

**SPECIAL ISSUE: How should social studies contribute to achieving Sustainable Development Goals?**

**What Does Future-ready Social Studies Education Look Like?  
Insights from Teaching and Learning Geography**

**Chew-Hung Chang**

National Institute of Education, Nanyang Technological University, Singapore

**Abstract**

The aspirations for social studies education that would prepare our learners for a sustainable future are presented in this paper. Given the complex, ambiguous and volatile times that we are in, there is a need to examine the key capabilities that our students will require in order to flourish in a future world. This cannot be done without consideration for sustainability. This paper will provide an overview of the current realities and attempt to articulate the knowledge, skills and dispositions of a future-ready student with a view to designing good social-studies education. A specific case in teaching and learning of the climate change topic is argued for students to learn to know, to do, to be and to live together.

**Keywords:** Future-ready, Geography, Knowing, Doing, Being

**Introduction**

The term “future-ready” has become more frequently used in discourses about education over the last few years (Wong & Ng, 2021; Fletcher, Warren, & Hernández-Gantes, 2018; Tan, Choo, Kang, & Liem, 2017). To be future-ready requires a forward-looking perspective and a willingness for timely change “in anticipation of the future” (Ng, 2017, p. 42). Indeed, this willingness to change should occur even when things are going well; a change “from a position of strength, rather than one of desperation” (Ng, 2017, p. 42). Serendipitously, the plethora of ideas about future-readiness in education occurred before the global pandemic of 2020. This was helpful in some ways as some countries and jurisdiction were able to implement alternatives to physical classroom learning during times of lockdowns and movement restrictions in many places around the world. However, the adoption of technology in teaching and learning, for example was not equally accessible or efficacious across different contexts. At the global, national and even local level, different schools were at different readiness levels in meeting the demands of online learning. These differences are often contextual within the social, cultural, economic and political milieu across these schools. For instance, the Organisation for Economic Co-operation and Development (OECD) 2018 PISA survey found that while the average percentage of students in disadvantaged schools who have access to a computer for schoolwork is only slightly above 20% in some countries like Indonesia, the global average was about 90% (OECD, 2020 p. 3). Social Studies as an interdisciplinary school subject is well placed to introduce such issues to students, with the hope that they

develop stronger awareness of the need to appreciate differences across social, cultural, economic and political contexts.

### **Understanding the Present in Anticipation of the Future**

The average life expectancies of some developed economies today are exceeding 80 years of age. Consequently, many children born today will live through to the twenty-second century. As educators, we are interested in how our policies, curricula and practices will have an impact on how our children will live beyond the twenty-first century. According to geologists, the earth is currently in the Holocene epoch which began some 11,000 to 12,000 years ago when the climate warmed after the Younger Dryas event. Scholars in other fields such as Chemistry Nobel laureate Paul Crutzen, who works on atmospheric chemistry, introduced the term “Anthropocene” to describe a reality in which human activity has resulted in unprecedented and often abrupt changes to the natural environment. Indeed, a new academic journal titled “Anthropocene” was launched in 2013 as an outlet for scholars working during this remarkable and unparalleled period of time where human activity leaves an indelible mark on the geology. Regardless of the subsequent official status of the term, the notion that introduced aptly refers to the unprecedented environmental change that has resulted from human activity.

Access to quality education has been highlighted as one of the 17 Sustainable Development Goals (SDG) by the United Nations Educational, Scientific and Cultural Organisation’s (UNESCO). Furthermore, the UNESCO Education 2030 Framework for Action was adopted in November 2015 to provide guidance on how to translate these SDGs into action. At the same time, the Future of Education and Skills 2030 developed by the Organisation for Economic Co-operation and Development (OECD) also aims “to help education systems determine the knowledge, skills, attitudes and values students need to thrive in and [to] shape their future” (OECD, 2020 p. 3). Social studies education, and geographical education in particular, plays a crucial role as it is concerned with helping students deepen their understanding of issues such as “climate change, water management, food security, energy choices” (Commission on Geographical Education, 2016, p. 5). Indeed, education is a key enabler to ensure the sustainable future for our children born today.

