

Repositioning and reconceptualizing the curriculum for the effective realization of Sustainable Development Goal Four, for holistic development and sustainable ways of living

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Repositioning and reconceptualizing the curriculum for the effective realization of Sustainable Development Goal Four, for holistic development and sustainable ways of living¹

The purpose of this discussion paper is two-fold. First, it is to reposition curriculum at the center of the national and the global development dialogue and to highlight its power to give effect to national and to global aspirational statements on the role of education in holistic development. When well designed and effectively enacted, curriculum determines the quality, inclusiveness and development-relevance of education.

Second, is to reconceptualize curriculum as a fundamental force of integration of education systems and as an operational tool for giving effect to policies on lifelong learning. Curriculum leads all core aspects of education that are known to determine quality, inclusion and relevance such as content, learning, teaching, assessment and the teaching and learning environments among others. Its horizontal and vertical articulation, as well as its articulation across learning settings is what gives effect to lifelong learning policies.

This paper therefore seeks to reposition curriculum as an indispensable tool for giving effect to SDG Goal 4.

With regards to the first purpose, it is necessary to identify what will be a key set of factors to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all” (SDG 4). We argue that curriculum, given its essential role in the provision of quality learning for all lifelong learners, and in articulating and supporting education that is relevant to holistic development, is critical in the realization of this goal. It is the curriculum that determines to a large extent whether education is inclusive, thus playing a significant role in ensuring that provision is equitable. It is the curriculum that provides the structure for the provision of quality learning, especially where teachers might be under-qualified and

¹ The present document is the first draft of the IBE’s discussion paper and should be viewed as a work in progress. Selected references will be included in a more advanced version of the document. The IBE is grateful to Marc Prensky for having produced the paper *Removing the masks. From teaching and learning to becoming, accomplishing and a new worldwide curriculum*, parts of which has been used in the present discussion paper.



inexperienced, their classrooms under-resourced, and their students lacking the prior frameworks within which to situate their learning. And it is the curriculum that articulates both the competencies necessary for lifelong learning and those needed for holistic development.

The curriculum therefore lies at the crossroads of these four key aspects of SDG 4: that education should be (1) *inclusive and equitable*, (2) characterized by *quality learning*, (3) *promote lifelong learning*, and (4) *relevant to holistic development*. Curriculum, in other words, provides the bridge between education and development — and it is the competencies associated with lifelong learning and aligned with development needs, in the broadest, holistic sense of the term, that span that bridge.

With regards to the second purpose, a well-designed curriculum serves as a core to which all other aspects of education systems are tethered. The curriculum determines what will be taught and learned, by whom, when and where. It determines not only the content but also the sequencing of the learning and the overall educational experience. Thus, it is the sequencing of curriculum that facilitates learning through life. At the same time, curriculum determines the articulation of learning and of educational experiences across sub-sectors of the education system as well as across learning settings. Again, this articulation facilitates learning throughout life. Across sub-sectors and across learning settings, the curriculum leads other core elements of education such as the content, teaching, learning, assessment, as well as physical, time, technical and human resources. The curriculum is the core that makes education systems function as systems.



Despite its critical importance curriculum is commonly conceptualized and understood as a program of study and a set of subject syllabi.

We therefore need a paradigm shift that recognizes curriculum as indispensable to the realization of education quality, effective lifelong learning and relevance to holistic development.

Among the critical facets of holistic development are: economic, social, political, cultural, multiculturalism, humanistic, values, ethics, equity, inclusion and sustainability. Among others, sustainability impels

sustainable living without which the post-2015 sustainable development agenda will fail. The proposed paradigm shift will entail among others, a strong focus on global citizenship. This implies commitment to planetary stewardship and to ethics and integrity based on mutual respect and accountability for the shared consequences of actions.

1. What is the role of education and curricular innovation in development?

Education is widely held to play a number of positive roles in development. This is almost universally accepted, whatever one's understanding of development. Education is generally understood to be a prerequisite for the realization of many other development goals. It is recognized as a key means to the ends of greater economic and social equality, of eradicating poverty, and of national economic, social and political development. Given the nature and importance of these ends, education is widely held – but also in and of itself, non-instrumentally – as a basic human right.

Evidence of this global acceptance of education's fundamental and critical importance is to be found across the gamut of humanity's foundational and aspirational documents, starting with the Universal Declaration of Human Rights (Article 26). The positioning of education as fundamental to development is underscored in the Constitution of almost every UNESCO Member State; in the development plans of the major regional development banks; in the national development plans of almost every country; and in the Education for All (EFA) and the Millennium Development Goals (MDGs) that preceded the post-2015 SDGs.

The role of education in development is understood today to be more important than ever before, given the recent explosion in the production, distribution, use and consumption of knowledge as a consequence primarily of the rapid development and proliferation of information and communications technologies (ICT) and of related digital technologies. These developments have given rise to a 'knowledge economy' which, while not displacing existing manufacturing, agricultural, financial and other economies, is increasingly integrated into them and frequently demands, accordingly, higher levels of education in workers across all sectors and, in many cases, highly educated 'knowledge workers'.

