

Shifting Scales of Time and Space: Establishing Connections Across the Humanities

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Introduction

Meaningful understanding of history and geography involves being able to identify and establish connections across time and space scales (An et al., 2015; Bain, 2005; Baker, 2003; Foskett, 1999). Nonetheless, one key problem in the history and geography curricula of schools today is this lack of connectivity and sense of scale.ⁱⁱ Thus, it is appropriate to find out how to help teachers and students expand their disciplinary thinking towards a more holistic (or interdisciplinary) approach that encourages them to shift scales and make connections across time and space. To answer this question, this article proposes a potential conceptual framework in which History and Geography, as interdisciplinary subjects, can conduct meaningful dialogues with each other so that students and teachers can extend their thinking to deepen their understanding of both disciplines and to identify connections across scales of time and place. This framework will be introduced through two initiatives, The Historian's Lab (HL) and The Sustainability Learning Lab (SLL), funded by an EduLab grant, and currently being developed by the staff in the Humanities and Social Studies Education Academic Group (HSSE AG) in the National Institute of Education (NIE), (Singapore). However, it is important to note that this framework is a work-in-progress and will be further modified and developed as the project moves forward.

Background

Historians and geographers have long argued the necessity of viewing both History and Geography (as subjects) from wider perspectives - beyond isolated events of the past or physical geographic features - to identify connections across time and space (Baker, 2003). For instance, historian Geoffrey Barraclough has emphasised the need to look beyond national histories to a whole world system of history, arguing that it is not only possible but also necessary to view the past "by attuning it to the world in which we live in today" (as cited in Baker, 2003, p.194), so as to gain a more sophisticated understanding of historical events. Hence, instead of the traditional narrow focus on Asian history as the history of a region, it could be understood in relation to Asia's place in the world and through making connections to the past, present and future across both time and space. In a keynote address at the recent Humanities Colloquium organised by NIE (2016), historian Bob Bain, in channelling French historian Emmanuel Le Roy Ladurie, conveyed a similar idea. Using Ladurie's famous observation of historians being either parachutists or truffle-hunters, Bain expanded the metaphors to state his case that it is a necessity for historians to be *both* truffle-hunters and parachutists.ⁱⁱⁱ

Likewise, for Andrew Clark, who works on geography and historical

geography, “geography’s ‘full and only purpose’ was ‘making sense of the world’, providing what he terms as ‘world knowledge’” (as cited in Baker, 2003, p.162; see also Clark, 1960). Agreeing to a similar viewpoint in much greater strength, Richard Harris (1971), a geography professor, has further argued that geography should be viewed “by a breadth of synthesis” (p.162) and not just in terms of spatial dimension. Thus, discerning history and geography in a more meaningful manner would mean being able to make sense of the world and seeing connections across time and space scales (An et al., 2015; Bain, 2005; Baker, 2003; Clark, 1972; Harris, 1971; Taylor, 1993). To do so, it may be necessary to approach the disciplines of history and geography through the use of interdisciplinary^{iv} lenses in order to become *both* a truffle-hunter and a parachutist at the same time.

However, there have been debates over whether History and Geography should and could be approached separately and/or from an integrated perspective. Those arguing against the interdisciplinary approach are of the opinion that the distinctiveness of the disciplines lie mainly in the different approaches they take in viewing the problem – what “history [views] as chronology and geography [views] as chorography” (Baker, 2007, p. 354). Put differently, history focuses on *time or spans of time* (i.e. the development/unfolding of events), while geography focuses on *space* (i.e. the basis or the locus that allow events to take place) (see Baker, 2003). Geographical historian Walter Prescott Webb views geography as “treating the physical ‘environment’ and history as addressing ‘civilisation,’ or ‘human action’” (as cited in Baker, 2007, p.351). Despite these differences between geography and history, it is noteworthy that both periods and spaces are *constructed* and *experienced* by people

(Baker, 2003, p. 3). However, these experiences are studied by people who differ by class, gender, and ethnicity, race and so on.

