

Background paper for the Futures of Education initiative

Learning for uncertain futures: the role of textbooks, curriculum, and pedagogy

by Andy Smart¹, Margaret Sinclair², Aaron Benavot³, Jean Bernard⁴, Colette Chabbott⁵,
S. Garnett Russell⁶ and James Williams⁷

Networking to Integrate SDG 4.7 and SEL into Educational Materials (NISSEM)

¹Independent Education Consultant, ²Research Associate, School of Education and Social Work, University of Sussex, ³School of Education, University at Albany, State University of New York, ⁴Spectacle Learning Media, ⁵International Education Program, The George Washington University, ⁶S. Garnett Russell, George Clement Bond Center for African Education, Teachers College, Columbia University, ⁷UNESCO Chair in International Education for Development, The George Washington University

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Abstract

Sustained globalization, together with threats posed by climate change, armed conflict and pandemics, are exacerbating a sense of uncertainty in how children and young people live their lives and prepare for the future. This paper argues that textbooks and pedagogy represent potentially transformative strategies to restructure young people's learning and expand their social and emotional capacities as they make the journey to adulthood.

The pedagogical strategies and instructional materials prevalent in many schools today rely too heavily on a kind of teaching and learning that implies and conveys a sense of certainty. As a result, the strategies and materials fail to help teachers integrate dispositions such as flexibility, resilience and self-direction alongside academic learning into their daily practice. This serves to undermine deeper student learning.

We argue that innovative curriculum, textbooks and pedagogy should promote students' ability to flourish in rapidly changing times. They should facilitate approaches to teaching and learning that prepare both teachers and learners to respond to uncertainty. Such approaches recognize the abiding value of both cognitive and affective learning and acknowledge the need for both conceptual mastery and open-ended learning.

Drawing on universal principles while focusing mainly on low- and middle-income countries, the paper proposes embedding social and emotional learning as well as community and societal values into curriculum and learning materials. It also explores the essential role of teachers' pedagogy in incorporating these dispositions and values. In order to achieve this, we propose the concept of 'strong textbook content', in which academic concepts are complemented by examples of their relevance to students' lives, with particular emphasis on examples that support positive student agency. We also propose the idea of 'strong pedagogy', whereby pedagogical support is embedded into textbooks and other education materials.

The vision of teaching and learning described in this paper requires the development of new or reworked education materials and a reimagining of approaches to teacher preparation and ongoing professional support. Time and resources will be needed for curriculum and textbook writers to identify contextualized content and prepare 'strong-strong' materials. With these innovations in place, young people of today and tomorrow can be guided to develop a more positive and wider sense of identity and efficacy as they acquire lifelong learning skills to help them traverse their future lives.

Schooling as a routine-generating activity (and its unravelling)

Throughout history, many children's lives have been characterized by time-consuming duties, vulnerability and vicissitude. In some societies, children were responsible for looking after crops, cattle or siblings. In others, they have been left behind as parents migrated to cities, or have been forced into child labour, uprooted from their communities by war and ethnic conflict, or conscripted into military units. Apart from those who grew up in stable, privileged settings, many children lived, and continue to live, lives of considerable uncertainty, including risks to their psychological and physical health. These conditions still affect many children in poor and conflict-affected contexts.

Traditional educational practices enabled children and young people to transition into adult economic and social roles by helping them acquire locally relevant skills and community-rooted ways of thinking. In this sense, socialization and training served to foster children’s participation in the political, social, and economic life of their communities.

Beginning in the nineteenth century, as schooling was expanded and formalized across the globe, children’s lives became more structured, and their frames of reference broadened. Over the past century, almost all countries have passed compulsory school attendance laws and prohibited child labour. Increasingly, parents have been obliged to invest in their children’s formal education and forego the immediate benefits of their labour – what some demographers view as the driver of the demographic transition (Caldwell, 1982). Newly independent nation-states often saw expansion of mass schooling as a way of forging loyal citizens.

By the dawn of the twenty-first century, augmented by powerful ideologies (education as a basic human right) and social science models (the effects of education on individual futures and the direction of national development), schooling had become a ubiquitous feature of the global landscape. As children gained access to schooling, whether in single-room, poorly resourced schoolhouses, or spacious, multi-room buildings, their lives acquired greater structure and routine. The spread of standardized schooling – with age-graded classrooms and structured content typically reflected in state-approved textbooks – has resulted in a more routinized and predictable childhood.

It is worth recalling this historical transformation as we shift our gaze to the future and to the likelihood that the coming decades will be accompanied by increasing fragility. Overpopulation in some countries and wasteful lifestyles in others are taxing capacities to sustain available natural resources. Human-generated disasters – fires, floods, desertification, water shortages and food insecurity – are predicted to grow in number and intensity, placing more people in harm’s way and forcing the displacement of millions. Rigaud et al. (2018) estimate that by 2050, climate change may internally displace 143 million people in Sub-Saharan Africa, South Asia and Latin America alone. The scale and geographic scope of future disasters and pandemics may shake the foundations of many social institutions, including schooling.