The range of positive roles that education plays in development spans a number of different levels: links between education and development exist at the individual level, principally with regard to personal development; at



the level of social and cultural development; at the level of national economic and political development; and at the level of global development, with regard not least to multicultural tolerance and peaceful coexistence, and to planetary stewardship.

Yet different conceptualizations of development involve different approaches to development, each of which has emphasized particular values, interests, purposes and goals in and of development. Speaking very broadly, the concept of development most commonly in use today has evolved from a prior understanding, the dominant and sometimes sole focus of which was on economic and material progress, to a current and widespread emphasis on humanistic, holistic and sustainable development, led primarily by UNESCO. While the World Bank and other development banks and related institutions gave perhaps the most substance to economic conceptualizations of development, today their focus on accelerated and shared growth, poverty eradication and knowledge for development mean that knowledge, technology, equity and social justice are increasingly recognized as indispensable elements of development. Development is thus now conceptualized in more complex and multifaceted terms than just economic and material progress.

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Different aspects of this multifaceted approach have been elaborated and promoted by different actors in the development sector. The United Nations Development Programme (UNDP), for example, recognizing that development is more than just the expansion of income and wealth, emphasizes the human development approach — “the process of enlarging people's choices” — to development. The UNDP perspective on development highlights three elements as essential: that people lead long and healthy lives, acquire knowledge, and have access to resources for a decent standard of living. UNICEF focuses on the social dimensions of development, including health, education and child welfare and protection. The Global Partnership for Education (GPE) bases its rationale on the benefits of education for a range of measures that include, for example, health, girls’ and women’s rights, the saving of children’s lives, and the fostering of peace. UNESCO holds peace and sustainable development to be central in the promotion of inclusive and equitable social development. Poverty and growing inequalities between and within countries remain major challenges for sustainable development, which therefore associates economic development with social inclusion and environmental stability. UNESCO accordingly underscores the interdependence of peace and



development and emphasizes holistic, humanistic, inclusive and sustainable approaches.

However, the undisputed appreciation of the relevance of education to development contrasts sharply with a growing dissatisfaction with its “outcomes”. Paradoxically, the more the role of education in development is globally recognized and emphasized, the more education is being criticized.

The education system is frequently criticized due to the considerable gaps that still exist in the universalization of essential skills and knowledge, in addition to the persistent inequalities in the social distribution of those foundational skills and knowledge. The traditional organization of the teaching and learning process and content are increasingly perceived as outdated with regards to the knowledge, skills and values needed to live in an ever-changing world and a century that is filled with uncertainties. And there is a spreading of distrust in the effectiveness of education systems to respond to contemporary and future challenges and problems.

Widespread dissatisfaction is not only a matter of perceptions and discourses. The “disconnect” between education on one hand and the national, regional and global development needs and agendas on the other, has many negative effects at different levels. At the individual level, poor quality education is a major obstacle to the acquisition of competencies required for living in the 21st century, resulting in reduced employment opportunities, limited participation in the modern knowledge economy and the world of work, marginalization and income poverty. At the national level, the shortage of human resources with the appropriate kind and mix of skills is among the most critical constraints to holistic and inclusive development, sustainable growth and global competitiveness. This also perpetuates and reinforces social inequalities and exclusion, which can lead to social fracture and political instability. And at the global level, ineffective education systems — predominantly found in poor countries — sustain global inequalities and threaten peace and security.

If appropriately conceptualized, positioned, designed, developed, implemented and learned, the curriculum can be one of the most effective tools for bridging the “disconnect” between education and development. Yet there is a worrying intellectual leadership vacuum and a striking silence on what ought to be the role and position of curriculum in the development agendas and efforts.

*Curriculum should not
be seen as a
“silver bullet”*



Certainly the curriculum should not be seen as a “silver bullet”. Rather, it should be viewed as **a vital node in a web whose efficacy depends as much on the strength of the other nodes** (for example, qualified teachers, good and safe physical facilities, quality learning materials, assessment practices aligned with the curriculum, etc.) **and on the strength and number of connections among them.**

We argue that the curriculum should be seen as a vital element for improving education quality and the relevance of education to holistic, inclusive and sustainable development goals for at least four good reasons.

First, the curriculum packages the essential and desirable knowledge, skills, affects, technology savvy and the application thereof (the competencies) to be acquired through education in order to support national, regional and global development. Therefore, the curriculum is the main instrument that articulates development aspirations and education goals.

Second, the curriculum provides a platform for a robust technical dialogue between development specialists, policymakers and educationists — and for enhanced social dialogue engaging a wide range of stakeholders — on how to optimize the contribution of education to holistic, inclusive and sustainable development at the national, regional and global levels.