Although history and geography disciplines may theoretically or in principle be differentiated, Baker (2007) argues it is not an easy task to do so in *practice*, due to overlapping and complementary approaches - and this ties in to the counter-argument that the two disciplines should not be identified singularly with time and space (Baker, 2003; Clarke, 1999; Dennis, 1991, 1994; Merrills, 2005; Ozouf-Marginier, 1995). Despite both disciplines having their distinctive intellectual territories and epistemological positions, they are so closely related that “neither one can afford to ignore or neglect the other” (Baker, 2003, p. 3). Moreover, Baker (2007) emphasises that both disciplines offer more than one perspective upon periods, places and people studied. Pointing out that geography and history encourages the practice of *comparisons* between places and periods respectively, French geographer Jean Bastié suggests that both approaches are complimentary. For Bastié history and geography are *interdisciplinary* perspectives on common topics (Baker, 2003). Thus, there are ample examples where history and geography are imbued with the other.

On the one hand, works by historian John Richard Green (1881) have infused geographical perspectives upon history as he is of the opinion that “History strikes its roots in Geography, for without a clear and vivid realisation of the physical structure of a country the incidents of the life which men [sic] have lived in it can have no interest or meaning” (xi; see also works by Ozouf-Marginier, 1995; Pacione, 2013; Philo, 1994, 2001). On the other hand, Geographer Richard Dennis (1991,

1994) has also emphasised, in his Anglo-American historical geography works, on the need to focus on historical perspectives upon human (human) geography (see also works by Clark, 1960, 1972; Le Lannou, 1952).

Therefore, both history and geography should also be identified in an interdisciplinary perspective to gain a better understanding of the world and establish connections. In other words, geographical influences upon history and historical influences upon geography – termed as geographical history and historical geography respectively by H. C. Darby (1953) – are essential to better understand the past and see connections across scales (Bain, 2005; Baker, 2003, 2007).^v It is believed that “connecting and layering these two disciplines can contribute new perspectives and multi-dimensional understanding of complex topics” (Newman & O-Neill-Jones, 2016, p. 2). However, it is important to note geography is not history and history is not geography, and it should not be confused as such (Clarke, 1999). Thus, a balanced approach in understanding history and geography is more appropriate rather than *only* being identified singularly with time and space (Baker 2007).

History and geography education in schools

One key problem in the history and geography curricula of schools today is the lack of connectivity and sense of scale.^{vi} Topics in school history and school geography are usually taught as stand-alone topics or in compartmentalised fashion to facilitate assessment. What this has resulted in for the students is a lack of coherence and connections between the topics they are studying. One of the reasons for this has been attributed to the lack of emphasis on an *integrated*

curriculum approach “that purposefully draws together knowledge, perspectives, and methods of inquiry from more than one discipline to develop a more powerful understanding of a central idea, issue, person or event” (Parker, 2005, pp. 452-453). In fact, Immanuel Wallerstein (2004), a historical social scientist, states that “separate boxes of analysis - what ... are called the disciplines - are an obstacle, not an aid, to understanding the world” (p. x). Thus, for History and Geography as school subjects, this would mean looking at events beyond the normal loosely connected, stand-alone occurrences to a connected bigger picture across scales that makes sense of the world-system.

While some schools^{vii} have adopted shifting scales through an integrated curriculum approach to teach both History and Geography, the subjects are still taught as two distinctive disciplines in Singapore under the broad spectrum of Humanities. Teaching and learning History and Geography for *understanding* is a difficult task in Singapore schools, where learning is limited to textbooks, memorisation of knowledge, and passing standardised exams (Afandi & Baildon, 2015). These subjects arrive in classrooms as a list of to-do items teachers must teach and students must learn (Afandi & Baildon, 2015), and are further challenged by time constraints (Bain, 2005; Bonnett, 2003; Hinde, 2005). This results in “missing the problems and questions that make the content coherent, significant and even fascinating” (Bain, 2005, p. 182) and further discourages inquiry and investigation into history and geography for more meaningful learning experiences.