Schooling and inequality

The movement to expand educational opportunity has made state-provided education one of the most widely accessed of all public goods. Education policy statements aim to reach all children, with the promise of social development to meet individual aspirations. Most public education systems have sought to reduce socio-economic, gender, and racial/ethnic disparities by bringing together children from different social groups and ensuring a basic level of education for all. However, the links between education and inequality across different social groups are deep-rooted, complex, and not easily mitigated (Benavot et al., 2019).

Recent events have starkly reminded us of these disparities. By early April 2020, the Covid-19 pandemic had forced 194 countries to close their schools and has affected some 1.6 billion learners.¹ The school closures have massively eroded children’s (and adults’) sense of routine, heightened their perceptions of fragility and highlighted socio-economic and racial inequalities in the provision of education for the ‘haves’ and the ‘have nots’.

In the context of national crisis response, some of the steps taken by ministries of education and sector actors may actually be regressive and may unwittingly undermine former achievements. In the case of Covid-19, educational leaders have demonstrated a remarkable speed in responding, yet much of the recent progress in increasing children's participation and learning prior to the onset of the pandemic is under threat. Hard to reach children – for example, those living in sparsely populated or rural areas or in urban poverty – may have little claim to the educational resources that governments mobilize during emergencies and are at risk of disengaging or dropping out of the system.

When schooling in times of crisis depends on distant teachers transmitting limited subject matter to be learned virtually, it is unlikely to lead to the cognitive and social learning that children need. Moreover, most currently available forms of distance learning do little to address the roles that in-person schooling plays in fostering social identity, peer relations and collective solidarity. When schools are closed, or even partly closed, continuity and equity are both at risk, but so too are the wider purposes of schooling.

(Un)Certainty in schooling: a double-edged sword

Crises can strike in many forms and at many levels of intensity, often rendering conventional, in-person schooling inaccessible to students for weeks, months or even years. A key principle in the literature of education in emergencies (Burde et al., 2017; Mundy and Dryden-Peterson, 2011) is that schools provide displaced and traumatized children with positive, organized activities, social connection, and a degree of stability or normalcy in a world that has been terribly shaken. In situations of flux and displacement, the certainty created by bringing children into temporary classrooms may alleviate fear, stress and anguish. Schools provide a safe space to learn, while teachers, as trusted adults, provide a sense of security that may be lacking outside the school context. This security is reinforced over time, through sustained relationships between students and adults, as well as among students themselves. The security and certainty come from the human factor, rather than from the buildings called schools. The social resilience that is provided by re-establishing normalcy can help children to develop their own personal resilience. At the same time, curricular content may be enriched to address the psychosocial needs of children in refugee settings and other crisis contexts.

Nevertheless, certainty in education can be a double-edged sword. The rigidity that is built into many school systems, starting with the national curriculum and continuing into state-authorized textbooks, can work against social and personal resilience. This tends to happen if what is taught is designed to be learned without question and without opportunities for children to see connections between their learning and their lives. Certainty of this kind establishes set 'blueprints' for learning, views classroom interactions only as a means of arriving at a single 'correct' answer and fails to invite diverse learners to see themselves reflected in the content. By seeking to remove the unforeseen from teaching and learning, this approach removes an essential element of learning. In the words of the education philosopher Gert Biesta, 'if we take the risk out of education, there is a real chance that we take out education altogether' (2013: 1).

Such blueprints of certainty, emanating from unseen authorities and organized in standard lesson plans, fail to prepare students for periods of rapid change, discontinuity, and the unexpected. They also lead to overly simplified instruction and narrowly focused assessments, thereby encouraging teachers to lead learning by rote. This process of memorization and recall undermines both teachers' and students' resourcefulness, critical thinking, creativity, and the degree of autonomy that is necessary for deeper learning. Certainty of knowledge in this sense implies a transmission or 'banking' model of education (Freire, 1970), where knowledge is atomized

into transmittable chunks and where students are given little encouragement to ask their own questions or to identify and navigate ambiguity and where the learning ceases at the moment the text has been memorized.

Such an approach also removes much of the affective dimension from the learning process, which in turn undermines cognitive learning. Although school subjects have their own disciplinary, academic structures,² there is growing evidence that for most learners, cognitive learning does not happen separately from other functions of the brain. Indeed, 'it is literally biologically impossible to build memories, engage complex thoughts, or make meaningful decisions without emotion' (Immordino-Yang, 2016: 18; Immordino-Yang et al., 2018).

