

Methods and Limitations

METHODS

Key education policy and curricular documents were collected from 22 countries in Asia, and a total of 172 documents (including national curriculum frameworks and the 4th and 8th grade subject curricula of core subjects) were analysed using a common coding scheme (see **Appendix I** for the detailed coding methods and **Appendix IV** for the list of documents coded). In total, 19,197 excerpts were coded as relevant to concepts embedded in SDG 4.7 (on average, 872 excerpts per country). The number of excerpts coded

varies significantly from country to country partly due to variation in the number of official documents available for coding. Within the curriculum, the review focused on core subjects (mathematics, science, social studies and languages) at primary and junior secondary school levels, specifically Grades 4 and 8. The curricula for civic and citizenship education, and for subjects such as values education and moral education were also examined in countries where these are separately taught. The coding scheme built on and expanded similar reviews conducted by UNESCO (2016a) and the International Bureau of Education (IBE) and APCEIU (IBE-UNESCO and APCEIU, 2016). The scheme consisted of 14 coding categories derived from the wording of SDG 4.7 and competencies (knowledge; skills; attitudes, values, dispositions; behaviours and action) emphasised in UNESCO's work on ESD and GCED (see **Box 1.1**).

22
countries

172
documents

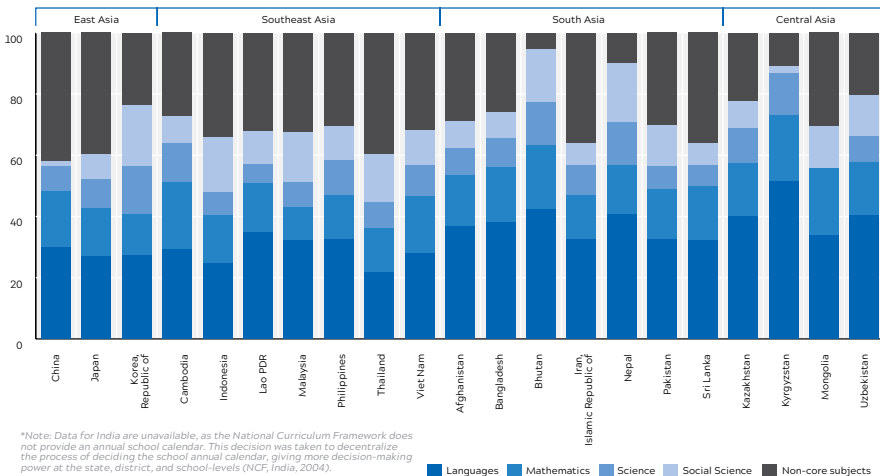
19,197
excerpts

Box 1.1 The 14 coding categories

ESD/GCED themes	Competencies
1. Economic dimension of sustainable development	11. Cognitive skills/critical and systemic thinking
2. Environmental dimension of sustainable development	12. Attitudes, values and dispositions
3. Good health and well-being	13. Behaviour and action
4. Human rights	13.i. Transversal/Cross-cutting skills
5. Gender equality	13.ii. Responsible lifestyles
6. Culture of peace and non-violence	13.iii. Activism
7. Justification and general orientation about global citizenship	
8. Global systems, structures and processes	
9. Global issues	
10. Interconnectedness	
	14. ESD, GCED and other educations

Previous reviews have focused on so-called ‘carrier subjects’ of 4.7-related concepts such as civic and citizenship education and social studies or social science. But the current study looked at the official curriculum for ‘core subjects’ as a whole, given the privileged position they occupy in school curricula in terms of instructional hours, their mandatory and examinable status, and the role they play in forming enduring dispositions of children and adolescents. The aim was to illuminate the *prevalence* or the *relative weight* of different concepts embedded in 4.7 (e.g. human rights, gender equality, global citizenship) in core education policy and curricular documents.