There is also a certain rhetoric of referring to the current realities as being characterized by volatility, uncertainty, complexity and ambiguity. Indeed, if we were to teach students today as we have taught them in the past, we will be depriving them of a future - a notion that education guru John Dewey was purportedly quoted on, on numerous occasions. Looking towards the future, we will first need to assess what “today” looks like. Inspirations of what the near-term future will be like can perhaps be gleaned from looking at how the current realities have been predicted ten years ago. Predictions about science, society and culture for the year 2020 were made in an article in the United Kingdom newspaper “The Telegraph” on 2 January 2010, (The Telegraph, 2010). The article predicted the widespread use of mobile technologies to access the internet, leading to “a more informed, engaged, and more empathetic global citizenry” by 2020 (The Telegraph, 2010). Interestingly, the current reality falls short of this prediction and we note that people have uneven engagements with the internet across societal contexts, even today. On the other hand, there were other predictions that are more accurate, for example global warming in particular. The four years from 2015 to 2018 were the warmest years ever observed in the 139 years that the National Oceanic and Atmospheric Administration (NOAA) had kept records for

(National Oceanic and Atmospheric Administration, 2019). Indeed 2020 ranks as one of the three warmest years in the decade even though there has been significant reduction in emissions from air travel due to widespread curtailment of flights (World Meteorological Organization, 2020). While there were some accurate predictions about what would happen by 2020 back in 2010, there were also many uncertain and complex issues. Looking forward, we may see new developments in immersive technologies, advances in bio-facturing, artificial intelligence driven marketing and even human-technology interfaces through implantables. While these scientific imaginations bring opportunities for humanity, there are also implications for the society, economy and environment that result in complex and uncertain outcomes we cannot ignore.

One thing is for certain - uncertainty seems to be a constant. We need to be prepared as a species to respond to the uncertainties of the future. In being future-ready, we will need to consider how best we can prepare our children for these uncertainties. Education is charged with the responsibility to prepare our children for the future, the aspiration is to develop “active citizens in the present and future world” (Commission on Geographical Education, 2016, p. 1).

Education has the potential to transform lives. It enables “individual growth, fosters community well-being, and can lead to societal change” (Chang & Kidman, 2020, p.2). Unfortunately, not all curricula are designed for the uncertainties and complexities of the future. We need a curriculum that is “dynamic, holistic, adaptive, inclusive, restorative, and contextualized” (Chang, 2019). In other words, we need our children “to be able to understand, question and reflect on the issues that they will face” (Chang & Kidman, 2020, p.2). Consequently, twenty-first century competencies like critical thinking, creativity, collaboration and communication will extend our students’ learning beyond an academic exercise to learning that builds the emotional and social intelligence. These aims are well aligned with the broader aspirations of a good social studies education. Indeed, the primary aim of social studies is to “help young people make informed and reasoned decisions for the public good as citizens of a culturally diverse, democratic society in an interdependent world” (National Council for Social Studies, 2010, p. 3).

### **Reflections from Geography Education**

A future-ready education, and by transitivity for future-ready social studies education, can be aligned to the goals of education for sustainable development. Discourses in geography education have been inextricably interwoven with discussions about ESD and environmental education since the 1970s. There is much reflection from the development in geographical education that we can refer to as we consider what a future-ready education for social studies can look like.

The goals of ESD comprises the aspiration to ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and “sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture’s contribution to sustainable development” (SDG-Education 2030 Steering Committee Secretariat, 2020; Chang & Kidman, 2020). Indeed, when students have agency in their learning, they are more likely to have “learned how to learn” - an invaluable skill that they can use throughout their lives (OECD, 2020 p. 3). In comparing that with the notion that a child in a future-ready curriculum should engage the information he or she encounters within the contextual

understanding of school knowledge, this will enable the child to ask critical questions that will develop deeper understanding of any issue (Young, Lambert, Roberts, & Roberts, 2014).

From the vantage point of a geography educator, I would suggest that Geography is a vital school subject and learning resource for 21st century citizens, who are living in a tightly interrelated world. It enables us to question what it means to live sustainably. Indeed, geographically educated individuals better understand human relationships and their responsibilities to both the natural environment and to others, consequently learning how to live harmoniously with all living species. This is done by building on personal experiences, and learning geography helps us to ask questions, develop intellectual skills and respond to issues affecting our lives. In fact, geographical education is essential for the development of “responsible and active citizens in the present and future world” (Commission on Geographical Education, 2016 p. 1). Geography can be an informing, enabling and stimulating school subject across all levels, and can help deepen the understanding of many contemporary challenges such as urbanization, overexploitation of natural resources and climate change. Indeed, geography allows us to have “new ways of thinking about the world” (Maude, 2018, p. 181) and “powerful ways of analysing, explaining and understanding” (Maude, 2018, p. 182). In addition, it “gives students some power over their own geographical knowledge... and enables [them] to follow and participate in debates on significant local, national and global issues” (Maude, 2018, p. 183). Indeed, geography gives us “knowledge of the world” (Maude, 2018, p. 183). These characteristics are not exclusively found in geography education, and many social studies education curricula have these characteristics as well.