Third, in giving effect to learning and in ensuring consistent alignment of learning with social aspirations and development goals, the curriculum is a key means for improving quality and equity in education.

And fourth, the curriculum is among the most effective tools for operationalizing lifelong learning policies, as it ensures vertical and horizontal articulation across levels, sub-sectors and learning settings and provisions.

Curriculum as the bridge between education and development

Traditionally, the curriculum has been considered — and many still consider it — as a set of syllabi and study plans organized on a disciplinary basis by educational cycles and/or levels. The curriculum design and development process is therefore perceived as a pure technical matter involving mainly specialists of the different disciplines, textbook writers, and designers of tests and examinations. However, this is a too narrow vision preventing us to look at the curriculum as an effective tool to overcome the “disconnect” between education and development.

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Within a broader and more comprehensive perspective, the curriculum can be viewed as a roadmap for achieving socially agreed development and education goals. It embeds the vision of society — and world — that we aspire to shape and the knowledge, skills and values needed to live in and change that society and world. Some have argued that the curriculum is to education what a Constitution is to democracy. Another useful perspective on curriculum is a biological analogy: the curriculum is the DNA of education. It encodes the goals, and the blueprint, for who the society want individuals to become — which is more than just a collection of study plans and syllabi or of acquired knowledge, skills and/or character traits.

The curriculum, given its essential role in the provision of quality learning for all lifelong learners, and in articulating and supporting education that is relevant to holistic development, is critical in the realization of SDG 4. In fact, it is the curriculum that determines to a large extent whether education is inclusive, thus playing a significant role in ensuring that provision is equitable. It is the curriculum that provides the structure for the provision of quality learning, especially where teachers might be under-qualified and inexperienced, their classrooms under-resourced, and their students lacking the prior frameworks within which to situate their learning. And it is the curriculum that articulates both the competencies necessary for lifelong learning and the competencies needed for holistic development. If EFA's principal successes of increasing access to education are to be consolidated and extended, it is the curriculum that will be fundamental in post-2015 educational development.

Curriculum, in other words, provides the bridge between education and development. And it is the competencies associated with lifelong learning and aligned with development needs, in the broadest, holistic sense of the term, that span that bridge: competencies that have been identified in terms both of basic human rights and of holistic national development needs; that have been carefully articulated in the curriculum and integrated into the education of teachers; and that are accordingly integral to the everyday practice of learning in schools.



Curriculum provides the bridge between education and development.

Competencies and development: curricular innovation at the heart of SDG 4

Much contemporary curricular discourse focuses on the development of a range of competencies that are seen to be essential both to the development of young people and to the development of their country – economically, politically and socially. Competencies encompass a mastery of the relevant content knowledge and of the associated skills, both cognitive and practical; and include also the internalization by the learner of the associated values – not least the moral dispositions and attitudes, as well as the motivation and commitment to the realization and, where appropriate, the practical enactment of the competency and its implications.

The shift to a competency-based approach to curriculum and learning, at least in this broader conceptualization of competencies, is best understood in terms of and parallel to the shift to holistic approaches to education and development. The discourse of competencies in curriculum has elaborated a more sophisticated, integrated and holistic understanding of what it is that we want young people to learn, be able to do and to become. Not content knowledge on its own; nor, as the pendulum has swung away from rote-learned content, skills alone.

Those competencies are not reducible to particular skills or content knowledge alone makes their curricular, teaching, learning and assessment challenges that much greater. That the contemporary context in which young people are growing up presents them with an environment more complex and challenges possibly greater than ever makes the role of curriculum and its associated competencies more important than might to date have been imagined.

Young people face, after all, to an extent far greater than we have ever had to, the challenges of an increasingly globalized world, with its wealth and growing inequalities, its environmental fragility, its diversity and fragmentation, and its value relativism and associated dispositions of ‘anything goes’ and an instrumental rationality.



2. Why are a repositioned curriculum and curricular innovation essential for the achievement of SDG 4?

All too often the curriculum is simply taken for granted: it's just 'there', and it must be taught, and learnt. The curriculum is of course not just 'there'. It is probably our most important social construction in education. It reflects the knowledge we believe to be of most importance, the skills we hold to be most useful, the values we cherish above all.

What we hold to be important, of value, is of course not arbitrarily so. These social constructions and the choices we make are not made in a vacuum: they take on significance with respect to our socio-cultural horizons. And the curriculum, as much as any country's national Constitution, both reflects and shapes these horizons. If we hold as important the right to decent work, set against the significance of the dignity that such work confers on each of us, then the curriculum will (or should) reflect those horizons by including the development of competencies that prepare young people for such work. If respect for our natural environment as the only home we have constitutes an important part of our shared horizons of significance, then the curriculum will (or should) reflect that by including the knowledge, skills and values associated with planetary stewardship.

