IGES Issue Briefs on
SDGs
Sustainable Development Goals

Advancing Education
as a Goal for Sustainable Development

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Main messages

- Access and attainment of education are fundamental for human well-being, and should be a priority of the post-2015 development agenda as education is proven to accelerate achievement of several important development goals.

- For education to support the sustainable development goals (SDGs), however, an ambitious education goal that moves beyond broadening coverage and rather works to improve overall efficacy of education is essential.

- Addressing sustainable development through education requires a *qualitative* turn in how education is viewed and contextualized, as quality improvements produce more significant benefits and often require lower resource costs.

- An education SDG should include three dimensions: increasing access and attainment, improving educational quality, and inspiring transformative learning.

- Distinguishing these three dimensions in an SDG can help clarify that education is both essential for human development and achieving social change towards a sustainable future.

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01 Purpose and focus

"In confronting the many challenges that the future holds in store, humankind sees in education an indispensable asset in its attempt to attain the ideals of peace, freedom and social justice." – Jacques Delors[1]

Over the next year, representatives from national governments and civil society will negotiate a post-2015 development agenda. This issue brief argues that an ambitious goal on education will be essential to the success of the Sustainable Development Goals (SDGs) and should address not only the need for universal education, but also substantially aim to improve overall efficacy of education through a qualitative turn in framing education to provide sustainable well-being for all. Section 2 reviews the strong correlations between education and human development. Section 3 explains how education has been conceived in previous international development frameworks. Section 4 outlines the progress made on education in regards to the Millennium Development Goals (MDGs), and Section 5 examines the contextualization of education in regards to sustainable development. Section 6 reviews the current discussions on how education can contribute to the post-2015 development agenda. The final section outlines a proposal for education as an SDG that includes both quantitative improvements in availability and accessibility of education and also qualitative improvements essential for acceptability and adaptability of learning for sustainability.

02 Value of education in achieving human development

Education was enshrined as a basic right for all in the Universal Declaration of Human Rights (1948), and its central position in recent development frameworks indicates widespread recognition of its role as a catalyst for achieving all development goals. Although the general value of education in achieving human development is well accepted, this does not protect education from being one of the first sectors that faces funding cuts when countries experience budget constraints. This practice seems to lay in direct contrast to many statistics that demonstrate the significance of education in accelerating both individual and social development.

The linkages between education and both poverty reduction and economic growth are well established. Mincer's Earning Function equation has been used to demonstrate in over a 100 countries that each additional year of schooling increases an individuals' earning potential by 5 to 15% (Polachek, 2007). A positive correlation between school attainment and national GDP per capita that links each additional year of schooling to a 0.58% increase in long-run growth rates is confirmed by Hanushel and Woessmann (2008) across fifty countries. This study also investigates the *quality* of education by utilising international student achievement tests, and finds that an increase in average test scores by one standard deviation is associated with a 2% higher GDP per capita growth rate. As qualitative improvements to education often require lower resource costs[2] than quantitative improvements to achieve, the notable increase in resulting benefits provides a higher return on initial investment and proves more cost effective.

Education is also noted for contributing to improvements in health, disease prevention, and equity/equality issues. Recent studies find education has a more positive influence on health than do either income or employment (Lochner, 2010: 34). For example, multiple studies have shown that attainment of primary education supports a 50% reduction in child mortality rates and that educated mothers are generally more responsive to children's health needs (Mattos, et. al., 2012). Furthermore, education is seen as improving civic participation, engagement in decision-making processes, and political stability (CGB, 2006). Based on the links between education and several socio-economic benefits, education should be a priority for investment in human development.

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1 Chairman of the International Commission on Education for the Twenty-first Century; quoted from his opening words of *Learning: The treasure within* (1996, p.12). Paris: UNESCO.
2 Qualitative improvements often depend more on systematic knowledge investments than new resource investments.