Upon closer examination, it is not just knowledge that we endeavour for a future-ready social studies education. We are interested in developing students’ capabilities. In referring to Nobel Laureate and welfare economist Amartya Sen’s work on capabilities, he refers to “individuals’ capability of achieving the kind of lives they have reason to value” (Wells, 2020). In a sense, a person’s “capability to live a good life is defined in terms of the set of valuable ‘beings and doings’ like being in good health or having loving relationships with others to which they have real access.” (Wells, 2020). In other words, education provides children with knowledge, skills and understandings so that they not only function well but also flourish in society. These functionalities empower them with capabilities in a 21st century world characterised by volatility, uncertainty, complexity and ambiguity. The volume and velocity of change and the variability in impact these changes bring, both to the environment and society, presents challenges to sustainability. The capabilities approach hence helps us educate children to respond to and flourish despite these challenges.

### **Learning to Know, Do, Be and Live Together**

In referring to the 1996 UNESCO report titled *Learning: The Treasure Within*, the report which is often referred simply to as the Delors Report, a holistic and integrated vision of education includes four key ideas of learning to know, learning to do, learning to be and learning to live together. This approach encapsulates the aspirations of social studies education to help children to live sustainability and to exist harmoniously with all living beings. Specifically, the 4 ideas are:

1. Learning to know - having broad general knowledge and also depth in a few subjects.
2. Learning to do - to acquire vocational/occupational skills as well as the capability to respond to many situations.

- from skill to competence
  - the ‘dematerialisation’ of work and the rise of the service sector
  - work in the informal economy
3. Learning to be - to develop one’s personality and to be able to act with growing autonomy, judgment and personal responsibility.
  4. Learning to live together - to develop an understanding of other people and an appreciation of interdependence.
    - discovering others
    - working towards common objectives

(Delors, 1996, p.97)

To illustrate how this approach could be used within social studies education, I shall use the example of teaching and learning about climate change.

“While one can argue that it has become more “fashionable” to talk about environmental topics such as climate change, there is no denying that the impacts of climate change necessitates further understanding of the phenomenon, so as to adapt to or even mitigate these impacts.”

(Chang, 2015, p. 181)

Climate change is undoubtedly a very serious problem. However, there are still people who remain apathetic and find the issues of little personal relevance (Adger et al., 2009; Leiserowitz, 2005). In fact some consider it as someone else’s problem that has little bearing on their lives and are often unable to think of the variability in extreme weather events as a climate related problem (Whitmarsh, Lorenzoni, & O’Neill, 2012). Indeed “[t]he confusion generated by conflicting stands as presented in political discourse is made worse by the public’s inability to observe and remember the short-term impact of climate change” (Chang, 2015, p. 182). I argue that climate change education is crucial in providing students with a critical life skill. In particular, students need to engage the climate change topic critically make sense of what they know and even decide on what to do next (Chang, 2015). It is only with accurate knowledge that students can make good decisions and take purposeful action (Bord, O’Connor, & Fisher, 2000). However even before such a level of criticality can be achieved, we need to ensure that students have solid fundamental knowledge about the topic to begin with.

The students’ understanding of the topic is often flawed and limited despite heightening general awareness in schools around the world. Among the concepts most commonly misunderstood among the members of public, are the greenhouse effect (Pruneau, Liboiron, Vrain, Gravel, Bourque, & Langis, 2001) and global warming (Henry, 2000; McBean & Hengeveld, 2000). These issues in misunderstanding are frequently found in students (Hansen, 2010; Cordero, Todd, & Abellera, 2008; Kilinc, Stanisstreet, & Boyes 2008; Daniel, Stanisstreet, & Boyes, 2007). In a study by Chang and Pascua (2016), they found that although the students displayed awareness of commonly known concepts such as global warming and the greenhouse effect, they did not have enough content knowledge to define, reason, argue and link these elements together. Some common examples of the misconceptions from the study include thinking that greenhouse gases form a layer that becomes thicker as humans release excessive amounts of CO<sub>2</sub> into the atmosphere, thereby enhancing the greenhouse effect. Some consider that the depletion of the ozone layer is due to pollutants and this leads to global warming without an understanding that there is radiation imbalance as a result. Others consider CFCs as the main culprit, even going so far as saying that since CFCs are no longer in use, the world is safe from global warming. To