Figure 1.1 Percentage of instructional hours allocated to core and non-core subjects Grades 1-9



In addition, school timetables for Grades 1-9 were collected from all countries except for India, where the National Curriculum Framework does not provide an annual school calendar. This decision was taken to decentralise the process of deciding the school annual calendar, giving more decision-making power at the state, district, and school-levels (NCF, India, 2004). The comparative data of instructional hours can be found in **Appendix III**. **Figure 1.1** shows the percentage of instructional hours allocated to core and non-core subjects, calculated based on timetables collected, which clearly shows that more than 60 per cent of total instructional hours for Grade 1-9 is allocated to core-subjects in all countries except China, and the percentage goes up to more than 70 or even 80 per cent for some countries.

The current review was conducted as a pilot partly with the aim of informing future exercises in the Asia-Pacific or other regions. The use of the common coding scheme posed challenges inherent to content analysis as a methodology for cross-country comparison. Although several measures were taken to minimise the level of subjectivity and ensure inter-coder reliability (see **Box A.1 of Appendix I**), those embarking on similar exercises in future could benefit from considering a number of challenges encountered in this instance. Major methodological challenges include those related to coding as well as the drafting of country-level background reports contributed by national research teams (see **Stage 1 of Review Design in the Introduction**).

LIMITATIONS

In an attempt to sketch an initial broad picture of SDG 4.7 content in national education policy and curricula across Asia, the numerical coding results of this review highlight some intriguing regional trends (see **Chapter 2**). However, several aspects of the review process must be made explicit and subjected to critical reflection before presenting its findings. The design of the coding scheme and the coding methods employed, the nature of the data analysed, and the process of forming research teams all suffered from significant limitations. This section details these limitations and makes methodological decisions related to the review transparent to the reader.

1. Coding Scheme and Procedure Limitations

Coding Scheme Design

Establishing a coding scheme made it possible to quantitatively evidence the prevalence of concepts associated with SDG 4.7 in education policy and curricular documents. Given the complexities and ambiguities of these concepts, the coding scheme was not developed from scratch but based primarily on the wording of SDG 4.7 and coding categories developed for two recent UNESCO studies (IBE-UNESCO and APCEIU, 2016; UNESCO, 2016a).

Notions of 'global citizenship' and GCED:

As a concept and a term promoted by UNESCO, GCED is quite new by comparison with notions such as ESD, human rights education, peace education and education for international understanding. GCED was introduced by the UN Secretary General's Global Education First Initiative (GEFI) launched in 2012, which put forward three priorities: (i) put every child in school; (ii) improve the quality of learning; and (iii) foster global citizenship. Coupled with international discussion of the post-2015 development agenda, the final years of the UN Decade of ESD (2005-2014) witnessed reinvigorated debates over the need for educational transformation to meet the challenges of the 21st century.

According to one definition put forward by UNESCO, GCED is a 'framing paradigm which encapsulates how education can develop the knowledge, skills, values and attitudes learners need for securing a world which is more just, peaceful, tolerant, inclusive, secure and sustainable' (UNESCO, 2014b, p. 9). This definition is so abstract and broad that it encompasses ESD as well. GCED is also described as a 'metaphor' that seeks to extend intellectual and emotional horizons beyond the nation-state without, in any manner, weakening national and regional identities (UNESCO, 2016c). While UNESCO has avoided defining GCED in a prescriptive manner, this has become a problem in operationalising the notions of 'global citizenship' and GCED. Responding to the need to monitor SDG 4.7, much energy has been dedicated to distinguishing GCED from more conventional citizenship education.

The IBE-APCEIU study (IBE-UNESCO and APCEIU, 2016), focusing on global citizenship concepts in the curriculum guidelines of ten countries, derived coding categories from UNESCO's definitions of GCED and the International Association for the Evaluation of Educational Achievement's (IEA) international studies of civic and citizenship education. This study emphasised '[distinguishing] GCED from aspects of [Civic and Citizenship Education] that have traditionally dealt with international world-wide topics', in an attempt to 'identify the global citizenship and related concepts in the curricula's learning goals and content' (IBE-UNESCO and APCEIU, 2016, p. 10). While adopting the categories developed by IBE-APCEIU study, the coding scheme used in the current study also allowed the coding of more traditional content on international topics under the category of 'interconnectedness', derived from a study commissioned by the Global Education Monitoring Report – GEMR (UNESCO, 2016a).

