledge-based societies. • National governments should provide leadership to successfully adapt and contextualise the international education agenda into national strategies/plans and to mobilise the needed national capacities/resources to create enabling environments for effective implementation. • International and regional coordination can aid in tackling common challenges, scaling-up good practices, and employing appropriate implementation methodologies.

<p>Monitoring, Reporting and Evaluation For evidence based policies</p>	<ul style="list-style-type: none">● M&E should facilitate individual and institutional learning by creating a mechanism to support continual improvement of education implementation/practice by ensuring timely assessment, identification of good practices, and quick resolution of adverse results.● National governments have responsibility for establishing and incorporating effective M&E mechanisms into education policy and planning strategies.● A strategic approach to M&E needs to be developed that can assess the quality and performance of educational systems, i.e. learning outcomes, and extends beyond a focus on easy-to-quantify statistics like access and attainment.● To understand if education is contributing to the sustainability of society, an approach that distinguishes different levels of indicators would be useful and provide a direction for progress.<ul style="list-style-type: none">○ <i>Input Indicators</i> will provide baseline data on education MOI and enrolment/attainment.○ <i>Facilitative Indicators</i> will focus on teacher training, safe and effective learning environments, and the quality/relevance of curricula.○ <i>Effect Indicators</i> would address the efforts to achieve transformative learning for sustainability, such as the advancement of cooperative learning and critical analysis skills.
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3.2 Importance of quality education for sustainable development

The discussions on the post-2015 development agenda have focused attention on education as an essential mechanism to achieve sustainable development. “Across all levels and types of education – formal, non-formal, informal – ESD is also helping to advance the change in teaching and learning processes, bringing in approaches that ‘stimulate pupils to ask questions, analyse, think critically and make decisions,’ that are cooperative rather than competitive and that are more student-centred” (Buckler and Creech 2014: 65). Both literature and practice now underscore the value of quality education on people’s ability to live healthier, happier and more productive lives in a sustainable manner. No other development goal provides greater return on investment. Quality education outcomes have higher influence on economic growth than school enrolment rates, and improving quality can be more cost effective as it depends on systematic knowledge investments more than new resource allocation. A quality education for

To enable measurable improvements in learning targets and performance-based outcomes, a stronger focus on enhancing quality education will be more effective

sustainable development (QESD) approach supports higher order learning thus strengthening competencies to analyse, synthesise and evaluate complex information in decision-making, planning and problem solving (Ofei-Manu & Didham, 2014).

A singular focus on quantitative improvements in education, which emphasises access and attainment as well as rote learning, can lead to

inadequate or declining learning outcomes. For example, the efforts to meet MDG 2 created a situation for several sub-Saharan African countries where large increases in student enrolment were not met by adequate increases in qualified teachers – resulting in steadily increasing pupil-teacher ratios in these countries (UNESCO Institute for Statistics, 2006). In order to enable measurable improvements in learning targets and performance-based outcomes, a stronger focus on enhancing quality education, which emphasises a holistic and practical

solutions-orientation to education, will be more effective. Nevertheless, in countries where enrolment rates are still a concern, the pursuit of quantitative improvements alongside qualitative improvements remains essential.

In order to achieve quality education, attention must be paid to quality teaching, curricula and appropriate learning environments (Global Campaign for Education (GCE) and Beyond 2015 Partnership, 2013). Qualitative reform of education requires progressive and dynamic curricula and the establishment of effective learning spaces that support collaborative and experiential learning. Furthermore, the QESD approach applies a comprehensive approach to educational improvements with respect to the content of learning, the approach for knowledge and skill transfer, the status of learning environments and the context in which learning takes place.

Strengthening learning performance is at the core of pursuing QESD because the aim is to empower learners with the capacities to envision and actualise a sustainable future (Ofei-Manu & Didham, 2014). ESD provides a contextualised framework that reinforces learning performance. It requires holistic integration of key educational components salient and relevant to the learner's ability to contribute to social change and transformation in a cooperative and collective manner. This should not only cover the educational contents as addressed in SDG Target 4.7, but it must also expand on the learning processes that are essential to enhancing quality education. The QESD approach would not only support the realisation of the SDG 4 targets, but it would also strengthen the effectiveness of education as a cross-cutting MOI across the entire sustainable development agenda.

4 Conclusion: Empowering a learning society for sustainability

The Global Action Programme on ESD identifies two parallel objectives simply defined as 1) integrating sustainable development into education, and 2) integrating education into sustainable development (UNESCO, 2014). Throughout the discussion on SDG 4 in this chapter, the opportunity for enhancing the quality of education through the integration of sustainable development – or ESD specifically – has been

repeatedly stressed. Not quite as frequently but with as much zeal, the importance of education as a cross-cutting MOI and the ability to enrich achievement across the SDGs through the stronger integration of education throughout the sustainable development agenda (and not only as a standalone goal) has also been highlighted. Although ESD is present within Target 4.7, throughout the post-2015 development agenda and the Education 2030 agenda an integrated and holistic understanding of education and sustainable development (or learning for sustainability) is relatively unapparent. This chapter concludes by recommending two parallel approaches for achieving a learning society for sustainability through a focus on integrating education into sustainable development and integrating sustainable development into education (see Figure 5.2 and Table 5.2 for additional information).