Meaningful history learning, for instance, would go beyond memorisation and rote learning to engaging students in meaningful dialogues so as to gain a deeper understanding of history and to

make connections with the past, the present and the future as well as in relation to places in the world (Afandi & Baidon, 2015; Lee, 1991; Lee & Ashby, 2000). Lee (1999) believes giving stories as history is not the best way to make students understand history in a meaningful manner. It does not help students to broaden their understanding of history nor does it spark curiosity to actively engage students in learning about the significance of the past in relation to time and space. In fact, to learn history, one needs to “think outside familiar and comfortable assumptions and world views” (Bain, 2005, pp.180-183; see also Afandi & Baidon, 2015), an act that has been characterised as “unnatural” by Sam Wineburg (2001). Thus, Lee (1991) argues that there is nothing historical about the learning if students are unable to understand how historical knowledge is developed, how different claims are being argued and why, and if they cannot explore the evidence particular accounts are based on.

Similarly, meaningful geography learning would encourage discovery and/or experiential learning and active inquiry, rather than rote learning, to better understand geographical complexities in relation to the world today and the future (Bonnett, 2003; Foskett, 1999). Thus, the current practice of geography teaching and learning should also be extended to address complexities (e.g. challenges such as climate change, access to clean water, migration) faced by people in the past, today, and challenges they need to be prepared for in the future. Disengaging geography (i.e., not identifying connections in a bigger picture) from the world rarely encourages meaningful learning of the discipline (Bonnet, 2003; Taylor, 1993). It could limit a student’s understanding of the discipline to a specific area and discourage him/her to see trends and patterns of geographic changes

and complexities in a broader view over a period of time. Thus, in addition to the spatial dimension in geography, a temporal dimension is also crucial to understand the discipline better in a world view perspective, as it helps to reveal relations across scales (Lenntorp, 1999). To do so, teachers and students need to be engaged in authentic geography work that would also help them to understand how geographers work with data (e.g. how different data representations are being argued).

Learning history and geography in this way requires teachers to be very knowledgeable and skilled so that they can help students to expand their historical and geographic thinking by making use of various strategies and concepts, including interdisciplinary approaches, to investigate and see connections of past events across time and space scales (Hinde, 2005; Thornton, 2007). Such an approach also fosters “strong interdisciplinary learning” (Harris, Wirz, Hinde, & Libbee, 2015, p. 158) and achieves “multi-dimensional understanding of complex topics” (Newman & O-Neill-Jones, 2016, p. 2). But, the question is how to help teachers and students expand their disciplinary thinking towards a more holistic (or interdisciplinary) approach that encourages them to shift scales and identify connections across time and space.

A framework for teachers and students

Given the above backdrop and the problem stated, this paper will now introduce a potential conceptual framework, through the HL and SLL, in which History and Geography can conduct meaningful dialogues so that students and teachers can extend their thinking in evaluative terms to identify connections across scales. In the words of Ladurie

again, it is an exploration into ways of engaging teachers and students to become both truffle-hunters and parachutists to use different lenses at different times to understand history and geography in order to make better sense of the world. The intention of the framework is not to eliminate the teaching of the two subjects as separate disciplines, but to “infuse” (Parker, 2005) certain aspects (e.g. knowledge, perspectives) of one discipline into the other discipline, wherever possible, for deeper understanding of both. Hence, this framework can be used in classroom teaching as a “pedagogical tool” instead of as an end (Hinde, 2005). While it is “not easy to distinguish [at least in practice] between the influence of geography upon history, and that of history upon geography” (Darby, 2002, p. 153), this article suggests teachers could effectively relate to geographical sensitivity (e.g. spatiality, location, distribution, interaction, environment) upon past phenomena (e.g. socio-political, economic events, etc.) and historical sensitivity (e.g., past social, political, economic changes) upon geographic phenomena, while not deviating from the curriculum objectives. In doing so, the following section will first elaborate on commonalities developed by the HL and SLL and subsequently will provide a brief introduction to each lab and how some of the lesson activities are intended to encourage integration.