Although the notions of 'global citizenship' and GCED are often contested in academic literature, there seems to be a broad consensus around the desirability and universal relevance of GCED conceived as an 'approach of transformative education for critical and active engagement in a globalised society' (Fricke et al., 2015, p. 8). In terms of monitoring SDG 4.7, however, it is not clear whether GCED means education for 'global citizenship', 'citizenship education' that has integrated global dimensions, or both. This complicates the task of operationalising GCED,

as there are not only different conceptions of ‘global citizenship’ (see Oxley and Morris, 2013; also see **Table 1.1**) but also different conceptions of ‘citizenship’ as well as ‘citizenship education’ (Johnson and Morris, 2010). Furthermore, determining what we mean by ‘transformative education’, what constitutes ‘critical and active engagement’, or which ‘global issues’ are worth including as coding categories can all be subjective acts which privilege a particular understandings of GCED – often those articulated by European scholars.

Box 1.2 What is transformative education?

The notion of ‘transformative education’ is used broadly by UNESCO, both in terms of delivering the ‘unfinished business’ or ‘broken promise’ of Education for All (EFA) and of promoting values-based and action-oriented education that aims at changing attitudes, values and behaviours. In most general terms, transformative education refers broadly to educational efforts to make the world a better place.

In the context of SDG 4.7, ESD and GCED are seen as ‘transformative’ in the sense that they empower learners to become agents of change. In the roadmap for implementing the Global Action Programme on ESD, UNESCO (2014a) characterises ESD as ‘holistic and transformational education’, which ‘achieves its purpose by transforming society’ (p. 12). In its guidance document on global citizenship education, UNESCO (2015a) states: ‘Global citizenship education aims to be transformative, building the knowledge, skills, values and attitudes that learners need to be able to contribute to a more inclusive, just and peaceful world’ (p. 15).

Among environmental and sustainability educators, two questions are central to the notion of transformative education: (1) What kind of change — in values and perceptions as well as in social, political and administrative structures — do we need in order to achieve a transition to sustainability? and (2) what does this imply for learning? ESD can be considered in three stages progressively involving first-order, second-order and third-order learning. They correspond to education *about*, education *for* and education *as* sustainability (Lucas, 1979; Sterling, 2009).

- **Education about sustainability** is an essential first step which aims at deepening awareness, knowledge and understanding of the need for sustainability, and threats to it.
- **Education for sustainability** is vital to individual and social change, as it involves questioning the established frames of reference that typically condition our responses to the challenge of sustainability.
- **Education as sustainability** involves epistemic change and leads to cultivating a culture of sustainability.

Similarly, Vare and Scott (2007) identify two major approaches to ESD, which they categorise as ESD 1 and ESD 2.

- ESD 1 promotes informed and skilled behaviours as well as ways of thinking, useful in the short-term where the need is clearly identified and agreed.
- ESD 2 builds capacity to think critically about what experts say and to test ideas, exploring the dilemmas and contradictions inherent in sustainable living.

Noting the prevalence of ESD 1, they argue that successful ESD 1 in isolation from ESD 2 could diminish our capacity to manage change ourselves over time, and emphasise the complementarity of ESD 1 and 2.

Another set of challenges involved in the GCED-driven understanding of SDG 4.7 relate to the risk of perpetuating a narrow understanding of sustainable development. ‘Sustainable development’ can become merely one of a number of global dimensions or issues to be added to a menu of objectives or concerns. As **Tables 1.1** and **1.2** show, ‘environmental global citizenship (education)’ is understood as one of several forms of ‘global citizenship (education)’. The coding categories employed by the existing UNESCO studies reflect this understanding. Both the IBE-APCEIU study (IBE-UNESCO and APCEIU, 2016) and the GEMR study (UNESCO, 2016a) treat ‘sustainable development’ not as a broad, overarching concept as understood in the 2030 Agenda for Sustainable Development (United Nations, 2015), but as a much narrower concept grouped with climate change and biodiversity under ‘global issues’ (in the case of the former) or a category juxtaposed with human rights, gender equality, peace, health, and global citizenship (in the case of the latter).