correct these misconceptions, there has to be deliberate efforts to translate these into the learning context through the curriculum making process. In other words, not only do we need to be able to identify these misconceptions in relation to the curricular content, we also need to be able to implement strategies through instruction. In particular, pedagogical devices like refutation texts (Chang, Pascua, & Ess, 2018), help students identify and correct their misconceptions, hopefully taking them beyond just learning to know towards learning to do.

I offer a suggestion that beyond cognitive skills, learning to do also includes the capability to respond to many situations. The need to rise above ‘just a skill’ to developing a willingness to make behavioural change for our common sustainable future. In a study of how community action can be encouraged through awareness raising and knowledge provision, Wi and Chang (2019) introduced a public education programme to see if a programme to provide households with the necessary climate change knowledge will help change the behaviour. The empirical findings show that the programme was successful as there was an improvement in the participants’ knowledge and behaviour is depicted in terms of taking “pro-environmental action” (Wi & Chang, 2019, p. 1027), which can provide insights for social studies educators in an Asian context.

Extending this example beyond the behavioural changes, Wi and Chang (2019) asserts that besides the knowledge and skills domains of learning outcomes, “values are also important factors in helping individuals understand and adopt pro-environmental behaviour” (Wi & Chang, 2019, p. 1029). In the study, an increase of about 20% in the number of participants believed that an individual can make a difference (Wi & Chang, 2019, p. 1025). Interestingly, the programme introduced by the researchers was to adopt a community approach where the participants came together at the community club to learn more about pro-environmental knowledge and thereby exhibiting the change in attitude and behaviour. These demonstrate the features of the learning to be and learning to live together ideas in the Delors report.

The topic of climate change will undoubtedly be featured prominently across the social studies curricula in many jurisdictions. The exemplification on how the learning goals can be organised according to the Delors’ report’s learning to know, do, be and live together provides just one way to make social studies future-ready. While we are unable to predict what will happen definitively in the future, we do know that we need to educate children who are able to ask the right questions and have the capability to make sense of new information that they will come into contact with.

## **Conclusion**

While it is the intent of the author to suggest adopting the Delors 4 “learnings” approach as a way to design future-ready learning, there are two key considerations for us as social studies educators. Firstly, we cannot see these 4 “learnings” in silos. These notions are not mutually exclusive and have a synergistic effect when considered as a whole. Secondly, we should never deprive our children the joy of learning. There must be meaning in what they learn. Having a formula to describe what they should learn may not be authentic. It would be counter intuitive if all we did was to say that we only learn about knowledge and skills in the first 3 lessons and then we spend the last lesson discussing the impact and what action they can take of climate change. This is inauthentic and probably not very enjoyable for the child. To quote Chang (2015), whose argument was based on the examples presented from Asia, the “approach of teaching climate change would need to balance between developing learners who can critically engage new information about the phenomena as well as being empathic

individuals who are committed to take action to make their living environment a better one” (p. 183). The example of teaching climate change in Singapore offers several insights about a future-ready social studies education for Asia.

Certainly, as a start, we have to decide what we mean by learning about climate change, or learning about sustainability. We also need to consider the cognitive and affective learning outcomes, and any possible change in the learners’ behaviour. Ultimately, the goal of education is not to teach a subject but rather in developing the child as a whole. In the case of social studies education, if we refer back to the notion of capabilities, a good social studies education will help our children function and flourish in society.

While the seventeen sustainable development goals seem rather daunting at first glance, they outline the key aspirations that we have for our common environmental, social and cultural destiny. Education and social studies education is only one of the enablers to help us reach this goal. Beyond the school curriculum, we need to look to every member of society to play their part in this. Across the local, national and even global scales, we need an active citizenry that will be able to employ criticality in deciphering the deluge of information about our world - with only a portion of accurate and authentic news. Social studies education will therefore be a very important first step toward empowering humanity for our common environmental future.

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