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Is Singapore's School Geography Relevant to Our Changing World?*

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Abstract

How school geography should be taught has been a longstanding issue for geography educators. In some countries, state or national level curriculum predicates how the subject should be taught in schools. This paper examines these questions in relation to existing frameworks of conceptualizing school geography, such as the International Charter on Geographical Education. School geography in Singapore has evolved from regional geography to thematic geography to systematic geography. A review of the curriculum in 2007 resulted in a distinct form of school geography unprecedented in Singapore's education history. Today, school geography in Singapore is learnt conceptually with national level assessment designed to that end. To what extent is this evolution in curriculum design in step with changes in our world? In response to the changes in school geography, pre-service and in-service teacher training has also responded by focusing on conceptual learning and inquiry. This paper will explore the state of school geography curricula in Singapore today, and the curriculum of teacher training, with the intent to critically discuss the state of geography education in Singapore. Although geography has remained a disciplinary subject whose place has yet been disputed, the big question of why study geography in the first place needs to be answered to ensure its continued survival. In particular, school geography will be examined for its relevance to a fast changing world. This critique ends by offering a reason to how geography plays an important role in education for sustainable development, and its relevance to Singaporeans or even any citizen of the world.

Keywords: school geography, education for sustainable development, curriculum development, assessment

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Introduction

In the book "Geography: teaching school subjects 11-19", Morgan and Lambert (2006) proposes that school geography curriculum should be considered within a "broader conversation about nature and contemporary society" (Morgan & Lambert, 2006, p. 3), in that the development in the academic geography discipline provides a "coherent narrative" that can be used by teachers to frame the subject. This argument is consistent with the view of curriculum design models such as Understanding by Design (Wiggins & McTighe, 2005) where concepts or big ideas in a specific subject are required to frame the development of the curriculum.

Geography is both a powerful medium for promoting the education of individuals and a major contributor to international, environmental and development Education (Commission on Geographical Education of the International Geographical Union, 2004). Indeed, a recurring theme in geography is the way people organize and use the environment (Fien, Gerber, & Wilson, 1989, p. 3) and this provides the basis for the argument that a school geography that is responsive to the developments in geography as a discipline will equip the students with the knowledge, skills and values as useful and contributing citizens of the world. The *International Charter on Geographical Education* proposes that geography curricula around the world are commonly structured either as regional studies or thematic studies. While the regional approach to learning geography requires appreciation of "national identity and international cooperation" as important functions of regional studies, thematic studies curricula in geography may be classified as systematic, issues-based and systems approaches. Further the literature on education for sustainable development suggests that geography education will provide the avenue to address sustainability issues (Tan & Chang, 2008). Indeed, geography in schools will "train future citizens to imagine accurately the condition of the great world stage and so to help them to think sanely about political and social problems of the world around" (Lidstone & Stoltman, 2007, p. 1). In this paper, the evolution of the Singapore national level curriculum for geography will be critically examined through this perspective, firstly with regard to how the curriculum is organized and secondly with regard to how the school geography can be situated to address issues of relevance to the world such as sustainable development.

Is School Geography in Singapore relevant to our fast changing world?

Singapore's education system is based on 6 years of primary and 4 years of secondary education (a 5 year program was designed for slower learners). National examinations are held at the end of primary school - Primary School Leaving

Certificate (PSLE) and Cambridge General Certificate of Education (GCE) Ordinary Level examinations at the end of secondary education. Students can enter a junior college for a two year pre-university course or a centralized institute for a three-year course upon completing secondary education, with the goal of sitting in the GCE Advanced Level ('A' Level) Examination. The performance at this examination determines placement for University entry. Students who are inclined to technical or vocation studies can enroll in the polytechnics or the Institute of Technical Education (ITE). In addition, polytechnic graduates who perform well may study degree courses at the universities while ITE graduates who do well may continue with diploma courses at the polytechnics. The education system implemented a major reform in 1997 - 'Thinking Schools and Learning Nation' (TSLN) which "describes a nation of thinking and committed citizens capable of meeting the challenges of the ... 21st century" (Department of Statistics, Ministry of Trade & Industry, 2010, p. 252), which led to several initiatives, including nationwide ICT implementation, critical and creative thinking, and National Education. This allowed school students to develop more holistically.