Commonalities in HL and SLL

Although the HL and the SLL will be developed as two separate labs, there are several commonalities in terms of practice and approach used. Firstly, the main intention of the two labs involve introducing students and teachers to an *immersive and experiential learning* experiences, where students play a significant role in being active decision-makers and/or problem-solvers to make

sense of the world through their own knowledge-building processes. Secondly, both labs encourage *disciplinary inquiry*, where students are required to engage in authentic historical and/or geographic problems and questions, which will be elaborated later in this paper under each lab’s description. In doing so, students will use different strategies such as critical inquiry, analysis, visualisation, interpretation and data/evidence evaluation in given sources (both primary and secondary) to make informed decisions or conclusions. They are also guided to apply concepts central to each discipline or both (see Baildon, Afandi, Damico, Rajah, & Lim, 2015; Bain, 2005; Hinde, 2005). These strategies are intended to achieve the same objective: to understand complex topics in a more meaningful manner. Thirdly, both labs encourage *discipline specific concepts* as well as *interdisciplinary concepts*. Some discipline specific concepts that will be used are accounts, empathy, historical perspectives for history, and sustainability, and geographical perspective for geography. On the other hand, examples of interdisciplinary concepts include geographical perspective in history, historical perspective in geography, continuity and change, processes, evidence, cause and consequence. Fourthly, both labs will be developed and customised to suit the needs of different audiences; and in developing lesson packages they will be considering both teachers’ and students’ needs. Thus, it can be said that both promote the design of rich instructional materials and a “responsive pedagogy” (Baildon et al., 2015, p. 3).

Furthermore, certain components of the two labs will be aligned upon a teacher Professional Development (PD) model that comprises of common characteristics identified by scholars. These include, but

are not limited to, promoting active learning instead of passive learning to encourage teacher engagement through classroom discussions and activities (Garet, Porter, Desimone, Birman, & Yoon, 2001; Gersten, Dimino, Jayanthi, Kim & Santoro, 2010; Harris et al., 2015); coherence with other learning activities and staying connected to curriculum goals (Garet et al., 2001).

Lastly, both labs will infuse one or more approaches stated below (and not limited to these) in developing lessons that are of interdisciplinary nature. Harris et al. (2015, p. 159) has provided a list of approaches that integrated history and geography lessons. Some of these, which are incorporated in both HL and SLL lessons, include: a.) Use of maps and data as primary sources. These maps and online mapping tools such as ArcGIS will be used to visualise a large volume of geospatial or historical data, which will help students to understand the strategic importance of an event and its location. By comparing multiple maps of different locations or areas, students can scale up their analysis beyond a time-specific or location-specific dimension to a bigger picture (e.g. the human-environmental impact on different waterways over a period of time such as a decade or a century). Shifting scales up in this manner helps students wear the two lenses – truffle-hunter and parachutist – described by Bob Bain to make sense of world and identify developments and changes that have taken place across time and space (see also, Newman & O'Neill-Jones, 2016). In addition to the use of maps, some other approaches include working on trends and patterns over time and making spatial connections and associations; considering the evolution of local/regional or world patterns as opposed to individual eras; the use of historical/contemporary comparisons to better understand the present and plan for

the future, (see also, Baker, 2003, p. 194); putting important historical events in geographic context by making links with their environment and economic factors, for instance; and investigating geographical changes (both physical and human) in both their spatial and temporal contexts.

The Historian's Lab

The primary objective of The Historian's Lab is to engage secondary school students in an immersive, experiential and authentic history learning experience, by sparking curiosity and interest to not only learn about the past, but also to “instil an understanding of the connectedness of the past, the present, and the future” (Lévesque, 2008, p. 19). This will be achieved in two ways: Firstly, it provides teachers and students with activities and lesson packages to promote teaching and learning History through immersive and experiential engagement with historical problems. Secondly, it intends to help students understand the authentic work that historians do (i.e. understanding, investigating and constructing history) by engaging them in specially crafted inquiry activities.