Uncertain futures require planners and practitioners to pursue models of education for the whole person that embrace the emotional dimension of learning while systematically building transversal dispositions and skills, such as critical and creative thinking, problem solving and collaboration. These models necessitate stronger links between academic content and real-world challenges and opportunities as well as between our emotional and our social selves. And while crises are an ever-present risk, they may also provide opportunities to foster the kinds of personal and societal resilience that are essential to a process of constructing lives and communities anew, stronger and better.

The redeeming value of social and emotional learning, contextualized

Widespread calls in recent years to reposition schools to promote global competitiveness, economic productivity and technical innovation have prioritized subjects such as mathematics, science and technology. In doing so, they have shifted focus away from the broader social, ethical and political purposes of schooling. Despite this trend, official curricular policies continue to point to the value of social and emotional skills and dispositions that support community engagement and life satisfaction. In some cases, schools are tasked with addressing specific issues such as gender inequality and social tensions, or with promoting a sense of national unity.

In the past ten years, in particular, school systems in the global north have highlighted the significance of social and emotional learning (SEL) for student well-being and academic learning. Concerted efforts are underway to better define SEL,³ to develop methods for teaching it effectively to different age groups, and to find time and curricular space for students to practice it. Recent research demonstrating how teaching SEL in preschools influences life outcomes in subsequent decades has been particularly compelling, especially for improved equity.⁴ To be sure, much of the current research on the impact of SEL focuses on experiences in wealthy, industrialized countries;⁵ but, increasingly, researchers and practitioners are seeking to reflect the priorities of less affluent societies in the global south.

Typically, the domains of social and emotional learning – social, emotional, cognitive, values, perspectives and identity, in one formulation⁶ – focus on individuals' developmental needs but have implications for broader social cohesion. Learning to apply empathy to cooperation, inclusion, avoidance of prejudice and bias, negotiation and conflict resolution are core social and emotional competencies that have resonance at the societal level, particularly in divided societies.

Building on this work, international development and relief organizations have begun to develop policies and programs that include more social and emotional learning, while at the same time raising issues about

appropriate contextualization.⁷ These efforts have been motivated in part by evidence of very low levels of learning, particularly of foundational skills, among children in low- and middle-income countries, even among students who have been enrolled in school for four years or more (World Bank, 2019: 8). Social and emotional engagement – for example, in consciously designed learning experiences, bonding with teachers, with positive peer experiences and being involved in community affairs – is thought to help motivate students and improve retention in school. Motivation and learning attainment reinforce each other (Toste et al., 2020) when well supported by teaching.

Social and emotional learning is necessary not only for academic achievement but also for personal well-being, for inclusion and acceptance of diversity, and to build skills for negotiating solutions to the inevitable problems of our futures before they devolve into active conflict. To prepare teachers to move in this direction, education systems need to reconsider the notion of instruction as the transmission of chunks of knowledge and, instead, embrace new forms of ongoing professional development that guide teachers towards a social and emotional learning-oriented approach to knowledge, thinking and well-being. In turn, this kind of learning will help to prepare students for greater uncertainty; for example, through building flexibility and respect for diversity.

Teachers and ‘learning to become’

The boundaries between formal, non-formal and informal learning are growing ever more porous, as are distinctions among the kinds of online and face-to-face teaching and learning that individuals will encounter during their lives. Many learning opportunities are occurring outside of formal schooling – in workplaces, communities, museums, and at home and, notably, for those with connectivity, through various media platforms that enable practical, often exuberant sharing of knowledge and skills (UIL, 2016). Building on the concept of decentralized learning webs enabled by technology (Illich, 1971), the notion of ‘learning to become’ entails a lifelong and life-wide dimension.⁸ Already, some young people are expected to master new skills at work and adapt to new ideas, lifestyles and relationships multiple times over the course of their lives. Nevertheless, the systematic teaching of language, values, social and emotional learning, life and livelihood skills is accomplished primarily by well-prepared, subject-spanning teachers.

The transformation of the teaching profession to accommodate the growing demand for life-long learning and to foster transversal dispositions and skills will entail both an investment in public education and a redesign of teacher preparation policies, curricula and assessment measures. As the teaching profession diversifies, there is a need to promote effective teaching practices in and across different life stages and corresponding education levels (early childhood, primary and secondary education, higher education, workplace learning and adult education). Whether formal, informal or non-formal, it is critical for these practices to recognize the catalytic role of SEL in cognitive development and academic learning while actively acknowledging the need to adapt to different cultural settings, starting from where teachers and learners ‘are at’.

Embedding transversal goals for sustainable impact

School syllabi and textbooks in most countries continue to reflect legitimated, albeit evolving, subject disciplines that have deep historical roots. Importantly, most teachers qualify for their professional service by gaining

expertise in these subject disciplines. The question then arises: how to reframe teaching and learning towards sometimes universal, transversal goals (Care and Luo, 2016) when such goals need to be interpreted in different ways for different subjects and levels?