The curriculum also interprets, shapes and reflects our "social imaginary". Curricular aims are always embedded within a broader context of social relations and practices. A social imaginary is a way of thinking shared in a society by ordinary people; it involves common understandings that make every-day practices possible, giving them sense and legitimacy. In this sense, curricular aims are always located within a social imaginary. Curriculum is thus again critically important in any society as it engages in a collective dialogue about what knowledge, skills and values are of such importance that they need to be learned by all. If sustainable ways of living are an important aspect of our social imaginary, or if they should be, then the curriculum should reflect that.



In other words, the curriculum reflects our most important values, our most important purposes – or at least it should. The curriculum development process thus offers an important means to a public debate about shared values, especially in deeply polarized times.

Curricular aims are frequently caught in tensions between the individual and societal; between vocational and academic goals; between economic needs and democratic values; between the need for stability (perhaps in a post-conflict society) and the need for change (perhaps in a deeply inequitable society); between local needs and global pressures.

Within this context, instead of being viewed simply as a collection of study plans, syllabi, and teaching subjects, the curriculum becomes the outcome of a process reflecting a political and societal agreement about the what, why and how of education for the desired society of the future. The consensus reflected in the curriculum can potentially provide a reference framework for putting learner welfare and development at the core of the education system. This framework can also help strengthen the links between education policy and curriculum reform, and respond more effectively to the expectations and demands of youth and society.

What are the implications for curriculum of the educational aims in SDG 4?

In its current shape SDG 4 aims to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all”. There is a range of educational discourses implicit in these aims, each with important implications and consequences for the curriculum. Critically, it is their implications for the curriculum that need to be addressed first.

It is, first, a **human rights discourse** that pervades the aims of SDG 4, with education understood as a human right in itself, and, implicitly, as a means to the realization of other rights. The implications for curriculum of this discourse are that it should include competencies (to include knowledge, skills, affects, technology savvy and their application) that are worthwhile in and of itself, even with no immediately obvious instrumental purpose. The point here is that education understood as a human right means that every lifelong learner has the right to be immersed to the fullest extent possible in these non-instrumental domains of the curriculum. Every lifelong learner has the right to know, for its own sake. Every lifelong learner has the right to the joy of learning itself, to wonder, to understand.

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Second, but equally important, is an *explicit discourse of inclusion, of equity, of fairness*. The curricular implications of this discourse are the same as above, that every lifelong learner has the right to learn — and much more. These aims imply the increased importance of personalized learning — that teachers are able to support each lifelong learner in their care as each lifelong learner learns at his/her own pace and is focused on or extended in areas of particular relevance, interest and challenge. Curriculum design needs to make space for this; and far-reaching curricular innovation is needed to create the potential for genuinely personalized learning.

These aims also imply that all lifelong learners are included — in the fullest sense of the term — in being accorded the learning opportunities that are available to any other lifelong learner. Not only, however, in the provision of learning opportunities: the aim of equity, at the heart of a discourse of fairness, implies that additional curricular, teaching and learning support needs to be provided for those lifelong learners who enter the school at a disadvantage, for whatever reason.

Third is a *discourse of quality education*, intrinsically associated with the discourse of equity in that quality learning opportunities need to be afforded to all. The quality of education and learning is notoriously difficult to assess. What is critical, however, and foundational in its essential contribution to quality in education is the curriculum, which provides the structure for the provision of quality learning.

Fourth is a *discourse of lifelong learning*, with which is associated a belief in the capacity of all human beings to learn new things, to acquire new skills, throughout their lives. What is of particular relevance here is that it is the curriculum that encapsulates and articulates the competencies that are associated with the capacity and disposition to learn throughout life. Serious and genuine efforts to promote learning throughout life depend in the first instance, therefore, on the inclusion of the associated competencies in the curriculum. Lifelong learning depends, in other words, on thoroughgoing curricular innovation and development at a sophisticated level — because complex competencies are involved — to this end.

Finally, implicit in SDG 4 in its entirety is a fifth discourse, that of *education as relevant to development*, in the broad and holistic sense of the term. That education should be development-relevant, again, holistically understood, is most evident in the aim to “promote lifelong learning opportunities for all” and in the discourses of quality, equity and the

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inclusion of all. A holistic understanding of development, as discussed earlier and as held by UNESCO and its Member States, underscores human wellbeing through the enhancement of individuals' capabilities and human freedoms.

From this perspective, improving the richness of human life in a holistic manner is a key component of development. Economic progress is just part of it, albeit an important part, given the role it plays in contributing to the creation of enabling environments and substantial opportunities for the realization of human capabilities. Holistic and humanistic views of development, which conceptualize development in more complex and multifaceted terms than just economic and material progress, highlight equity, individual empowerment, sustainability and the realization of human capabilities as key elements. Such views of development emphasize the role that education plays, not only in increased economic returns but also in greater degrees of inclusion and social cohesion, and in better health more generally.

Repositioning the curriculum as foundational in reaching the targets associated with SDG 4

At this critical juncture in the international education development agenda, the curriculum, given its essential role in the provision of quality learning for all lifelong learners, and in articulating and supporting education that is relevant to holistic development, is essential in the realization of SDG 4.