Table 1.1 Categories of global citizenship identified by Oxley and Morris (2013) based on prevailing literature

Type of Global Citizenship		A focus on...
Cosmopolitan types	Political	the relationships of the individual to the state and other polities, particularly in the form of <i>cosmopolitan democracy</i>
	Moral	the ethical positioning of individuals and groups to each other, most often featuring ideas of <i>human rights</i>
	Economic	the interplay between power, forms of capital, labour, resources and the human condition, often presented as <i>international development</i>
	Cultural	the symbols that unite and divide members of societies, with particular emphasis on <i>globalisation of arts, media, languages, sciences and technologies</i>
Advocacy types	Social	the interconnections between individuals and groups and their advocacy of the ‘people’s’ voice, often referred to as <i>global civil society</i>
	Critical	the challenges arising from inequalities and oppression, using critique of social norms to advocate action to improve the lives of dispossessed/subaltern populations, particularly through a <i>post-colonial agenda</i>
	Environmental	advocating changes in the actions of humans in relation to the natural environment, generally called the <i>sustainable development agenda</i>
	Spiritual	the non-scientific and immeasurable aspects of human relations, advocating commitment to axioms relating to <i>caring, loving, spiritual and emotional connections</i>

Source: Adapted from Oxley and Morris, 2013, p. 306, Table 2

Table 1.2 Types of Global Citizenship Education by Gaudelli and Heilman (2009)

Type of Global Citizenship Education		Characteristics
GCED congruent with democratic citizenship	Cosmopolitan GCED	• An emphasis on respecting <i>human rights</i> and revering places
	Environmental GCED	
	Critical justice GCED	• Embody Deweyan ideals of pragmatism
GCED less congruent with democratic citizenship	Disciplinary GCED (focus on academic knowledge)	• Failure to evoke egalitarian ideals
	Neoliberal GCED (focus on vocations)	
	Human relations GCED (focus on private interests)	• Lack of civic aims

Notions of ‘sustainable development’ and ESD:

Recognising a tendency to reduce ‘sustainable development’ to its environmental dimension in existing studies relevant to SDG 4.7 monitoring, the coding scheme of the current study defined sustainable development as encompassing three dimensions – environmental, economic, and social. The persistent tendency to define ‘sustainable development’ (SD) narrowly – despite the adoption of the SDGs – reflects the often limited understanding of SD among professionals and researchers in the field of international educational development. It also reflects the persistence of siloed and fragmented approaches to SD on the part of both national governments and UN agencies.

The development of coding categories tends to be highly reflective of the assumptions and institutional agendas of the designers of any curricular monitoring study.⁶ In designing a coding scheme for a study such as this one, we are essentially envisioning the ‘ideal’ curricular embodiment of ESD and GCED. We thus felt it was critical to avoid reinforcing the current limited understanding of SD through the very design of our coding scheme. The notion of SD, however, is even more complex than that of global citizenship. While space does not allow a detailed discussion of the evolving concept of SD, it is useful to go back to the widely-cited landmark definition of SD by the World Commission on Environment and Development (WCED, also known as the Brundtland Commission), which was tasked by the UN to develop strategies for achieving SD by 2000:

⁶ For example, although there is no explicit reference to ‘health’ either in the wording of SDG 4.7 or its global indicator, it receives a prominent position as one of nine coding categories in the study commissioned by GEMR (UNESCO, 2016a).

Humanity has the ability to make development sustainable – to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs. The concept of sustainable development does imply limits – not absolute limits but limitations imposed by the present state of technology and social organization on environmental resources and by the ability of the biosphere to absorb the effects of human activities. But technology and social organization can be both managed and improved to *make way for a new era of economic growth*. (emphasis added, WCED, 1987, p. 8).