Geography has been a subject taught in Singapore schools even before she gained independence. However, is the subject taught to "train future citizens to imagine accurately the condition of the great world stage and so to help them to think sanely about political and social problems of the world around" (Lidstone & Stoltman, 2007, p. 1)? In short, does school geography in Singapore imbue in students the knowledge, skills and attitudes that are required to engage with a fast changing world? The subject has undergone several national level curriculum reviews at primary, secondary and tertiary levels through the last six decades. Today, geography does not exist as a separate subject in primary school. Rather, it is taught within the subject of Social Studies at primary schools in Singapore. At the secondary school level, geography is a compulsory subject for lower secondary but is an elective subject at upper secondary level. Geography remains an elective subject at pre-university and university education in Singapore.

In order to determine how relevant school geography is to the changing needs of the world, this paper will first examine national curricula documents and analyse the evolution of geography as a school subject over the past few decade. In addition, the implementation aspects of the curriculum, such as teacher preparation and assessment issues will also be discussed. Finally, the paper will propose that for school geography in Singapore to stay relevant, that the conceptualization of the curriculum must take into consideration the changing needs of the world, such as for sustainable development.

The evolution of Secondary school Geography

Geography is a compulsory core subject for lower secondary students in the Special, Express and Normal (Academic) Courses². The Ministry of Singapore refers to their national curriculum as the “syllabus”. Hence, the term syllabus will be used here as a contextual understanding of the curriculum document while curriculum refers to the national curriculum being planned and implemented. The curriculum that was implemented in 2006 claimed that it was focused on a systematic framework to organize content, mainly dividing the topics into human or physical geography topics (Curriculum Planning and Development Division, 2007). The curriculum makes the theme of physical-human relationships explicit while keeping the focus on physical geography, human geography, geographical skills and issues related to managing the changing environment. It also places greater emphasis on the teaching of geographical skills like atlas skills, map reading skills and photograph interpretation. However, an examination of the topics listed and the way the topics are phrased indicate a more conceptual approach than a systematic one. The curriculum was organized into 5 themes, namely, introduction to geography, understanding the environment, the physical environment, the human environment and managing the changing environment (Curriculum Planning and Development Division, 2007).

While the syllabus document articulates a curriculum that adopt a “systematic framework to organize content” (Curriculum Planning and Development Division, 2007, p. 2), it stated that “[w]ithin this framework, the physical-human relationships are used as the organizing theme to show how relationships between people and the environment have given rise to the distinctive character of places and environments” (Curriculum Planning and Development Division, 2007, p. 2). It is clear that students need to understand the macro concepts in geography of human-environment, space and place, within this framework. Undeniably this has come a long way from the days where regional geography was taught. In fact, conceptual understanding of humans and their relationship with the environment was key in lower secondary geography for at least the past 30 years in Singapore.

A cornerstone event in the development of the geography curriculum for upper secondary is the introduction of the Combined Humanities Subject in 2001. At present all students have to study a compulsory Combined Humanities subject which

² At the secondary level, students go through one of three courses. The Express Course is a four-year course leading to the Singapore-Cambridge General Certificate of Education Ordinary Level (GCE 'O' Level) Examination. The Normal (Academic) Course is a four-year course leading to the GCE Normal Level ('N' Level) Examination. Students who do well at the 'N' levels will qualify for an additional year to prepare for the 'O' levels. The Normal (Technical) Course is a four-year course leading to the GCE 'N' Level Examination.

comprises of 2 papers at the upper secondary level (secondary 3 and 4, or Grades 9 and 10 equivalents). The first paper is Social Studies, which is compulsory, and the second paper, called the elective humanities, can be chosen from the subjects of history, geography or literature. Students who study a history or literature elective may also opt to study a second humanities subject which can be geography. Since 2001, a new geography elective paper may be offered together with social studies as a core elective humanities subject (Singapore Examinations and Assessment Board, 2010).