The curriculum, not least in its articulation of how genuinely personalized learning may be supported, determines to a large extent whether education is inclusive, thus playing a significant role in ensuring that provision is equitable. The EFA agenda has seen greatly expanded access to education, but there is much concern today about the quality of learning. Addressing this depends to a great extent on teachers, but in many countries they are often under-qualified, insufficiently experienced, overwhelmed by large classes of students who frequently lack the prior frameworks within which to situate their learning, and their school and professional environments under-resourced. It is the curriculum that provides the essential structure for such teachers and learners — for all teachers and learners. The curriculum thus provides the essence of quality, relevance and inclusion.

Equally important is the fact that it is the curriculum which articulates both the competencies necessary for lifelong learning and the competencies needed for holistic development. The establishment of enabling economic



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environments will depend significantly on competency development that is aligned with national development needs. The role of curriculum in developing these competencies cannot be underestimated. Their articulation and appropriate sequencing in the curriculum, their development through the curriculum – in ways that require both horizontal and vertical articulation – and their assessment in and through the curriculum, demand sophisticated and creative curricular innovation.

An overhaul of curriculum to these ends implies, however, much more than the elaboration and articulation of competencies that are relevant to holistic development and critical for genuine lifelong learning capacity. The challenges are greater and further-reaching. They include, for example, a reconsideration of the role of ICT in curriculum, teaching and learning (and in education more generally); of the ways in which the subject disciplines are most commonly present and taught in the curriculum; of blended and other learning strategies; of personalized learning in and through the curriculum; and of global citizenship education.

Reconsidering the role of information and communications technologies (ICT) in curriculum, teaching and learning

This can include serious and critical engagement with blended and other learning modalities. It is no secret that making productive use of ICT in curriculum, teaching and learning can be costly and is fraught with challenges. It is, moreover, very difficult for this modality to gain traction in any educational environment. The potential here is enormous: blended learning modalities, ICT competencies, universal access to digital technologies and their advantages — these are at the heart of curricular innovation in this domain.

The developmental context the world finds itself in and the context that young people will live in as they grow up, are rapidly evolving. It is important that we deal with the fact that — while some elements may be beginning to change — most of today’s curriculum and what is actually being taught and learnt has not changed a lot compared to the profound transformations affecting society and economy, at both local and global levels.

Development requires humans with more capabilities, and many of these capabilities come from a productive and creative use of technology. Most of the world’s young people already grasp, at some level, that if they lack the enhancements technology now brings they are, in their own times, “humans with fewer capabilities”. The cleverest are quickly becoming



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adept at employing whatever technology they can get access to in order to enhance their lives.

We need to reconcile the old and the new and get technology into the hands of those who lack it. At the same time, though, it is also imperative to bear in mind that digital technologies are truly valuable only if we create the infrastructure for connecting to the world. And as we connect people, we must figure out ways to help people use technology in their lives and develop a *new critical competence of selecting information* while learning and retaining key values and skills. Most importantly, we should not use digital technologies as a new medium to deliver old material, maintaining almost unchanged the traditional structure and organization of the curriculum as well as the approach to teaching and learning.

The many positive effects and the powerful and transformational powers that digital technologies offer to bear on education, curriculum and learning, are being celebrated since more than thirty years. Yet it doesn't seem that most of the expected positive transformations have taken place.

Many countries have adopted an educational ICT strategy and in many (advanced) contexts schools, students and teachers are now equipped with technological devices such as desktop/laptop computers, personal digital assistants, smartphones and tablets. However, it is likely that teachers are using those devices — if they get used at all — mainly to transmit information using traditional pedagogical approaches. If digital technologies offer only a new way to deliver the traditional curriculum and content, we have — educationally, and in terms of preparing new generations for the future — missed a huge opportunity.

Technology should be, rather, enabling hosts of new things that education has never before the opportunity to provide: connecting in real time around the world and receive instant feedback; using databases and computation engines to discover new relationships; programming increasingly powerful machines to extend our capabilities; making and using simulations to get new insights; creating new, useful objects through 3D printing; and so forth. To make digital technologies effective and worthwhile, they must be used not just as a new way to do old things, but as a foundation for the education, curriculum and capabilities of the future.



Reconsidering the ways in which the subject disciplines are most commonly present and taught in the curriculum

This can involve, where appropriate and to the effect that every lifelong learner has the right to be immersed in the joys of learning, further engagement with the possibilities afforded by project-based and problem-based learning, for example. The key issues here are that such approaches to learning are more readily amenable to the development of integrated competencies (project-based learning can be focused on competency development more easily than can traditional disciplinary study) and can consciously draw on a range of related competencies that cut across traditional disciplinary boundaries.