Much ESD writing presents the Brundtland definition of SD as development that ‘meets the needs of the present without compromising the ability of future generations to meet their own needs’, and upholds it as an integrated approach to economic vitality, environmental sustainability and intra- and inter-generational equity. However, what is little known is that the WCED fails to set ‘clear priorities or guidelines for making decisions when conflicts and trade-offs among [the economic, environmental and social pillars] exist’ (Glasser, 2016, p. 59). While SD – in everyday use of the term – is often misunderstood as an eco-centric approach, the Brundtland definition in fact puts an emphasis on economic growth.

As are notions of global citizenship, definitions of SD are contested and elusive. The central debate regarding SD relates to whether we choose a ‘strong’ or a ‘weak’ – or ‘robust’ or ‘nominal’ – conception of sustainability. While the concept of ‘weak sustainability’ assumes the substitutability of natural capital, the concept of ‘strong sustainability’ is ‘based on the scientific fact that all human life and activity occurs within the limitations of planet Earth, or the “biosphere” where humankind lives, including all societal functions, such as the economy’ (Brunner and Urenje, 2012, p. 10). **Figure 1.2** shows that there is a long way to go before we reach the ideal model of SD. While environmental and sustainability educators often assess the quality of ESD based on whether it resonates with the concepts of weak or strong sustainability, the design of the present study did not allow an analysis based on these concepts. It also did not allow an analysis of how curricular content is framed according to different conceptions of interaction between humans and their environment.⁷ Therefore, the analysis of sustainability in education policy and curricula presented here is often superficial, limited to noting the mentioning (or lack of it) of concepts related to the environmental dimension of sustainable development.

7 Domazet et al. (2012) assessed ‘how curricular content presents the interaction between humanity, individuals and their bio-physical environment’, by using five categories of curricular content framing (pp. 62-63).

Figure 1.2 The ladder of sustainable development



Source: Adapted from Domazet et al., 2012, p. 30

Another limitation of the coding scheme was that it lacked a generic category for sustainable development. Sometimes there were references to the overarching concept of sustainable development which could not be reduced to its environmental, economic or social dimensions, but the scheme did not allow for the coding of generic references to sustainable development or sustainability, and the coders therefore had to decide where to code such references.

Coding Procedures

Although the coding scheme design suffered from conceptual limitations discussed in the previous section, the coding exercise nonetheless produced a very rich and voluminous dataset that is only partially explored in this report. As detailed in **Appendix I**, the methodology required both the in-depth reading of the documents and understanding of complex concepts embedded in 4.7. This

raised issues of subjectivity potentially complicating comparisons across 22 countries whose documents used 18 different languages.⁸

Coder variability and coding validity

National researchers coded in their own languages using a coding scheme in English (except in the case of Uzbekistan), and they were tasked with capturing cases where a concept was either explicitly or implicitly present. To assist the national researchers each coding category was described in detail and they were instructed to code based on an understanding of the concept behind words or the meaning of the concept, rather than conducting an automatic keyword search. The MGIEP team reviewed all the coding results and responded to all queries from national teams throughout the coding process. Although measures were taken to ensure inter-coder reliability (see **Box A.1 of Appendix I**), different coders may have coded sub-categories differently due to ambiguity in the concepts embedded in 4.7, a lack of consensus regarding the translation of these concepts into different languages, their own divergent understandings of what these concepts meant in the local context, their propensity to ‘overcode’ (to ‘read between lines’) or ‘undercode’ (to take a text at face value), or any combination of these reasons. Moreover, the process of coding required researchers to manually insert sentences into the relevant sub-categories. The extensive and complex nature of the coding scheme increased the chances of human error, irrespective of the coders’ understanding of concepts.

2. Dataset Limitations

To ensure comparability in the documents comprising the dataset, a document collection template was created (see **Appendix IV** – all 172 documents coded are presented in the format of this template). National teams, often in consultation with the UNESCO field office, the national commission for UNESCO, and/or the education ministry in the country, collected key education policy and curricular documents and filled the template. As noted by UNESCO (2016a), however, differences among documents were considerable across countries.