The topics taught in the Geography elective paper is a subset of the “pure” geography subject. This curriculum underwent another review in 2006 resulting in the 2007 upper secondary geography curriculum (Syllabus 2235) which saw a reduction from 10 to 8 topics. It comprises four physical geography topics and four human geography topics. The topics are listed below with an asterisk to indicate topics that are common to both the elective and pure geography subjects.

1. Plate tectonics and resulting landforms
2. Weather and climate
3. Natural vegetation*
4. Rivers and Coasts *
5. Geography of Food*
6. The Industrial World
7. Tourism
8. Development*

This curriculum focused on the interaction between peoples and environments. Students need to understand the ingenuity of people could overcome constraints imposed by the physical environment. To that end, each physical geography topic is concluded by a study of natural hazards and how humans can manage these hazards. Aligned with the call for engaged pedagogies, there is also emphasis on fieldwork, with suggested fieldwork strategies listed within the syllabus document (Singapore Examinations and Assessment Board, 2010). Despite the many curriculum revisions over the last 30 years, the form that school Geography has taken today is clearly one that requires the conceptual understanding on human-environment relationships.

Evolution of Pre-University School Geography

A similar revision of curriculum was also conducted for the A level geography subject since 1980s. Currently, geography is a subject offered in the humanities and arts group at the pre-university level. As of 2006, all subjects are offered at three

levels, namely Higher 1 (H1), Higher 2 (H2) and Higher 3 (H3) of the GCE 'A' Levels (Singapore Examinations and Assessment Board, 2011). Students can choose three H2 content based subject and one H1 subject, where at least one of these are from a contrasting discipline³. In general, students can study geography as a H2 subject, but those with deep interest and high ability can pursue the subject at H3 level. Besides the MOE-developed H3 geography comprising a research essay, there are other H3 geography in the form of university-taught courses and research programme conducted by the National University of Singapore (NUS). The H1 level course is supposed to have the same rigor of academic content with the H2 courses except that it is half of a H2 course in terms of curriculum time (Ministry of Education).

The core topics in geography at pre-university level focus on the themes of physical-human relationships and human organization of space. There are three physical geography topics and three human geography topics.

1. Lithospheric Processes, Hazards and Management
2. Atmospheric Processes, Hazards and Management
3. Hydrologic Processes, Hazards and Management
4. The Globalization of Economic Activity
5. Population Issues and Challenges
6. Urban Issues and Challenges

The H1 geography curriculum (Syllabus 8812) consists of three of the six topics in H2 geography curriculum. The two compulsory topics are lithospheric processes, hazards and management and the globalization of economic activity. The third topic is a choice of hydrologic processes, hazards and management or urban issues and challenges. Again, the more recent curricula are focused on a more conceptual understanding of humans and their relationship with the environment.

The evolving curriculum in school geography at primary, secondary and pre-university levels over the last 3 to 5 decades have moved from regional studies of geography to conceptual understanding of the relationship between humans and their environment within the context of space.

Despite the positive tone of the sections delineate above, the question of what are some problems that geography education face in Singapore and what can be done about it remain unanswered. While geography has survived as an intact subject within school and university thus far, there is no ensuring that this situation will

³ The two broad groups of "discipline" include Humanities & the Arts, and Mathematics & science. So a contrasting discipline means that the student has to study at least one subject from each group and he/she is free to choose the remainder subjects from any of these two groups.

continue. The following section highlights an important aspect of geography education that should be considered in a world where environmental changes are occurring at unprecedented rate, scale and complexity.