Current approaches to introducing social and emotional learning into schools in some countries⁹ rely on additions to the school timetable, including stand-alone courses, cross-curricular project work and extra-curricular sessions, while also depending on teachers to facilitate social and emotional learning through their daily classroom interactions. Though sometimes effective, these approaches are difficult to implement at system level, where, more often than not, priority is given only to subjects that are included in learning assessments and high-stakes examinations (N’jengere, 2017). Many educators (and parents) view transversal themes or cross-disciplinary project work as ‘extras’ which detract from the time needed to study core subjects. Priority content for SEL and building transversal dispositions and skills for sustainable impact must, therefore, be included within priority subjects.

Many countries have committed to developing content and pedagogy that supports social and emotional learning and builds transversal skills. However, transforming policy into practice is easier said than done (Care, 2019; GPE, 2020). The push for learner-centred approaches, touted as a global model (Tabulawa, 2003) and embraced in some systems, has shown little evidence of impact in schools outside the global north. Schweisfurth (2019), Jukes and Sitabkhan (2020) and others have argued for a pedagogy that takes into account instructional cultures, available resource levels and teacher preparation. In order to truly bring SEL and transversal skills to life in classrooms across the global south, coordinated efforts are needed to embed these elements of national education policies into core subject disciplines and, given their centrality in guiding instruction, into textbooks, learning assessments and high-stakes examinations.

The continuing, transformative potential of textbooks

The educational vision of some school systems for the twenty-first century involves schools being fully connected to the worldwide web, with an emphasis on discovery-based STEM¹⁰ education at all levels, and learning programmes tailored to the needs of individual learners. The distance between this vision and the current reality in most low- and middle-income countries is vast: most teachers and learners lack access to the internet, ICT or even radio or television, and this is unlikely to change in the foreseeable future. In our view, for many settings around the world, textbooks¹¹ in some form or another will continue to provide the foundation for basic education for decades to come. In poor, rural or disadvantaged urban areas or in crisis contexts, they are likely to continue to be the only teaching and learning materials at hand.

In many countries, the implemented curriculum is designed locally by schools within a national curriculum framework. In others, where instructional resources are limited, textbooks play a powerful role in guiding classroom practice and often become the *de facto* curriculum. Whether published by government or following government-approved criteria, the textbook in such contexts not only specifies what is to be taught and learned and affects how it is to be taught, it is also a policy document that represents an instrument of accountability to check on teachers’ and students’ progress. The result is that classrooms in such settings may be neither learner-centred nor teacher-centred, but textbook-centred. ‘Teacher-centred’ implies that the teacher has choices, just as ‘student-centred’ gives the student more choices, but a textbook-centred classroom, which is the norm in many places, removes choices from both teacher and students. Thus (assuming that it is followed), the textbook becomes an instrument of accountability for both.

Textbooks give structure to teaching content and pedagogy, but we should be careful not to overstate their influence. Textbooks can encourage good teaching practices, but cannot take account of community context, students' backgrounds or teachers' own experiences and expertise. Textbooks cannot provide students with a sense of worth, nor build the vital relationships that help schools thrive. The enduring value of textbooks lies in their potential to organize content by means of a methodology that engages learners and underscores good teaching practice. Overloaded and poorly written textbooks constrain both teaching and learning. Improved textbooks can support teachers by reinforcing and legitimizing the good practices to which they have been or should have been introduced through professional development (Ensor et al., 2002). Textbooks can thus represent either barriers *to* or carriers *of* new ways of teaching and learning (Smart, 2019).

The paradox of the textbook

Generations of textbooks have tended to reinforce transmission-based notions of knowledge and learning. Many textbooks are still organized in a way that reflects a rigid form of certainty and are rarely, if ever, transformative. Knowledge is presented as fixed and unassailably true, to be accumulated in the form of 'banks' of knowledge, in Freire's formulation (1970).

Furthermore, although all education materials, including textbooks, have the potential to play a role in building social cohesion and creating a unified national citizenry, in some instances they serve to perpetuate stereotypes and divisions among groups (Bellino and Williams, 2014; Tawil and Harley, 2004). The avoidance of politically sensitive topics, omission of key historical events, particularly in history and social studies books, and the biased portrayal of different social groups can exacerbate underlying inequalities and tensions and contribute to conflict.¹²

This combination of fixed text, monotone social perspectives and rigid pedagogy allows little room for critical and creative thinking or social and emotional learning, the very competencies that can help learners to address the uncertainties of their futures.