Significant Differences between Documents

Education laws, strategic plans/education policies, national curriculum frameworks (NCFs), and curricula of core subjects varied considerably in length, content, and focus from country to country. As a result, the number and volume of documents to be coded varied considerably across countries, as partly shown by the number of excerpts coded for each country (see **Appendix I**). Whereas some are exhaustive documents of several hundred pages (for example the Basic Education Core Curriculum of Thailand), others provide only a general overview

8 Documents coded are in: Bangla, Chinese, Dari, Dzongkha, English, Farsi, Indonesian, Japanese, Khmer, Korean, Lao, Malay, Mongolian, Nepali, Russian, Thai, Uzbek and Vietnamese.

of the curriculum. Some NCFs were particularly brief, consisting of fewer than 15 pages. While the study's focus was basic education (primary and lower secondary education), the focus of some documents was more extensive, covering K to 12 (from pre-school to upper secondary education), and in some cases also tertiary education.

Sampling Bias

To complete coding within the time frame of the project, the decision was taken to code subject curricula only for the 4th and 8th grades (see **Appendix I** for the reasons for selecting these two grades). However, this sampling of grade levels may have skewed the coding results. There is always a possibility that a topic reported 'missing' in a country's policy and curricular documents is in fact being addressed in the curricula of other grades. It would therefore have been ideal if documents from all grade levels at primary and secondary level could have been coded. This would also have enabled analysis of the relative emphasis certain concepts receive at different stages of education.

3. Research Team Limitations

Selection of National Researchers

Most national consultants were identified with the help of UNESCO Field Offices. Given the often close relationship between UNESCO and national ministries, we frequently encountered the challenge of establishing teams who were willing or able to provide a detached assessment of official policy. Consequently, certain national background reports tended to be overly descriptive in nature, offering accounts that glorified or celebrated national achievements. In order to ensure an objective assessment, peer reviewers – academics, government officials, individuals from the social sector – were commissioned to provide extensive feedback on country-level background reports.

There was also considerable disparity in national researchers' capacities to code as instructed and to interpret the coding results. Due to the linguistic diversity across Asia, the task of cross-verifying the coding data was highly demanding. In many cases, Google Translate was used to provide feedback to the national researchers and to ensure the documents were accurately coded. It was also used by the Core Drafting Group to verify certain claims made in national background reports.

Incorporation of Diverse Peer-review Feedback

On country-level background reports, sub-regional synthesis reports and the current final report, extensive feedback was sought from national and international experts and academics with expertise relating to different aspects of schooling. Feedback from different sources was sometimes highly contradictory, with

certain reviewers asking authors to ‘tone down’ criticism of national policies, even while others demanded more critical analysis of official policymaking involving greater consideration of the larger political and social context. As a result, much information considered politically too sensitive was deleted from this report, although the critical thrust of the analysis was retained. While many countries have instituted initiatives to promote certain aspects of ESD/GCED, the current report seeks to highlight the deep-seated, fundamental challenges which confront efforts to promote peace and sustainable development through education. Although certain peer-reviewers saw the final report as presenting a ‘Western’ view on the state of education in Asia, the authors of the Core Drafting Group are all based in Asia (though all received their academic training partially in Europe or North America, either at undergraduate or graduate level). A paucity of critical analysis of education systems in Asia by local researchers is symptomatic of both the marginal status of critical educational research in many Asian societies and the widespread fear of voicing criticism of official policy. It should be noted that the current report has no intention of trivialising governmental efforts, but refrains from simply itemising or cataloguing ‘good practice’ in ESD and GCED.⁹ It instead offers a critical framework for understanding the fundamental challenges to the meaningful implementation of SDG 4.7, which are widely shared across Asia.

9 See UNESCO Database on the Right to Education at <http://www.unesco.org/education/edurights/> for detailed information on the ratification of normative instruments and monitoring status of the right to education, including national reports on the 1974 Recommendation concerning Education for International Understanding, Co-operation and Peace and Education relating to Human Rights and Fundamental Freedoms.