

Fostering a Knowledge Building Community in a Primary Social Studies Class to Develop Humanistic View on Real World Problem

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Abstract: This study examined the nature of reasoning of 30 primary five students working on a social studies topic on ‘Appreciating the World and Region We Live In’, contextualized to a local community, Kampong Buangkok. Results showed that students not only became increasingly motivated in the processes of theorizing and collective solutioning, they were also developing a higher level of consideration for the people and their activities, among spatial and temporal considerations. We found clear evidence that students’ subject-based literacy skills improved significantly over the course of the KB lessons.

Introduction

Much educational research is motivated by the need to build students’ competencies in the face of the rapidly changing world and its demand. What qualifies our students to fluently navigate and make sound decisions in this complex world? A series of lectures designed for Harvard graduates dealing with moral dilemma heightened the need to look into the affective domain of learning including developing humanistic perspective to approaching problems (Krathwohl et. al.). The aim of this study is to detail enactment of knowledge building (KB) pedagogy and technology in a primary five class working on the topic of preservation of “Kampong Buangkok” in Singapore and investigate the impact of such an approach on developing 21st century competencies, including a humanistic perspective in their decision-making process.

Background

In the past decades, educational research and learning sciences have motivated educators to shift their practice. Many changes in educational context have indeed happened. Plainly using the ‘inquiry’ method and thinking skills in the teaching of history is an archaic approach dating decades back to the 1950s and 1960s (Woodhouse & Fleming, 1976). Around the world, especially during transition phases, history teaching plays a formative role in empowering students to “become good citizens of their own nations, of troubled continents and of our endangered global village” (Harkness, 1994). In Singapore, we are in the transition from our founding 50 years of nationhood to the next 50. According to PM Lee (2015), we must preserve what has worked for us: multiracialism and interdependence, and strive for what will forge a stronger 50 years for Singapore: identity and community. The concepts that PM Lee mentions as crucial for Singaporeans requires much more than just an intellectual exercise to deconstruct them in class: it requires a direction from a “values agenda” approach that empowers students to refine these values in contextualized and relatable ways that history lessons can provide (Kelsey, 2009).

KB presents a model of student-centered collaborative inquiry. KB teachers are encouraged to actively engage students in thinking through the diverse but related ideas that emerge in the class inquiry and supporting them in ways to revise and improve these ideas into more formalized explanation or proposal (“theory”). This idea-centric approach never fails to surface students’ thoughts and perspectives that surprised teachers. This is a piece of clear evidence against the misnomer that some teachers have about their students; that their students cannot think. In fact, all students, regardless of age and ability, have ideas. KB introduces students to a culture in which they see new responsibilities in themselves as learners, contributing and negotiating to develop new insights about their inquiry (Paavola & Hakkarainen, 2005). More importantly, students understand that they need to function as a network to discuss and exchange ideas with their peers (Lee, Chan, & van Aalst, 2006; Scardamalia & Bereiter, 2003; Bereiter, 2002).

Design of study: Knowledge Building in Social Studies classrooms

In a series of studies on KB pedagogy in Social Studies in local schools, it was found that young children were able to engage in online collaborative sense-making and they were also found to have developed skills in asking deeper questions and tackling deeper concepts (Tan et al., 2014). However, it was also found that teachers struggled to cope with KB pedagogy. They found it difficult to respond to students’ ideas and to keep up with

students' development of ideas (Chai et al, 2012). As such, more studies on KB classroom needs to be done to address teachers' anxiety and competencies.

Teacher's lesson design

The study was done over two weeks in a social studies class of 30 primary five students (age eleven). The theme that students were working on was 'Appreciating the World and Region We Live In.' The teacher contextualized the inquiry to a local community, Kampong Buangkok. Students were first taken on a field trip to Kampong Buangkok to collect data for their case through observations and interviews. There were four phases (adopted from A-C-T-S, the school's overarching pedagogical tool) to organize these KB lessons:

Phase 1: Asking questions: The lesson began with an overarching question "What is the value of Kampong Buangkok to Singaporeans?" (Refer to Figure 1), initiated by the teacher on an online electronic discourse platform, (KF). KF platform provided an open discourse space for students to explore their interpretation and biases of the problem. The big idea that the teacher wanted students to focus on was to navigate the tension between progress and heritage. This unit is an enrichment unit to the theme of "whether civilization is a blessing or curse to Mankind". A set of KB scaffolds (e.g. <I can build on this value by> ; <I need to understand>, <I were put in place to guide students through their ideas.