Education for Sustainable Development (ESD) In the Curriculum

Inherent in the concept of sustainability is the idea that development should be kept apace so that future generations' development will not be compromised. Without education, an important process to pass on and propagate ideas and to inculcate beliefs about what constitutes sustainable practices to our future generations, there is little hope for sustainability. Humanities subject such as social studies and geography take center stage, as ESD is not present as a subject nor featured strongly in the core curriculum in Singapore.

Lidstone and Stoltman (2007) propose that there is a need to “conduct comparative research on how geography curricular in various countries” are addressing sustainability concerns. Singapore's geography curriculum feature ESD strongly in the lower secondary and pre-university levels. In fact, ESD is present only in geography and social studies. There is little evidence of ESD in history or literature.

The geography curriculum will be divided into the following categories for the purpose of analysis:

1. Lower secondary geography
2. Upper secondary geography (Pure & Elective)
3. Pre university geography (H1 & H2)

At Lower Secondary, the current geography curriculum is organized around the themes of understanding the environment to managing the changing environment. It reflects an approach that is centered on providing the core knowledge about environmental concerns of our times. In particular, the concern of climate change is included in the concluding unit of the curriculum. Apart from the knowledge of the causes and impact of global warming, students are expected to learn how to describe and evaluate the measures to reduce the impact of global warming induced climate change. In addition, students will develop attitudes such as accountability, social responsibility and personal care and concern for the environment. At a glance, the knowledge, skills and values for this unit address the core concepts in ESD. It provides opportunities for teachers to move students from an awareness phase into a taking action phase, assuming that the values are well learnt.

ESD on climate change is only present in the “pure” geography subject at the upper secondary level. The unit on “Weather and climate” features a section on “climate disasters”. Only the knowledge about the impact of climate change related phenomena is included here. There is no explicit mention of skills or values that should be learnt with respect to climate change concerns. In as far as ESD is concerned; this has to be addressed in the Geography curriculum.

At the pre-University level, ESD on climate change is only featured at the H2 level. Under the unit on atmospheric processes, hazards and management, the section on climate change and Responses is organized around the issue of the problems brought about by global warming induced climate change. In particular, the section includes knowledge, skills and values that are central to ESD. The section requires students to learn the causes, impact and adaptation and mitigation strategies of global warming induced climate change. In addition skills such as describing and assessing these strategies are required. Values that are relevant to the issue include adaptability and preparedness for any eventuality. Similar to the lower secondary geography curriculum, the knowledge, skills and values for this unit target the core concepts in ESD. They allow the students to move from awareness to taking action. While there is no immediate apparent follow-through of the concerns on climate change from lower secondary to upper secondary geography curriculum in terms of skills and values, the absence is probably intentional as the social studies (which is a compulsory subject) curriculum has a distinct section on environmental concerns for both the lower and upper secondary levels.

Issues and challenges

In terms of exposure to ESD in the formal curriculum, a student in Singapore comes into contact with concepts of ESD as early as Primary 3 (9 years old) through Social Studies. The knowledge, skills and attitudes are explicitly taught at lower secondary for both geography and social studies. At upper secondary level, Social Studies is the main delivery mechanism for ESD. At pre-university level, geography becomes the main subject through which ESD on climate change is achieved. However, only when our students move from mere awareness of sustainability concerns to interpreting, analyzing and studying the issues and then finally developing some personal opinion and attitude about these issues, can we hope that sustainability for the future can be achieved. In other words, action and not just inculcation is key to the successful implementation of ESD.

It is important for geography curriculum in schools to address beyond the knowledge and skills of geography into the values we desire our students to develop so as to take action to ensure sustainable development in the future. But how do we know if students have learnt values? Fundamentally, what type of skills will support

the development of values? If we desire our geography students to be informed and critical citizens, then a skill required must be the ability to evaluate information surrounding a geographical issue. In other words, how will the existing mode of national level paper and pen examinations help educators understand how much students have learnt about how to evaluate issues?

Assessment in School Geography–Is it for ESD?