03 How education was framed in earlier development frameworks

The International Commission on Education for the 21st Century advocated for education as a principal means for supporting human development and ensuring that it occurs in an inclusive, harmonious manner (UNESCO, 1996). The United Nations Millennium Declaration (2000) and the Millennium Development Goals (MDGs) reinforce education's centrality in human development. MDG 2 represents a clear agreement by the 193 UN member states to achieve universal primary education by 2015. MDG 3 also sets targets for eliminating gender disparity at all education levels.

The Education for All movement coincides with the Millennium Development agenda. The outcome of the World Conference on Education for All (1990) was an agreement to universalize primary education and reduce illiteracy by 2000. At the World Education Forum (2000), the commitment to education for all (EFA) was re-affirmed with a new target date of 2015. Six new goals and measurable targets were also elaborated as part of the Dakar Framework for Action on EFA. The EFA Development Index includes indicators for evaluating individual country progress towards these targets. Building on the MDGs and EFA, the United Nations Literacy Decade (2003-2012) was established to upscale efforts to meet literacy goals.
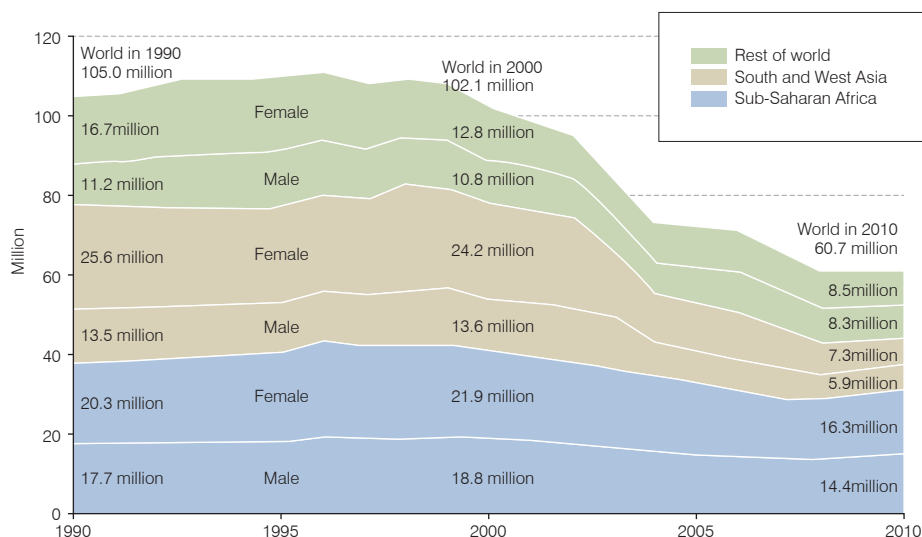
Together, MDG 2, MDG 3, and the EFA goals provide a detailed schedule of the quantitative improvements for education included in the current development agenda, especially in regards to educational access, attainment and equity. These goals also call for qualitative improvements in education, but difficulties measuring these improvements meant that the qualitative aspects were neglected during subsequent target setting processes.

The UN Decade of Education for Sustainable Development (DESD, 2005-2014) originated from a proposal made at the World Summit on Sustainable Development (2002). DESD was framed as supporting achievements linked to the international development agenda by incorporating the principles, practices and values of sustainable development into all facets of education and learning. With the other goal-setting processes focussed 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).

04 Achievement of education in the context of the MDGs

Considerable success has been achieved in efforts to meet MDG 2 and the EFA goals. Significant increases in enrolment and completion of primary education have occurred. Enrolment in primary education in developing countries rose from 82% in 1999 to 90% in 2010, indicating the highest number of children ever attending school. Regionally, sub-Saharan Africa experienced the highest increase in net enrolment rates from 58% to 76%, or 43 million additional students enrolled. This was followed by South Asia which increased from 77% to 93% (UN, 2012). The global primary completion rate increased from 81% to 90% between 1999 and 2010. More girls are also attending school, and gender parity has almost been achieved with the ratio between the enrolment of girls and boys rising from 91 in 1999 to 97 in 2010 in developing countries (UN, 2012).