In contrast, well-designed textbooks can enable students to learn how to learn, foster critical thinking and problem-solving skills, and in doing so prepare them for learning throughout life. Teachers, for example, can teach history as a process of informed interpretation rather than as fixed narrative. Science textbooks, even in contexts that lack laboratory equipment, can acknowledge the nuances of science as well as its social implications. Well-designed textbooks can stimulate learners to reflect on their own circumstances as well as on the circumstances of others, and on the changing social environments that animate their lives. They can provide teachers with focus, structure and pedagogical legitimacy that supports diversity of practice and thinking. To be sure, these processes depend considerably on school cultures and the wider culture of teaching and learning. Yet, textbooks are a critical resource that can embody and legitimise new and different approaches. Where textbooks lead, school and teacher culture may follow.

This, then, is the paradox of textbooks, especially within systems of centralized textbook approval. How can teachers prepare students for a world of uncertainty and pluralism using textbooks that promote singular, monotone narratives? How can education systems nurture and support the professionalism of the teacher, when the textbook limits their engagement and creativity? How can students learn to evaluate and compare sources of information when their learning is guided by a single source of authority in the form of a narrowly

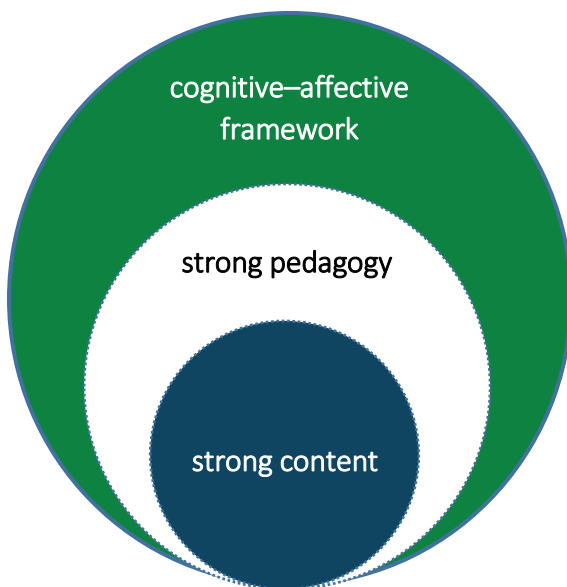
conceived textbook? And, finally, how can textbooks support positive emotional and social learning, when curriculum designers and writers begin with a model for activating only cognitive skills and achieving only academic learning outcomes?

A strong content–strong pedagogy approach to textbooks

Well-written textbooks recognize and reflect both the cognitive and affective dimensions of learning. They include strong curricular content and strong pedagogy. Figure 1 below shows how textbook writers can start with a cognitive–affective framework that provides the infrastructure for what we have called a strong content–strong pedagogy approach.

We use the term ‘strong’ not only to reflect conventional good practice in materials development but also to support the skills, dispositions and agency that are needed for learners to be better able to face both the predictable and the unforeseen challenges of the future. Textbooks and other learning materials, aligned to socially relevant themes and values that reflect broad, national or regional education policy and curriculum visions, should aim to create strong relationships and connections. These include not only learners’ relationship with academic learning itself, but also the connections among learners, between learners and teachers, and between learners, their communities and their physical and social environments. A focus on the importance and variety of these relationships can inform the selection of content and pedagogy employed in the textbook.

Figure 1: Blending strong content and pedagogy within a cognitive–affective framework



Strong content not only fosters the development of foundational, conceptual knowledge in curricular subjects; it also reflects the nuances and diversity of students’ own lives and promotes inclusion. In textbooks with strong content, the text acts as a carrier for key subject concepts while ensuring an appropriate variety of conceptual definitions, respected opinions, and sources as well as maintaining relevance to the natural, social, economic,

and environmental contexts of the country. To count as strong, the textbook will also be – as adapted to each subject – a strong carrier for transversal values and dispositions such as inclusion, collaboration, negotiation, volunteerism and their application to societal and environmental concerns. Strong textual content strikes an appropriate balance between ‘fixed’ and ‘less fixed’ kinds of knowledge (whether it is the study of syntax, the characteristics of mammals, or forms of economic and societal activity) as well as between concepts and their applications to human well-being.

Strong content also supports the values and dispositions that underpin personal and social resilience. For instance, early grade literacy and language arts materials offer a platform to promote themes of inclusion, diversity, conflict resolution and caring for the environment through the creation of characters and story lines that exemplify positive attitudes and social behaviours as well as emotional engagement.¹³ The sciences offer multiple opportunities for examples of youth agency and citizenship, particularly in relation to environmental care and adolescent health (Sinclair, 2018). One such initiative, the Smithsonian Science for Global Goals programme, illustrates the role of local socio-scientific issues in encouraging students to build an identity committed to positive local and global futures (Blanchard et al., 2019). As an example of strong content in the sense of promoting social resilience and well-being, the concept of ‘habitat’ should be accompanied by the concept of ‘habitat preservation’, which introduces values and opportunities for personal and social agency while illustrating core scientific concepts.