Cross-disciplinary study through, for example, cross-cutting themes, can help to make learning more relevant to and meaningful for lifelong learners. Such study assumes disciplinary subject boundaries that are more porous than might have been the case when each discipline was established as an object of study. Indeed, this reflects more fairly the nature of the increasingly interconnected world in which we live and for which we are preparing the future generations.

Much curricular innovation in this direction is well underway at different levels in many different education systems, but significant challenges still persist. For example: what are the “basics” of tomorrow? How do we deal with the breadth of skills that are needed? How do we deal with today’s vast amount of detail in every subject and skill area?

Not too long ago, there was more or less consensus in the world on what the “basics” of education were. They started in the earliest grades with “getting along with others”, supplemented in primary school by the 3Rs (reading writing and arithmetic), and further complemented in secondary education by a combination of mathematics, language(s), sciences, and social studies. This core curriculum was pretty universal – and still is the basic curriculum in many places. Many, in fact, believe that this should not change.

Today, while all of the former “basics” are still important, we must ask whether, for **the future**, their relative importance has changed. **Do they still embody all what is effectively needed to become the citizens of tomorrow? Are they still representing the “core” of the educated person of the future, as they did in the past?** If the curriculum continues concentrating on the basics of the past, then no matter how much better we teach those basics, or how many additional skills we try to add onto

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them, or how much technology we bolt onto them, we are unlikely to be on the right track. There is not yet a broad consensus as to what the new basics should be, and this presents a real challenge.

We are aware of the fact that the current curriculum is too often overloaded, overcrowded, “congested”, and outdated. And it is easy to reach the conclusion that today’s curriculum contains only a tiny sliver of the basic skills that people require for tomorrow. Many have found value in reducing the “basics” to a very small number that people can focus on, often in order of priority. There are many suggestions for what these priorities and new “basics” might be. For example, in the mid-90s the report to UNESCO of the International Commission on Education for the Twenty-first century, chaired by Jacques Delors, proposed an integrated vision of education based on the four pillars of “learning to know, to do, to be, and to live together.” Some advocate for the “4C’s” (critical thinking, communication, collaboration, and creativity) or the “7C’s” (the 4C’s plus “computer”, “character” and “culture”). Some speak of becoming “good, capable and world-improving people”. Others would say it is having people becoming “effective thinkers, effective actors, effective relators and effective accomplisners”. Whatever we decide, and however difficult the process of deciding might be, there is value in coming to consensus on a new set of basics to expand the “core” of the past.

Up until quite recently, information was hard to acquire and store, and got shared slowly. Now, and in the future, information is trivial to store, and travels instantly. For most of history lasting up to within the past several hundred years, it was possible for most of the available knowledge and skills in a part of the world to be acquired by one person, or a small group. Today we all know that there is far too much breadth — and far too much detail in any area — for anyone to acquire it all. The amount we now know as humans is too great for anyone to master even by devoting their life to it.

As knowledge has exploded, so has the list of key skills or competencies, subject matter, and “educations” that the curriculum is expected to cover. The main difficulty stems from the fact that frequently it seems inappropriate excluding any of these key skills or subjects, and yet it is impossible to deal with such never-ending lists. This is true as well for the incredible amount of detail now available *within* each subject area and skill. In designing the curriculum we therefore need to find ways to cut the vast amounts of knowledge and skills to manageable proportions. Unless we do this, focusing on the breadth of what should be taught and learnt

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will prevent us from introducing the necessary changes in the traditional organization of the curriculum.

We have, in the past, too often defined education as “knowing a lot”, rather than as “understanding what is the core and be able to use it”. Currently there is far too much “content” and far too little depth of understanding. Focusing on core messages and reducing detail are key, and are different to “losing depth” (which many fear). It is more useful to understand concepts and “arcs” than facts and examples. Learners far too often lose sight of the forest for the trees, and losing this perspective makes education a collection of undirected trivia. Were we to do a better job of reshaping the curriculum around a set of new “basics”, and revisiting those basics over time to see whether our understanding of them has improved.

Making space for personalized learning in and through the curriculum

This presents further challenges for curricular innovation. Personalized learning means taking into account the background, needs, perceptions and potential of each learner. It means enabling each lifelong learner to learn at his/her own pace and to be focused on or extended in areas of particular relevance, interest and challenge. **Personalizing education means respecting, understanding, and building upon the uniqueness of each person within collaborative environments viewed as learning communities where all are needed and all support each other.** It requires carefully articulated and subtle curricular flexibility and sensitivity. Digital technologies can be of considerable help in this domain: suffice it to say that some of the greatest advantages of these technologies have to do with their potential contribution to personalized learning.

Personalization can also be viewed as a strategy for dealing with the (unmanageable) amount of knowledge and content. Even as we provide everyone with educational opportunities, we are now entering a world where individuals can, and should, to a large extent follow their own interests and passions during their learning journey. Beyond the basics, it is likely that not everyone needs to receive the same content for living in the future world. The curriculum needs to be clear, as to where learners have choice in what education to pursue and what the available parameters are.