The MDGs have spurred considerable efforts to improve education around the globe. With the provision of debt relief and funding initiatives linked to the MDGs, many developing countries have achieved free primary school education for the first time. Development aid has significantly supported infrastructure and capacity development for education, particularly for building schools and training teachers (McArthur, 2013; CIDA, 2013).

Figure 1. Primary school age children out of school, 1999-2010* (Millions)

However, many challenges remain. Progress in enrolment has slowed in recent years (see Figure 1), primarily because it is difficult to encourage children from the most disadvantaged backgrounds to attend school. 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 (UN, 2012). The focus on access to education also overlooks the content of learning, teacher competency, and the fact that a large number of enrolled students still lack basic competency in numeracy and literacy (UN, 2013; McArthur, 2013; UNESCO-UNICEF, 2013). Gender disparities continue to exist in some regions. In Western Asia and Northern Africa, the total share of girls among out-of-school children is 65% and 79%, respectively (UN, 2012). While rapid population growth in some regions overstretches limited resources, a worrisome decline in aid for education development has appeared in recent years (UIS, 2013).

05 Improving education in the context of sustainable development

In the context of international development, progress made in education development remains extremely important and must continue beyond 2015. However, globally emerging challenges relating to environmental sustainability and financial stability require a closer look at the roles education can play in addressing cross-cutting environmental and development challenges in the post-2015 development agenda. To manage these challenges, education needs to be framed around a development philosophy that recognizes constraints imposed by planetary boundaries and differentiates between quality of life and standard of living (Costanza et al, 2013). Improvements in education hence need to help learners adapt to these changing realities, emerging challenges, and to better match learned skills with society's changing needs.

Education for Sustainable Development (ESD) is an important social process to engender 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 et al., 2010). It should support educational

improvements in life-long learning, students' critical reflexivity, cooperative learning relationships, and holistic interpretations of knowledge. By promoting integrated/whole systems perspectives, ESD confronts both the limits of disciplinary thinking and treatment of sustainable development as three distinct (albeit overlapping) dimensions.

There is strong recognition that ESD includes a series of important thematic topics (i.e., climate change, sustainable consumption and production, eco-literacy and environmental science, disaster risk reduction, indigenous knowledge, etc.). Beyond providing knowledge transfer on sustainable development topics, ESD should also promote educational reform to strengthen value and skill-based learning. Furthermore, ESD can support critical examination of worldviews to enable learners to better achieve sustainable living through practical, daily actions. This type of action-oriented, problem-based learning aims to develop the capacity of learners' to become effective agents of social change.

Thus, it is argued that the foundation of ESD is not *what we learn but rather how we learn*, and especially how we continue life-long learning in a dynamic and rapidly changing reality. In order to frame this new educational paradigm in practical terms, it is necessary to discuss educational pedagogies and methodologies as the foundation of a progressive vision of ESD. Educational approaches based on cooperation and generating shared understandings are essential for discussions aimed at reframing the ideologies that bind current development perspectives.

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 ESD should be culturally-relevant and locally appropriate and occur at all levels. Substantial progress has been achieved under the framework of DESD; with many countries implementing ESD related policies and measures. 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. In considering how education can strengthen society's ability to transition towards sustainable development, ESD provides a model for reconceptualising education to move beyond traditional knowledge transfer and rote learning to a system that actively engages learners in a process of social learning and reflective action for transformative change.

06 Education in current global discussions on post-2015 development agenda

Education can be viewed as one of the central means for alleviating the dichotomy between environmental sustainability and development that challenges the formulation of a universal development agenda post-2015. My World 2015 is an online initiative for individuals to rank their priorities for the post-2015 development agenda. As of 11 July 2013, over 700,000 people have voted, and of the 16 potential priorities, provision of good education is consistently ranked as the highest priority.[3] It is clear that education will remain important in the post-2015 development agenda, but how best to integrate and frame education to address sustainable development must be further emphasized in current discussions.