These activities involve making historians' intellectual work visible, providing first-hand experience to students and being able to witness professional historians at work. The researchers, together with partner school teachers, will develop lesson packages that both complement and supplement the prescribed textbooks (e.g. interactive board games, videos, primary sources, maps and other visual prompts), allowing students to analyse evidence from different sources, synthesise and corroborate evidence, frame historical problems and understand the significance of different accounts (Bain, 2005). These are expected to provide

students with a more engaging and authentic experience of history, through hands-on investigations of the past. In so doing, students would be able to make connections across time and space, and at the same time, come to realise how history is created and how it is often contested. In addition, training workshops for secondary school teachers will be organised to provide them with necessary knowledge and practice of experiencing history and history pedagogy that go beyond rote-learning and memorisation in a more interdisciplinary and immersive approach.^{viii} The focus of these workshops is to support teachers in *incorporating* these pedagogies in their classroom practice, rather than doing away with the current practice.

For instance, a lesson package on “What is Temasek?” was developed to engage students in an immersive interdisciplinary learning experience as they critically analyse multiple sources and accounts to assess if the commonplace assumptions (in school textbooks and popular culture) that equate modern Singapore with ancient Temasek is accurate. The lesson incorporates the comparison and analysis of documentary evidence as well as the use of maps and traveller accounts as part of the inquiry process. It thus places the gathering and corroboration of evidence and inquiry at the heart of learning. Contemporary and ancient maps are used to enhance students’ understanding about the place based on its physical features (e.g. waterways, dry lands) and this geographical understanding in turn helps to determine the kind of possible activities people were involved in and their lifestyles, as well as the modes of transportation and the like. Contemporaneous traveller accounts are also compared and evaluated to gain a better understanding about the region in the ancient past and to investigate whether

these accounts support the assumption that Singapore was Temasek. Throughout the process, students will be probed to ask “What do different maps indicate?”, “What is significant about the place?”, “How has its significance changed over time and why?”, “What do lifestyles of people suggest about the place?” and the like. This approach also moves beyond retention of historical facts and just accumulating *content* to a more engaging inquiry-learning process.

Similarly, a lesson package on Operation Coldstore was developed to help students to make sense of the event by understanding the causal relations, motivations, significance and implications of this singular event in Singapore’s past. This process would encourage students to view the event as truffle-hunter (looking at specific events and issues in Singapore) and a parachutist (situating events in wider geographical areas, within which anti-communism was also a response by other governments in the developing world) too. Thus students will be probed to extend their thinking to answer authentic questions such as, “Why did it take place?”, “What was happening in other parts of the world during that time?”, “How might these events and issues have shaped government responses in Singapore?”, “What were the social, economic, cultural impacts of this event?”, “What are the controversies surrounding this episode in Singapore’s history?” To answer such questions students would need to not only use contextual knowledge, but would also need to gather evidence/sources, critically analyse different historical accounts/evidence, corroborate, and understand the significance of the event and find connections with the past, the present and the future (Afandi & Baildon, 2015). Furthermore, it encourages students to infuse geographical perspectives into that particular episode in

Singapore's history to better understand the significance of the event in relation to Singapore's geographical location within the British Empire and the Cold War geopolitics of the time. Successful implementation of this approach will eventually provide the student with necessary skills and concepts that can be applied "flexibly and appropriately" (Bruner, as cited in Lévesque, 2008, p. 28) to understand past and contemporary issues across time and space and discuss the causal factors and motivations that have precipitated certain movements, government responses, and compare these responses to current issues.

Moreover, to provide students with an authentic history learning experience as mentioned above, students will also be guided by teachers and historians to engage in historical thinking processes, similar to that of a historian. Although "historical thinking of elementary- and secondary-school students does not (and cannot) match that of disciplinary experts [i.e. historians]" (Lévesque, 2008, p. 31), "there is a continuity" between what an expert does "on the forefront of his discipline" and what a student does in approaching historical thinking (ibid). For instance, students will be given two contesting accounts of a historical event. They will be probed to answer authentic questions such as "What evidence do they have to support an idea?", "What evidence do other accounts/sources provide?", "Why are there different accounts about the past?", "How do you decide which account is better?", and "Does it matter which interpretation is right or wrong?" Such inquiry helps students to understand the process of constructing history. Similar to historians, these thought-processes encourage students to move beyond the textbooks, and use new evidence and accounts to "support, extend or contest" their prior knowledge and understandings

and "situate historical interpretations ...in relationship to their understanding" (Bain, 2005, p. 199). Students will also be asked to share their ideas with others so as to see how different perspectives of the same accounts are developed. This helps students to be open to contesting viewpoints of the same problem and understand that most written history is influenced by the individual's perspectives and that history is not fixed. Thus, this historical thinking practice will somewhat "serve as a benchmark for students' own historical development, a benchmark that may help educators narrow the gap between the two worlds" (Lévesque, 2008, p.31). This also makes the learning more engaging for students (Bain, 2005).