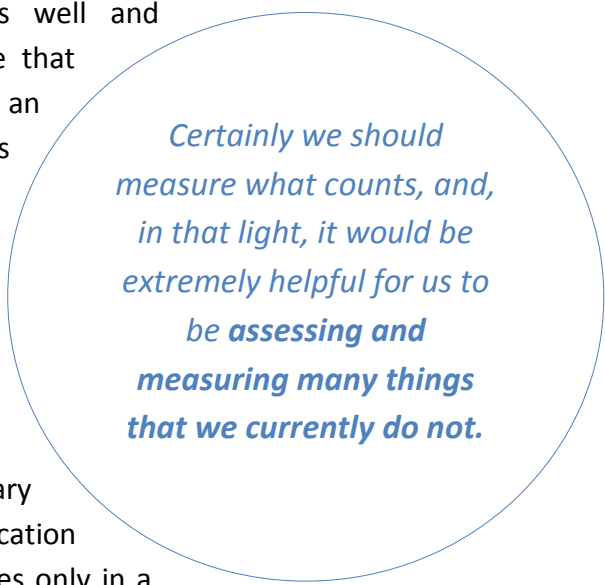
Many argue that the curriculum needs to be based primarily on the essential, generalizable skills people will need to possess in the future, rather than on subject matter “content” that is in many cases changing



We have, in the past, too often defined education as “knowing a lot”, rather than as “understanding what is the core and be able to use it”. Currently there is far too much “content” and far too little depth of understanding. Focusing on core messages and reducing detail are key, and are different to “losing depth”.

rapidly. Content is certainly necessary, but most of what we need is specific to our individual lives and work. Many skills (or competencies) differ from content in that they are — if we make them — generalizable. One can start generalizing from content, and this can be useful (the French Revolution is representative of all revolutions), but often starting from skill is far more useful if we focus on how the skills can be applied and “transferred”. Transfer, itself, is a skill to be mastered — something often overlooked in our rush to measure how much of it happens. It is therefore important to find ways to presenting the full gamut of needed skills to all, while keeping content — beyond a small base — individualized. And those skills (or competencies) should not be developed in a vacuum, but contextually.

We typically look for, measure and reward student achievement mainly on the basis of the amount of “content” that they have accumulated and are able to reproduce. Today’s students, particularly when working together, and even more when aided by technology (although even without it) can accomplish far more than people of their age ever could previously. Accomplishing things in the real world should not only be *a minor part* of the curriculum, it should be one of its most important components — surrounded and informed, in a new educational matrix, by all the skills and content learners need to accomplish the projects well and successfully. In the end, what it critical is to ensure that learners have developed, as a result of their education, an understanding of how to apply their unique mix of skills to real-world situations, that they master the numerous skills that are increasingly needed, and that they have become the kind of good, capable, and engaged person required for building a better society and world — no matter how much curricular content they may have “assimilated”.



Certainly we should measure what counts, and, in that light, it would be extremely helpful for us to be assessing and measuring many things that we currently do not.

Evaluating educational programs has become a primary concern among many policy makers and national education authorities. However, the focus is on learning outcomes only in a few areas — typically language, mathematics and science —without a holistic approach to “learning”. This can prevent us from capturing and understanding the whole “learning” that has (or has not) taken place, and even less what learners are becoming. What is far more important is that we assess *the right things*.

Certainly we should measure what counts, and, in that light, it would be extremely helpful for us to be *assessing and measuring many things that*

we currently do not. “Empathy”, for example, is regarded by most as an important skill for students and as an essential skill for teachers. Yet we currently don’t measure it at all — at least in any quantitative and recorded sense. “Attitudes”, a central component of competencies, are rarely assessed. And, to a large extent, assessment still concentrates on the amount of knowledge (“content”) that has been accumulated. We have to think in new ways about how to assess learning more holistically, and we should make doing this a priority.

Global citizenship education

The proposed development agenda for the forthcoming years speaks of ensuring sustainable consumption and production patterns; of developing sustainable forms of energy; of sustainable economic growth; of making cities and human settlements sustainable; of taking urgent action to combat climate change and its impacts; of the sustainable management of water; of the sustainable use of the oceans, seas and marine resources; of the sustainable use of terrestrial ecosystems and the sustainable management of forests; of inclusive societies for sustainable development; and, in sum, of the importance of a global partnership for sustainable development.

In all of this, education, and the curriculum in particular, have a critical role to play: not only in ‘green skills (or competencies) for green jobs’ but also in curricular development for a citizenship education that is global in its orientation, that implies the respect and responsibility associated with an ethics of integrity, with planetary stewardship, and with the equitable sharing of resources that is consonant with social justice and a prerequisite for peace.