A reviewed Singapore secondary (high-school) geography curriculum was implemented in 2007 (Singapore Examinations and Assessment Board , 2010) in which a new marking approach was employed for part of the national written examination paper. The “levels marking” approach was implemented with the goal to assess students’ ability to discuss geographic problems and to construct arguments for evaluating these problems. This resulted in much anxiety among some teachers as the “point marking” approach was the *modus operandi* used for geography assessment in Singapore for the last few decades. With this change, questions on what type of pedagogy best affords the “levels marking” approach have been raised across the geographic education community from teachers to education researchers in Singapore.

According to Sellan, Chong, & Tay (2006) the changes to the assessment mode, in which levels marking is first introduced to the geography curriculum in Singapore, are to prepare students “to meet the challenges of an increasingly globalized world ... to promote critical and creative thinking skills, and to nurture problem-solving and independent learning abilities in students.” For the past 2 decades, the assessment format of the geography GCE “O” Level examination has comprised two examination papers. Paper one was a multiple choice paper consisting of 40 questions and Paper two consisted of up to a dozen structured essay questions, of which students chose to answer four questions. The structured essay questions were marked using a point marking scheme in which marks were awarded for relevant and accurate points raised in answering the given question. In the new curriculum, the examination paper consists of one physical geography paper and one human geography paper. Both papers consist of 4 essay questions, from which two are chosen to be answered. The last 8 marks of each essay question are allocated to a sub-question which requires some degree of application, comparison and evaluation. This is the part of the question that is marked using the levels marking approach.

If the geography curriculum is intended to be a vehicle for ESD, then this development in the assessment format at a national level examination is a welcome change. Not only will it force students to analyze the information they have to provide, they will have to evaluate the issue and then provide an opinion. As

mentioned, the ability to evaluate information surrounding a geographical issue is a necessary condition to develop geography students who are informed and critical citizens. This is a necessary but not sufficient condition.

However, the success of the intended curriculum in school geography depends on its implementation in the classroom. Teachers are the single most important curriculum gatekeeper as they are at the "front-line" of teaching and learning.

Teacher Training for Geography

The main body of certification for all practicing teachers in primary, secondary and pre-university schools in Singapore is the National Institute of Education (NIE). Started in the 1950s as a Teachers' Training College, NIE went through several restructuring exercises and became an autonomous institute of the University in 1991. NIE provides both pre-service and in-service training for teachers in three main areas of academic subjects, education studies and curriculum studies. Geography curriculum studies subjects are taught by the Humanities and Social Studies Education (HSSE) Academic Group. There are two programmes for pre-service teacher training in which geography curriculum studies is undertaken, namely the Bachelor of Arts (Education) degree and the Postgraduate Diploma in Education.

The Bachelor degree programme (4 year programme) requires a student to read one academic subject for primary school teaching (single major) or two academic subjects for secondary school teaching. In addition, a student reading geography for secondary school teaching may choose it to be the first or second academic subject, similar to a major or minor specialization programme. Students reading Geography as academic subject 1 (AS1) has to complete 4 years of academic subject training in that subject but geography minors only need to complete 2 years. The curriculum is similar for all major and minor geography students up to year 2 at NIE.

In the first year of study, students are required to read four compulsory courses. These include the introductory courses to physical and human geography, Techniques in geography and a course on Singapore in Asia. In second year, students can choose from a range of courses but they have to read at least one human and one physical geography course. In the third year of study students can choose to read any 4 courses from the range provided. In the fourth and final year, students are required to read a course designed around a compulsory overseas fieldtrip. A report has to be produced by the student which will then be assessed. The fieldtrip course and report provides the students the opportunity to integrate the learning over the four years into a single coherent geographical inquiry. The intention for a fixed structure on the students' choices in years one and two is to ensure that students are

provided with the subject matter knowledge and academic rigor required of a trained teacher to engage with the national curriculum for school geography. The final year field trip course provides the students with an opportunity to experience geography on top of learning about it in a classroom context.