Figure 5.2 Two parallel approaches for empowering a learning society for sustainability

Section 1 of this chapter identified the distinct benefits of education to human development and to sustainable development separately. However, it is also argued that within the context of the post-2015 development agenda these two historical tracks will need to be harmonised towards the common purpose of achieving sustainable well-being for all. A critical examination of the current proposal for SDG 4 and the Education 2030 agenda supports an argument that while the goal and agenda are both robust and inspirational, they are still mainly

framed around advancing human development. Only Targets 4.7, 4.a and 4.c offer clear incentives for attaining quality education for sustainable development in a truly integrated pattern. However, there is little positioning of education as a cross-cutting MOI for empowering society with the transformative capacities to transcend business-as-usual scenarios and fulfil the aspirations for sustainable development.

For the 'integration of sustainable development into education', the focus of the recommendations is on the combined perspective of advancing quality education and achieving ESD-based learning performance. This perspective needs greater incorporation into SDG 4 and its implementation. Achieving quality education for sustainable development (QESD) must be stressed as a universal goal that builds on and supports the goals for access and attainment. This QESD perspective could be integrated into the targets of SDG 4 to strengthen its overall efficacy, but it also needs to serve as the defining construct in national-level education planning and for the mobilisation of relevant education MOI. Such identification of QESD as a long-term achievement target will help to ensure that policymakers and practitioners better appreciate quality education's pivotal role in sustainable development and reduce the likelihood that the less quantifiable elements of quality education are cut from budgets, policy agendas and curricula in favour of short-term, quantifiable gains.

For the 'integration of education into sustainable development', the value and benefits that education can provide to the achievement of the other SDGs need to be more clearly elaborated and galvanised. This effort requires an understanding of education that extends beyond the boundaries of formal education institutions, thus expanding the opportunities for life-long learning, continuing professional development, and community-based/social learning.

The value and benefits that education can provide to the achievement of the other SDGs needs to be more clearly elaborated

An appreciation of education as a 'strategic development investment' is also required, which can position social learning within the SDGs, "as the foundation and conduit for harnessing the human propensity to contemplate our fate and futures" and in so doing supplant "economic

growth as the metanarrative and vehicle for bringing about a more sustainable and desirable world for all" (Glasser, 2009: 38). Inclusion of an individual target for education under SDG 17 would support this and may be added as an additional target under the "capacity building" section (currently only target 17.9). Efforts could also be taken to clearly identify the role of education under specific goals, such as is done in targets 3.7 and especially 13.3. To achieve a strong role for education as a cross-cutting MOI though, there needs to be stronger recognition that 'transforming our world by 2030' in the aspirational manner currently detailed in the proposed post-2015 development agenda necessitates a tremendous shift in social and cultural paradigms. Such a transition requires inclusive processes to redefine widely held norms and values on what we understand as 'quality-of-life' and 'well-being'. For this, we find in education the potential for developing the capacities of individuals and creating enabling environments for people to come together in this cooperative pursuit of sustainable development. Thus, an overall purpose of the post-2015 development agenda should be to facilitate and empower a learning society for sustainability where such change can take hold at local and collective levels.

Addressing the recommendations for strengthening the role of education in achieving sustainable development can be done at multiple levels. Better framing of a quality education for sustainable development perspective directly within the SDGs and the Education 2030 agenda may currently be the most difficult to achieve, but such action would have far reaching influence. Subsequently, national governments will respond to these international agendas through their appropriate contextualisation in national policies and strategies, thus allowing these points to be more clearly elaborated and integrated in national sustainable development strategies, national education plans, and education curricula. Integration of this QESD perspective into implementation processes and monitoring and evaluation frameworks will strengthen the execution of these recommendations.

Table 5.2 Recommendations on two approaches to a learning society for sustainability

Integrating Sustainable Development in Education	Integrating Education in Sustainable Development
<ul style="list-style-type: none"> • <i>Quality Education for Sustainable Development</i> needs to be emphasised as a universal goal. • <i>Education for Sustainable Development</i> provides a holistic learning model that supports Quality Education improvements. • The <i>Quality Education for Sustainable Development</i> learning performance framework can guide educational reforms and clarify the multi-stakeholder governance of education under the 2030 agenda. • The pursuit of <i>quality education and learning for sustainable development</i> should be identified in national education strategies and plans as a key long-term objective and as such be duly reflected in budgets, policy agendas and curricula. • The <i>focus on learning performance</i> is inherently qualitative in nature, but it lends itself to clear monitoring of educational outcomes and their linkage to sustainable development impacts. 	<ul style="list-style-type: none"> • A strong <i>Education Perspective</i>, that includes formal, non-formal and informal education, can play a dynamic role in supporting achievement of all SDGs. • Education is a <i>strategic development investment</i> that supports life-long learning, continuing professional development, community-based and social learning. • Education should be mobilised as an inclusive <i>Means of Implementation</i> for all SDGs, and through this can enrich the influence of social and cultural dimensions for 'transforming our world by 2030'. • As a cross-cutting MOI, education should aim at <i>strengthening individuals' capacities and creating enabling environments</i> for collaboration and cooperation on sustainable development. • A <i>learning society for sustainability</i> is needed to address the transformative nature of the post-2015 development agenda, and this may be facilitated and empowered through integrating education and social learning into all SDGs.

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