We know that poverty alleviation depends to a significant extent on job creation, which is in turn dependent on economic growth. But the current modality of economic growth is predominantly carbon-based. To reduce poverty by stimulating national economic development, we are destroying our natural environment. The most dramatic consequence of this is climate change – quite apart from lives blighted by industrial pollution of the air, water and land, particularly in developing countries. Climate change and the consequences of industrial pollution are not just issues of environmental sustainability. They are issues of social justice. It is the poor who will suffer most from the consequences of climate change. It is the children of the poor who will suffer the physiological consequences of having their local environments given over to industrial production for the distant rich, and their water, soil and air fouled.

Education, and the curriculum in particular, have a critical role to play: not only in ‘green skills for green jobs’ but also in curricular development for a citizenship education that is global in its orientation, that implies the respect and responsibility associated with an ethics of integrity, with planetary stewardship, and with the equitable sharing of resources that is consonant with social justice and a prerequisite for peace.



What, then, is the role that curriculum can play in helping the leaders of tomorrow develop alternate futures, so that we might leave the future generations with a world more sustainable than looks the case today? Would multi-disciplinary approaches to curriculum and learning enhance our ability to see and understand the complex interrelationships in all of this, to see the networks of interdependence in which we are enmeshed, to see the global consequences of our every act of consumption, for example, for what they are? New approaches to curriculum are central to meaningful education for sustainable development.

Green competencies for green jobs is one domain in which curricular innovation can play an important role, and competencies for holistic development are relevant here. What needs to be additionally highlighted is that such competencies would integrate the content knowledge and the skills associated with green technology, and, critically, the values and attitudes associated with sustainable development and with sustainable ways of living. And that takes us to a consideration of the role that citizenship education can play as a cross-cutting curricular theme in this regard.

It can be argued that a diminished willingness to take responsibility for the consequences of our actions is, unfortunately, all too typical today. Given the diversity, complexity, and increasingly globalized nature of a world constituted by infinitely many social interactions, our actions have consequences far beyond what we could ever imagine — and we just do not have the ethical rules to guide actions the consequences of which cannot be foreseen.

This diminished willingness to take responsibility for the consequences of our actions is all the more unfortunate given the following four critically important features of our contemporary world that are closely associated with the process of accelerated globalization: (i) the exponentially increasing gap between rich and poor, in the face of the advantages of a globalizing economy accruing predominantly to the rich; (ii) the progressive destruction of the planet's natural environment and the probability of catastrophic environmental instability in the face of global warming; (iii) the fact that for the first time in history, more than half of humanity lives in urbanized environments; and (iv) the intercultural and even inter-civilizational tensions that are associated with globalization's increasingly multicultural societies and a smaller, more interconnected world.



Curricular innovation in the domain of citizenship education that would prepare young people to take responsibility for the consequences of their actions and to commit themselves to a humanly decent response to the four critical issues above entails asking serious questions about current civic and values education in the curriculum. Civic education that is solely patriotic in orientation will continue the competitive degrees of selfishness that have landed us where we are. Civic and values education need to be reconceptualized in terms of global citizenship and responsibility — and more so than is the case in countries where this shift is already underway.

Accepting responsibility for the consequences of our actions is difficult in an increasingly connected world where those consequences can be very far-reaching and where we often cannot know or predict such consequences. But insofar as we can know and predict, we should be acting in ways that are at least respectful of each other. These are the moral circumstances which should be addressed in citizenship and values education. These are the values that the curriculum should aim to instil in young people.

Furthermore, the holistic development focus **on inclusion and on social cohesion** should also be **global in orientation**. Its focus on development to get people out of poverty should be just that: **holistic and sustainable**. The values associated with sustainable ways of living should constitute the core of any reconceptualized citizenship education. Education in sustainable ways of living is both local and global in orientation: the former, obviously so; the latter, because of the global consequences for everybody of each of our 'lifestyle' choices.



Final remarks

As we have called for some radical reconceptualization and a shift of paradigm with regard to some critical aspects of the curriculum in seeking to reposition it to support not only the effective realization of SDG 4 but the entire post-2015 sustainable development agenda, so we call in conclusion for a shift in mindset with regard to the curriculum itself.

Curriculum needs to be understood not as a stack of subject syllabi and the associated textbooks, teacher guides and timetables, but as the means through which education supports development, holistic and sustainable. **“Curriculum, the quality, inclusiveness of lifelong learning and the development-relevance of education”** needs to become our mantra as we confront the post-2015 education and development landscape. For reforms to be effective, the curriculum should reflect a society’s shared vision of education while taking into account local, national and global needs and expectations. It should be based on multi-stakeholder discussions that seek common understandings and political and social consensus.

What is needed as we confront the post-2015 landscape is a root-and-branch audit, assessment and evaluation of the curriculum, in terms of its purpose, content and associated skills and values, in every country that is serious in its commitment to achieving the targets associated with SDG 4 and the entire post-2015 Sustainable Development agenda. The principal guiding question in any such audit and evaluation would be, **“Is the curriculum fit for the purpose it has to serve in the effective realization of SDG 4, and in the commitment to the post-2015 development goals in their entirety?”**