The Postgraduate Diploma in Education is a 9-month programme for teacher trainees who have already obtained a University degree with geography as a major subject of study. These teacher trainees only read education studies and curricular studies as their undergraduate training obtained elsewhere is assumed to have equipped them with sufficient subject matter knowledge.

In both the Bachelor and Postgraduate programmes, the training in curriculum studies focuses on three aspects,

1. Planning to teach Geography
2. Fieldwork in Geography
3. Assessment in Geography

The context of the secondary and pre-university geography curriculum in schools is used to teach the three aspects above. To address the needs of school teachers, who “remain focused on textbooks as a means of instruction in the class” (Tan & Lian, 2007, p. 95), the training is designed to help students decide *what* they need to teach; What is good to teach, what is important to teach and what is crucial to teach. To that end, pre-service teacher training for a geography teacher required them to ask the “what”, “why” and “how” of curriculum planning and instruction.

To this end, the Understanding by Design (UbD) conceptual framework (also called the backward design process) was used whereby the teacher trainees think about assessment before deciding on what and how to teach. Consequently, this process requires a clarification of the desired results of instruction before deciding on how the instruction should be designed. The framework is broken down into three stages for easy understanding:

- Stage 1: Identifying desired results
- Stage 2: Determining evidence of learning
- Stage 3: Planning the learning experience (instruction).

In order to assist teacher trainees use this framework for planning how to teach, there was a need to develop a strong conceptual understanding of the subject matter, in addition to the teacher trainee playing the role of a curriculum designer and knowing who the learners are.

The teacher trainees were given a task of designing a unit of instruction on one of the themes in the current school geography curriculum for upper secondary school. At the start of the course, the unit plan was developed before they were introduced to the concepts. This draft is then revised and reworked as they acquire the skills involved in planning the unit.

Teacher trainees clarify the desired learning goals by “identifying the essential questions and enduring understanding of the curriculum units” (Tan & Lian, 2007, p. 97). Here the disciplinary understanding of the concepts in geography helps them make connections within and across the units. The overarching concepts and themes in geography are emphasized here and relations to ESD are discussed at length. This is where the teacher-training programme ensures relevance to changes in academic Geography as well as remaining relevant to the changes in the real world. Teacher trainees have to develop concept maps for the school geography topics based on their prior academic training. This is where their previous engagement in academic geography takes center stage in informing their understanding of concepts in the school curriculum. The human-environment lens is also used for the teacher-trainees to explore the role of school geography in ESD.

In addition, they are guided to craft performance tasks and the corresponding criteria for evaluating the task performance, which form the evidence of understanding. Finally, the teacher trainees design the learning experiences to achieve the desired outcomes. As part of understanding if the teacher trainees have understood the principles, they have to present their entire unit plan package to the tutors and undergo an oral defense of why the unit was planned the way it was. This process affords the teacher trainees opportunity to see their “own personal growth in designing unit lessons” (Tan & Lian, *Teaching For Understanding: Designing curriculum for instruction using the Understanding by Design framework for Geography Teachers' pre-service education.*, 2007, p. 97). Also, misconceptions or lack of understanding of the subject matter knowledge of geography can be elucidated through this reflection on their prior academic geography training.

There is conscious effort to align the conceptual approach in pre-service teacher training and the requirement of understanding the concepts that underlie the topics in the school geography curriculum to the in geography academia. In addition, the need to update existing teachers to the changes to academic geography and developments in geography education was undertaken through in-service teacher courses. NIE is a major provider of teacher in-service courses in Singapore. As the Ministry of Education provides funding for Professional Development (PD) for teachers, they have also mandated a 100 hour PD time (Tan, Isabella, & Goh, 2010). As a result, there was a proliferation of PD courses in Geography subject areas in the mid to late 2000s. There are two main types of in-service geography courses offered