The Sustainability Learning Lab

The main aim of the SLL is to foster knowledge around sustainability by engaging them in an experiential teaching and learning experiences, where they get to understand the ways geographers work. Although this involves multidisciplinary approaches to understanding geography, these challenges are addressed through applied learning that provide access to geographic databases, curriculum resources, pedagogical strategies, fieldwork packages and ICT tools. In order to achieve the aforementioned objective teachers and students will be given opportunities to actively engage in sustainability education, research, fieldwork as well as training workshops. Activities are designed to encourage students to move from a superficial learning of physical features of the earth, to explore trends and patterns across time and space as well as to engage in an authentic geographic learning experiences in which they understand how geographers work.

For instance, carrying out fieldwork

covering both aspects of human and physical geography in established field centres in Singapore is a key focus in the SLL. According to scholars (Driver, 2001; Foskett, 1999; Healey & Roberts, 2004; Lai, 1999; Stoddart, 1986), fieldwork is central to geography as a discipline and is closely linked with exploratory concepts. Fieldwork helps students to get a “first-hand”, “real” geographic experience as it creates an interaction of “physical, mental and emotional experiences” (Foskett, 1999, p. 159) and provides the ability to relate to the world (Lai, 1999, p. 240). As part of SLL’s signature elements it has established a field centre at Jurong Eco Garden and, to date, have conducted fieldwork lessons with partner schools. In doing so, students were provided with first-hand experience in applying geographic concepts, skills and tools, for instance in measuring water quality indicators at multiple sites at the field centre. In addition to using the standard PUB kits to measure Dissolved Oxygen, pH, turbidity and temperature, SLL provides students with the opportunity to investigate similar parameters and even more indicators (e.g. Phosphate, Nitrate levels) using sophisticated equipment – the same equipment used by geographers. This provides students the opportunity to compare data gathered using different types of equipment and thereby analyse results and inquire into the similarities and differences in their findings at different sites. Based on the data collected, they are also probed to ask authentic geographic questions such as, “Which method of testing water quality is better?”, “Does it matter if the results are different for different equipment used?” What do different results indicate about water quality?” “How clean is Singapore’s water?” These activities are intended to spark the curiosity of students, corroborate findings, exercise reasoning and participate in reflective thinking – or in

other terms to engage in geographic inquiry process (Roberts, 2003) on their own as well as during classroom discussions. Hence, similar to the HL, concepts such as analysing, collaborating, comparing, applying concepts and inquiry are central to disciplinary work in the SLL. Engaging students in real world settings and situations through fieldwork not only promotes experiential learning, but also enhances students’ reflective thinking on what they did and how their learning connects to the larger picture of clean water in Singapore and appreciating Singapore’s water resources (Dummer, Cook, Parker, Barrett, & Hull, 2008; Fuller, Rawlinson, & Bevan, 2000; Roberts, 2003).

The SLL also intends to develop a web-based geospatial data repository to provide access to geospatial data and retrieval so as to conduct lessons that spark students’ curiosity and facilitate a more meaningful and in-depth understanding of geographical thinking and concepts. Geospatial and time series data analysis are an essential core of sustainability studies. Thus, analysing visually represented geospatial data using online mapping tools (e.g. ArcGIS online) will allow students to conduct spatial analysis as well as temporal analysis. For instance, if analysing a map of a specific site/location students will analyse the surrounding environment/topography and the human interactions connecting to it. They will also be encouraged to compare maps from multiple areas, thus scaling up to investigate and understand distributions, patterns, trends from a parachutist’s lens too.