Several proposals have already been made to link education and training to the SDGs, as it is promoted as the primary means for delivering the needed capacity development to support the achievement of all SDGs. The main point of these various proposals is to combine the EFA goals and education-linked MDGs under the SDG framework, emphasizing quality education. It has also been proposed that education could be either a standalone goal or integrated into all development goals (UN, 2013; DIE, 2012). Furthermore, additional suggestions include: 1) extending access targets beyond primary education, 2) improving completion rates for education, 3) increasing the equity and equality targets on several fronts (i.e. gender, religion, culture, social class), 4) improving the quality of education in regards to acquisition of cognitive skills, life skills and other affective components, i.e. values, creativity, higher-order thinking, social and emotional capabilities, and 5) devising appropriate tools and methods to measure particularly quality education (EFAMGR, 2013; GCE, 2013; UN, 2013; SDSN, 2013; UNESCO- UNICEF, 2013).

3 From My World 2015: http://www.myworld2015.org/?page=results

In order to achieve quality education, attention must be paid to quality teaching, curricula and appropriate learning environments (GCE, 2013). The present lack of 1.9 million required teachers and the capacity gaps created by under-trained teachers, particularly in developing countries, contribute to poor learning outcomes (UNESCO-UNICEF, 2013). Furthermore, qualitative reform of education requires progressive and dynamic curricula and the establishment of effective learning spaces that support collaborative and experiential learning. There are further calls for the inclusion of job-skill and vocational training, teacher training, information communication technologies, and adult education within the post-2015 education targets (GCE, 2013; UN, 2013). Finally, the education agenda should also be firmly grounded in a "rights based approach underpinned by the values of universality, non-discrimination and indivisibility of rights" (UNESCO-UNICEF, 2013: 3).

Currently, the Open Working Group (OWG) on the SDGs regularly convenes to consider goals for various thematic areas. This process is supported by the recent report of the High Level Panel on the Post-2015 Development Agenda and also reviews proposals from multiple stakeholders. The OWG will present its final report to the 68th Session of UN General Assembly (GA) in September 2014, and the GA will decide on the exact design of the SDGs. The GA has already recommended that the SDGs should be "action-oriented, concise and easy to communicate, …aspirational, global in nature and universally applicable to all countries." (UNGA, 2012, para 247:43).

07 Proposal for addressing Education as an SDG

"It is in fact a part of the function of education to help us to escape – not from our own time, for we are bound by that – but from the intellectual and emotional limitations of our own time." – T.S. Eliot [4]

Throughout this issue brief, it has been argued that education plays numerous important roles in advancing human well-being, social development, and the achievement of a sustainable society. To effectively promote these aspects, an international development goal on education must continue to accelerate increases in educational availability and accessibility. Such a goal, though, 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 realizing a sustainable future for all. Thus, a framework is proposed for an education SDG that would progress from quantity increases to quality improvements of universal education and learning for sustainability.

Although development goals have generally been set around quantitative targets, it is important to recognise the value of both quantitative and qualitative indicators. Quantitative indicators provide *objective* facts, while qualitative indicators help explain the *subjective* nature of social phenomena. Qualitative indicators meaningfully address significant aspects of education such as value learning, knowledge frameworks, and pedagogical approaches. Progress on quality improvements can be assessed through Performance Based Assessment [5], and could be included in international student achievement tests such as the Programme for International Student Assessment [6]. Furthermore, sub-goals on quality aspects may require multiple targets to create an overall perspective of their achievement. Recalling Section 2's discussion, better qualitative assessment of education is essential as these aspects provide greater return on human development than do the quantitative aspects. With appropriate assessment mechanisms, this is far more achievable than regularly believed and the only real limitation is the need for greater sub-national data collection.