by NIE, namely, content and pedagogy courses. The purpose of these courses is as implied in the categorization, courses that provide teachers the opportunity to update their content and pedagogy in teaching geography. As a University institute, geography teachers also have the opportunity to pursue Higher Degrees or Advanced Diplomas to deepen their academic studies in geography. In particular, a Professional Development Curriculum Model (PDCM) was developed by NIE to provide a clear articulation of the academic pathway for teachers to pursue higher degrees (Tan, Isabella, & Goh, 2010). Together with the spread of in-service courses, higher degree opportunities afford geography teachers multiple means of updating content and developing their pedagogies, even if they have graduated from their undergraduate degrees years ago. This professional development avenue will provide the basis for a relevant delivery of the curriculum as the teacher, a key stakeholder in the curriculum process becomes updated with the latest development in the academic subject and current affairs, such as issues in environment and sustainability.

The Future of Geography in Singapore

In order for geography to remain relevant, it must address the issues of our time. This paper has provided an overview of the historical development of geography education in Singapore, with a critical analysis on how it has responded to the themes in geography and in the issues that are relevant to a citizen of the world. This paper further argues that ESD plays a pivotal role in ensuring that geography is able to engage our students in the knowledge, skills, values and actions that are required to respond to the unprecedented changes to our lived environment in terms of rate, scale and complexity.

Although the sections above delineated how geography has remained largely relevant to the needs of Singapore through the past few decades, there are several issues that need to be considered for its ensured survival as an uncompromised subject at school and at the university. Increasingly, the problem of falling student intakes for geography at Universities has raised concerns as they eventually form the pool of Singapore's geography teachers in future. With a diminishing pool of geography teachers, the challenge of inspiring more students to learn geography at school and at the university through good teaching practice becomes more arduous. While this is a challenge exacerbated by an aging population, there is a real problem of motivating students to study geography if they do not see its relevance to their lives. A new curriculum is being drawn up and planned for implementation in the next few years as a review of the existing curriculum. What is heartening is that the curriculum review process is highly consultative and involves stakeholders such as teachers, curriculum planners, university academics, as well as teacher trainers.

However, it is equally important for this group to recognize the importance of grounding the curriculum in real world issues and in developing opportunities for students to translate the knowledge, skills and values into action. Only then can the subject be relevant to the lives of our teachers and students.

Fortunately, the education ministry has the insight to develop human capital to respond to this challenge. The Academy of Singapore Teachers, which was set up with the purpose of raising teacher professionalism, will be working with NGOS like the Southeast Asian Geography Association (Poh & Nadarajah, 2010) and the Geography Teachers' Association, Singapore to advance their work on a Geography Chapter in which, the goal is to develop a network of geography teachers that can come together to reflect and recharge. As the network is only in its infancy, the efforts will be in vain if the interaction does not transcend into discussions on issues that affect our daily lives.

While the state of geography education has undergone evolution that is commensurate with the needs of the nation, the argument presented here for its continued survival rests on developing a geography that is relevant to our lives. Indeed, a milestone project of the Geographical Association called "Living Geography" proposes that student should be engaged with "innovative and enjoyable learning that embraces their own perceptions of change in the local environment" (Geographical Association, 2010). To that end, Living Geography argues for geography curricula that are current and future oriented, local but set in the global, investigate change processes and evaluate change and question sustainability (Geographical Association, 2010). Indeed, this is the very idea that the paper has argued for thus far. Through examining the historical development of school Geography, Geography at the local Universities and the changes to the teacher training curriculum in Singapore, examples of practices that support this idea have been discussed. Conceptual learning and the changes to assessment modes provide the necessary conditions for students to take action for the world they live in. There is no guarantee that students will see this relevance or even want to do anything about climate change, for example. However, teachers are important change agents who do not just carry out the curriculum, but through their own reflective practice and beliefs, inspire the students they teach. Perhaps the first step is for geography educators themselves to model the action they would like to see in their students. Geography educators need to answer the big question of why study geography in the first place through action, and explicate it in geography curricula in schools, at the University and for teacher training. As geography plays an important role in education for Singaporeans, and even to any citizen of the world in ensuring that future development is sustainable, its relevance cannot and should not be easily dismissed.

Biographical statement

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