For the social sciences, the examples used in national textbooks must be sensitively selected because schools cater to students from all sections and regions of society and draw teachers from these same groups. The social sciences can incorporate topics that explicitly introduce positive social and emotional skills in age-appropriate fashion.¹⁴ The treatment of the past in language, history or geography textbooks provides opportunities to practice critical thinking by viewing events from multiple perspectives. Generating content supportive of tolerance and a culture of peace demands sustained effort. Even in countries that prefer to tell a single ‘tale’ about the past in order to promote unity or entrench the power of a governing group (Paulson, 2015), the dominant narrative can be diversified.

Rethinking the content of textbooks depends on changing how they are created. Discussion between professional writers, illustrators and editors from different social groups will help identify topics with authentic nuances that can both sow the seeds for a more harmonious future and help young people survive in a politically charged environment. Writers should also be aware of problems inherent in the potential use of national textbooks by refugees and those displaced internally, as part of wider concerns around language, identity, gender, and conflicting ideologies.

Strong pedagogy, as a complement to strong content, supports open-ended learning, strikes a balance between lower-order activities and higher-order questions and activities.¹⁵ It also recognizes and responds to the emotional and social dimensions of how students learn and acknowledges how well-designed learning modalities can themselves reinforce positive social and emotional skills and dispositions. Because it is both teacher-centred and student-centred, this kind of teaching provides learning opportunities that allow the teacher to guide students to interpret and discuss textbook content, using a balance of closed and open-ended questions together with guidance for the teacher to support students with prompts, encouragement and constructive feedback. It uses pedagogical approaches that enable the ongoing practice of social and emotional skills such as respect for all, empathy, cooperation, conflict resolution and reconciliation.

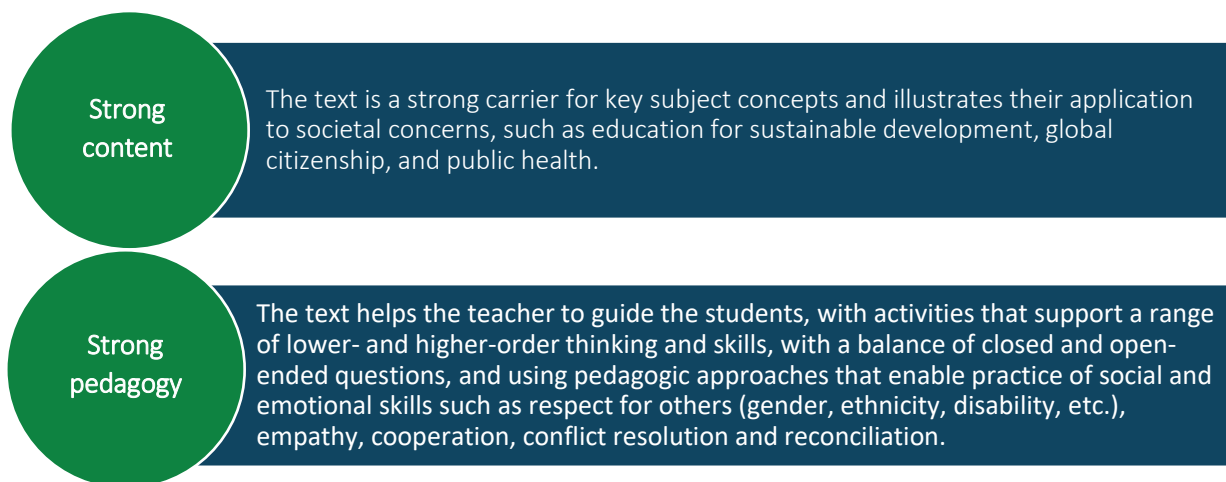
For textbooks to encourage critical thinking and deep learning, they must avoid dense passages of expository text that are difficult for students to comprehend. Instead of using precious classroom time unravelling the text and quizzing students on its surface meaning, textbooks should support teaching practices that move beyond

simple decoding toward challenging students to think critically and creatively. This can be done, in part, by adjusting informational or narrative texts to students’ actual reading levels and by introducing a more open-ended and supportive pedagogy.

As part of the process of embedding transversal dispositions and skills into traditional subjects, two neglected tasks must be considered. One is for concerned educators, academics and civil society actors to work with youth to identify key ‘take-away’ messages and behavioural learning goals. For example, to face the future, students should leave school with deep understanding, commitment to and practice of respect for diversity and social cohesion; of protecting the country’s forests, cultivable land, and coastline, as applicable; and of promoting relevant public health measures, among others.¹⁶ Another task is to find age-appropriate examples to strengthen take-away messages and goals, such as inspirational news stories describing positive action by children and youth. Writers can translate these examples into classroom lessons that both reinforce basic concepts in their respective disciplines and make them relevant to the real world and to students’ futures.

The features of strong content and strong pedagogy embedded in textbooks and learning materials are summarized in Figure 2 below.