Additionally, students will be encouraged to infuse historical perspective into geography using maps and databases (e.g., changes in water quality indicators over a decade or a century) too. In fact,

“time” is considered an important element in geographic thinking (An et al., 2015; Newman & O'Neill-Jones, 2016). Therefore, “distinct modes of thinking conditions” identified by Gersmehl and Gersmehl (2007, p. 183; see also Gersmehl & Gersmehl, 2006), such as making comparisons, transitions, pattern identification and connections, and auras across time and space will be key highlights in their active classroom learning. In doing so, they will answer questions such as (assuming a lesson on water quality), “How does human-environment interaction affect water quality?”, “How does water quality indicators change over a period of time and across space and why?”, “What patterns can be identified across multiple sites/locations/regions at a particular time or a time range?”, “What changes or developments can be found in the past decade?” These thought processes also enhance students’ ability to understand geography in a more meaningful way using time and space connections. For instance, if it is a specific area, it allows them to probe into thinking how they would feel if they were standing at that particular area today, or how geographic developments/changes that have taken place would impact the future. Thus, like the HL, the SLL also provides students with opportunities to understand contemporary situations and be prepared to face future challenges. The ability to identify relations across space and time in geography “is important as students consider the diversity of Earth’s environmental and societal features” (Newman & O'Neill-Jones, 2016, p. 4). Such thinking enhances students’ critical thinking ability for making sense of the world.

Conclusion

This article intended to introduce a

conceptual framework to help teachers and students understand the interdisciplinary aspect of history and geography, which they can incorporate in their lessons so as to conduct meaningful lessons that encourage establishing trends, patterns and connections across scales. In doing so, it introduced the HL and the SLL that are currently being developed by HSSE with funding support from EduLab. The paper highlighted that apart from the current practice of teaching history and geography as separate disciplines, an interdisciplinary approach (in terms of knowledge, perspectives, concepts and strategies) to teaching and learning can help students understand multi-dimensional aspects of complex topics. A greater emphasis was placed on shifting scales across time and space as well as from a micro view to a macro view to identify connections and to make sense of the world. However, the article also noted that a balance between integration and distinctive learning of the two disciplines is the best approach for an effective learning experience: “Knowing how and when to separate topics to clarify them and knowing, on the other hand, when to integrate them is a major achievement of skillful teaching” (Parker, 2005, p. 453).

Despite the immersive and experiential learning experience that can be given to students through HL and SLL programmes, it can also be challenging for teachers to put it into practice, and hence it is important to address these issues too. Firstly, it requires teachers to be knowledgeable and skilled in both geographical history and/or historical geography thinking. Secondly, it requires a significant amount of time, effort and commitment from teachers and students to incorporate these into their lessons and to implement in classrooms. To address these issues, the labs intend to develop training workshops including fieldwork and

professional development modules for teachers to enhance their knowledge and skills. Furthermore, the research team will be working closely with the partner school teachers during the pilot studies to better understand their unique needs and acquire feedback so as to promote a more responsive pedagogy and develop lesson packages that will eventually be do-able in their classrooms.

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and integrating geospatial technologies to analyse historical data using maps.

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ⁱⁱ Mentioned by Bob Bain during his Keynote Address at Humanities Colloquium in Singapore (2016).

ⁱⁱⁱ A truffle-hunter would look at the finest details in a micro view, whereas a parachutist would look for patterns and trends in a macro or a bigger view, as explained by Bain.

^{iv} The term integrated approach would also be used interchangeably in this paper to convey the same idea as an interdisciplinary approach.

^v However, there are those who disagree with this view (e.g., Earle, 1992; Philo, 1994) based on limitations these definitions have. In fact, to date, these terms have not been clearly defined and sometimes have been used interchangeably too (e.g. Fernández-Giménez, 1999; Meyer, 2000; Muller, 2004). However, it is not the concern of this paper to elaborate or define these terms.

^{vi} Historian Bob Bain mentioned this during his Keynote Address at the Humanities Colloquium in NIE (2016).

^{vii} An example of a successful integrated approach is the Michigan Geography-History Project (MGH) (see Harris et al., 2015).

^{viii} Three workshops for this purpose were conducted in April 2016 in NIE. These workshops focused on understanding the big picture of history, uncovering the past