Table 1 details our proposal for an Education SDG. This distinguishes between three types of essential goals for education. First, increases in availability, access and attainment aim to extend the existing educational targets under MDG 2. Second, improvements for quality education are specified that address the necessary capacities for the provision of high-quality education. Third, improvements that inspire transformative learning are proposed as the essential reformative features of education in that they support learning for sustainability. In their entirety, these three types of sub-goals provide a progressive goal for education that would: 1) continue to

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4 Quoted by The New York Times on 5 January 1965, http://www.nytimes.com/books/97/04/20/reviews/eliot-obit.html
5 Student assessment based on applying knowledge, skills and critical thinking to performing tasks and solving problems that emulate real-life situations, which deviates from traditional assessment of rote memorisation.
6 PISA launched in 1997 by the OECD with participation of over 70 countries.

strengthen the pursuit of basic human development for all, 2) significantly improve provision of quality education to enhance learners' ability to adapt to challenges of a rapidly changing world and achieve sustainable well-being, and 3) engender social learning and empower society with the capacities to envision and realise sustainable development.

Table 1: Proposal for a progressive goal on education in the SDGs

OVERALL GOAL: Universal quality education that provides necessary life-skills for individual well-being while also empowering society with the capacities for realizing a sustainable future for all.		
	Sub-Goals	**Achievement Targets and Indicators***
Increasing Access & Attainment	Continue achievement for **UNIVERSAL PRIMARY EDUCATION & LITERACY**	• Full access and attainment – with a strengthened focus on reaching children from most disadvantaged/marginalized backgrounds; • Continuing to address issues of equity & equality in educational attainment.
	Attainment of **SECONDARY EDUCATION**	• Enrolment (or transition) rates in secondary education; • Completion rates in secondary education.
	Increase provision of **EARLY CHILDHOOD DEVELOPMENT**	• Availability and access to ECD programs, i.e. percentage of children receiving such programs.
Improving Quality of Education	**TEACHER TRAINING -** Expand and improve *(to support improvement of the overall quality of teaching)*	• Increase number of trained teachers, and aim to reach a basic standard of training/education for all teachers; • Ensure the provision of teacher training on pedagogies and learning methodologies, along with teaching holistic or interdisciplinary perspectives; • Increase teachers' usage of both formative and summative assessment at classroom level to better adapt teaching to students' needs.
	Safe and *Effective* **LEARNING ENVIRONMENTS**	• Schools serving as models for sustainable practices through the application of environmental management principles to school operations and facilities; • Schools serving as hubs for community learning and contextualization of learning opportunities with regards to local needs and challenges; • Provision of dynamic opportunities for engaged, experience-based learning.
	CURRICULA - IMPROVE *QUALITY* AND *RELEVANCE*	• Application of clear learning methodologies & progressive learning objectives/goals (i.e. scaffolded learning that builds competencies from grade to grade); • Provision of skill-based education (taking a "life-cycle" approach focusing on educational needs throughout the stages of one's life) aimed at preparing learners for secure employment and livelihoods; • Expand delivery of education across formal, non-formal and informal sectors & include new methods of knowledge and skill exchange (such as multi-media and ICT, experiential-based & community-based learning, and skill sharing); • Good coverage of knowledge-based competencies relevant to sustainable development and ESD.
Inspiring Transformative Learning	Provision of **COOPERATIVE & PARTICIPATORY LEARNING**	• Amount of time students spend on collaborative learning activities & projects; • Level of engagement students have in setting education syllabus & contents.
	Develop critical **ANALYSIS & PROBLEM SOLVING SKILLS**	• Amount of time students spend on examining real-life problems and developing solutions. • Use of Performance Based Assessment to demonstrate skill-based learning.
	Provision of **GLOBAL CITIZENSHIP & PEACE EDUCATION** and **VALUES-BASED LEARNING**	• Cumulative amount of teaching/learning time spent on: - Teaching on multi-cultural perspectives; - Service learning and opportunities for volunteerism; - Capacity building for civic engagement.

N.B.*: Targets are proposed in terms of what could monitored to demonstrate achievement towards each sub-goal. In some cases, specific indicators are also proposed, while in other cases further investigation would need to be conducted to identify the most appropriate means for collecting relevant information (especially, where it may come from school or class-room level).

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Further Information