Figure 2: Summary of key elements of strong content and strong pedagogy in textbooks



In education systems based on standard, subject-based curricula, we recognize that the examples of socially relevant content we have mentioned may be more applicable in some subjects than in others. The discipline-based, cognitive structure of academic subjects must still be reflected in how textbooks are organized, even within a cognitive-affective framework. We also recognize that context is paramount: the strong–strong approach to content and pedagogy must be designed from within each curriculum and cultural context, requiring the allocation of time and resources to generate materials that can resonate with and motivate both teachers and learners.

Looking to the future, we believe that strong content, supported by strong pedagogy and social and emotional learning – and reinforced by well-designed training and professional development for teachers – can lead to optimal learning. Rather than presenting barriers to learning, textbooks based on this approach can help foster the acquisition of transversal dispositions such as critical thinking, creativity, and multi-perspectivity, which can help students deal with uncertainty in their present and future lives.

Achieving the vision

This paper has addressed concerns about equity and the quality of education in the coming decades, focusing mainly on issues related to embedding content and pedagogy in education materials. Millions of children and young people have access to no learning materials of any kind, and many more have access only to poor quality materials that fail to support teachers in building the kinds of knowledge, skills and dispositions students will need to face the uncertainties of the present and the future. Therefore, an adequate supply of inclusive textbooks, with strong content and strong pedagogy, is a priority concern for policy makers, both in times of crisis and of relative stability.

Textbooks, now and in the future, may take many forms; however, there is likely to be a continuing role for printed materials, whether used face-to-face in physical classrooms or for distance learning. The Covid-19 crisis has opened opportunities for the improvement and widespread use of digital approaches, but these cannot, in the medium-term future, meet the needs of less privileged children. Currently, there is some potential for teachers to be supported by smartphone messaging services, such as WhatsApp, that are widely available even in low- and middle- income countries. Such tools can be used to remotely guide students (those with access) in using their textbooks or other resources for continued study and preparation for high-stakes examinations. However, the Covid-19 response has starkly exposed the discomfiting fact that many children and young people lack access to the internet, to digital devices, broadband cellular networks and even to radio or television. Given the probability that this situation may continue well into the future, the paper has focused on the question of how a new generation of textbooks can better serve the needs of all learners in the coming decades to improve the quality of their learning and its relevance to the challenges that lie ahead.

We have described a vision in which teaching and learning materials – notably textbooks, because of their widespread prevalence and use – can be redesigned to support teaching and learning of positive social and emotional skills and the application of these skills to the societal and environmental challenges of the twenty-first century. This is part of what we believe to be education’s core mission of supporting the acquisition of knowledge, skills and values in preparation for uncertain futures. The paper has explored ways that educational materials can go beyond merely ‘covering the syllabus’. They can become vehicles for activating social and emotionally guided pedagogy and promoting pro-social and pro-societal goals. By ‘learning to become’, students can acquire self-directing and interpersonal skills, inclusive identities and a sense of local, national and global citizenship, even in the face of uncertainty.

We realize that embedding behavioural goals in national policies is one thing; ensuring that they become an integral part of classroom life is quite another. To do so requires innovative approaches to curriculum and textbook design, teacher preparation and professional development, and assessment policy. In the context of UN Sustainable Development Goal, Target 4.7, following NISSEM (2018), we recommend the following actions:

- *Integrate* SDG Target 4.7 themes into education strategic plans and policies;
- *Promote* the teaching of Target 4.7 themes through social and emotional learning (SEL);
- *Engage* local stakeholders in developing local materials relevant to Target 4.7 themes;
- *Embed* structured pedagogy in instructional materials to support student engagement and agency.
- *Revise* education materials to foster inclusive national and global identities;
- *Measure* and *monitor* Target 4.7 learning in terms of attitudes, behaviours, skills and content knowledge;
- *Invest* in systematic trials of revised teaching and learning materials, using results to improve materials iteratively; and,

- *Secure* donor commitments to contextualize, revise, trial and finalize Target 4.7 and SEL into education materials.

Initially, national and international financing and technical expertise will need to be marshalled in support of such innovation, translating intentions into national policies and concrete action. This will be followed by reviewing curriculum frameworks and the modalities for preparing education materials as well as approaches to how learning is assessed. More funds and energy will need to be devoted to developing, implementing and evaluating materials along the ‘strong–strong’ lines put forward above. National policy commitments are often already in place, but curriculum developers and textbook authors will need additional time and resources to generate contextualized and motivational materials that can support academic learning while cultivating student well-being and agency for the good of their country and the wider world.

Conclusion

Crises and risks are more likely to become major disasters if we do not prepare adequately for them. Countries and international donor organizations can help today’s students prepare for uncertain futures by committing to a new generation of textbooks that enable young people to develop a wider sense of identity, acquire lifelong learning skills and embrace values that recognize our common humanity in the face of a rapidly changing world. With the support of actively engaged teachers, young people will be better prepared for twenty-first century challenges – be they economic, civic, political, environmental or cultural. We envision a model of education in which textbooks and other learning materials forge strong connections between individuals and other members of their learning community as well as with the wider social and natural environment. We believe that such social and emotional dimensions can enable learners not only to engage with academic content, but also to develop mutual respect, address inequity, face fragility and risk, and build more equitable and peaceful societies.

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Notes

¹ For continual updates on country-wide closures and affected learners, see UNESCO, 2020, *Education: From disruption to recovery*.

² These structures aim to systematically build conceptual understanding and provide subject-specific frameworks for teaching and learning.

³ Defined by Elias et al. (1997, p.5) as ‘the process of acquiring core competencies to recognize and manage emotions, set and achieve goals, appreciate the perspectives of others, establish and maintain positive relationships, make responsible decisions, and handle interpersonal situations constructively’.

⁴ For a summary of a recent study on long-term benefits of high quality early childhood education, see Heckman (2020), [The lifecycle benefits of an early childhood program](#).

⁵ To date, the great majority of studies on the impact of SEL has taken place in what Heinrich, Heine and Norenzayan (2010) refer to as WEIRD (Western, educated, industrialized, rich and democratic) societies.

⁶ Visit Harvard University’s EASEL (Ecological Approaches to Social Emotional Learning) Lab [website](#) for a comprehensive discussion of SEL domains, frameworks and related skills.

⁷ See Jukes (2019); Jukes and Sitabkhan (2020).

⁸ We understand UNESCO’s concept of ‘learning to become’ as a philosophy or pedagogy of education that views learning as a process of continual unfolding that is ongoing and lifelong. It emphasizes potentials, rejects determinism and expresses a flexible openness to the new. It invokes the need to develop the capacity to imagine a good and fulfilling life. Although greater specification of the notion is likely forthcoming, several points about the current view of ‘learning to become’ can be considered. First, the notion is not distinct from, or exclusive of, the original four-pillar model of learning (Delors et al., 1996). Rather, it encompasses some, if not all of them. Second, the notion emphasizes the overarching purpose of learning, with an emphasis on imagined futures, of possibilities and potentialities, of a life worth living, even under conditions of material constraints. The notion makes almost no reference to the concrete settings in which learning takes place. Third, it views learning not as a process of internalizing a fixed body of culturally approved knowledge, to be conveyed by schools or in other educational settings, but rather as an unfolding, open-ended, continual and lifelong process. Fourth, it is not entirely clear whether the concept is equally relevant to individual learning processes as well as to collective ones. Stated differently, how would a society or community ‘learn to become’? How does learning to become relate to a transformed society, apart from the aggregation of transformed minds?

⁹ Among many examples, see State Council of Educational Research and Training, Delhi, (2019) Happiness Curriculum http://www.edudel.nic.in/welcome_folder/happiness/HappinessCurriculumFramework_2019.pdf and Mexico’s *Online Toolbox* for teachers, <https://atentamente.com.mx/>

¹⁰ Science, technology, engineering and medicine

¹¹ In this paper, we define ‘textbooks’ to be core education materials, whether in print or electronic form, hand-held or on screen. In a sense, the format of textbooks, whether paper or digital, is less important than their role in interpreting the curriculum and for structuring teaching and learning. Where resources are most limited, only the teachers may have textbooks for their personal use.

¹² See Williams (2014); Bellino and Williams (2014); Williams and Bokhorst-Heng (2016); Rizvi and Bonfiglio (2019); Russell (2020).

¹³ Bernard (2019) describes a range of examples of how supplementary reading materials tied to the Ugandan national literacy curriculum can support emerging reading and writing skills while explicitly supporting social and emotional learning and promoting SDG 4.7 themes.

¹⁴ Smart (2019) gives an example of a social studies unit on ‘tolerance’ in Bangladesh, designed to utilize pedagogy based on social and emotional learning to convey social content.

¹⁵ Lower order learning activities include, for example, decoding, memorization, repetition and recall. Higher order activities include problem solving, reconstructing, analyzing, applying and evaluating. See Anderson and Krathwohl (2001) for a revised version of Bloom’s (1956) taxonomy of educational objectives, upon which these classifications are based.

¹⁶ There are lists of key health messages: as an example, a set of take-home facts and guidance for malaria (Government of Uganda, Ministry of Health, 2018; UNICEF, n.d.) or for child nutrition (UNICEF, n.d.). Short lists of this kind for any kinds of prosocial and pro-societal behaviours considered vital for the future can be developed and accompanied by examples of young people acting positively together. Measures to counter malaria could fit in with learning about insects or human biology or the study of the water cycle, and so on for other messages, attitudes and values.

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