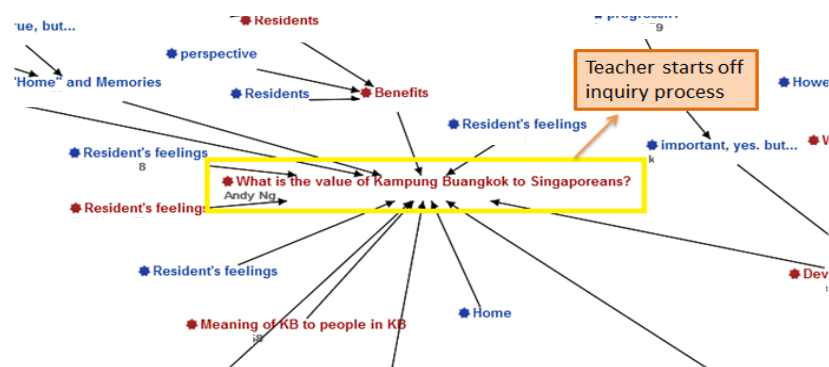


Figure 1. Teacher posted the initial question on KF

Phase 2: Challenging ideas: Following the first lesson, the teacher highlighted a student's questions posted on KF: 'Are the people or the economy more important?' and facilitated a whole-class discussion to challenge students' current thoughts. He led students through a discussion to talk about the two main camps of thoughts emerging on KF at that moment, i.e. one camp supported the "People" while the other supported "Economy". A student suggested 'What if we develop kampong Buangkok while preserving it and not destroying it either?', the class picked up on that and the teacher posted that promising idea onto a new KF view. (Refer to Figure 3). The teacher continued to emphasize on consensus, reminding students to consider multiple perspectives rather than winning an argument.

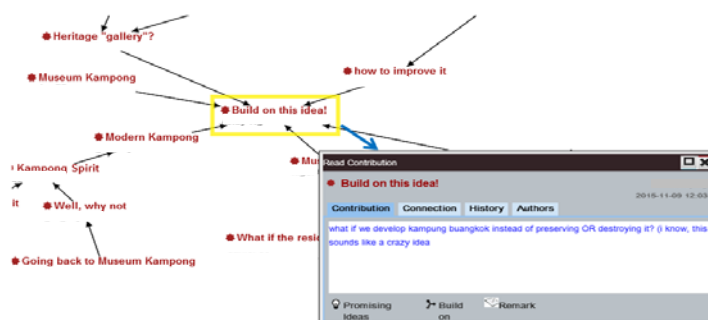


Figure 2. Promising idea identified in class to shape the inquiry further.

Phase 3. Think Further. Following the question ‘What if we develop Kampung Buangkok while preserving it and not destroying it either?’, three promising ideas were put up on KF for further pursuit. The class agreed on a set of selection criteria based on the level of amalgamation of promising student-proposed theories for what the “town council” could do instead of a one-sided approach. The selected promising theories includes “developing a museum in Kampong Buangkok to attract tourists”; “turning Kampong Buangkok into a flower gallery like Botanic Gardens”; “developing half of Kampong Buangkok into a modernized residential area while leaving the other half alone”. Students were to have a final read-through and discussion on KF about what ideas among the three that they would propose to the “town council”. They would then have a conclusive verbal discussion before bringing their ideas up to the “town council”.

Phase 4. Reflect Forward:

The teacher posed six questions in a new KF view for the students to reflect on their experience. Questions included: ‘In the first place, why is there even a debate as to whether Kampung Buangkok should be preserved or developed?’ and ‘If there are future opportunities for me to participate in projects aimed at protecting places of heritage, would I be interested, even if it would take up a lot of my time and effort? Why or why not?’.

Throughout the lessons, the teacher would talk about KB principles (e.g., improvable ideas, collective cognitive responsibility). The teacher would say things like “Spend the last 15 minutes of the lesson reading through all the notes contributed to KF, and process all that information” thus cultivating the habits of collaboration in the class.

Results

The data collected comprises of students’ notes on KF, classroom observations, students’ and teacher’s reflection notes. We analyzed the data for three components: (i) students’ motivation in solving the problem; and students’ primary considerations in response to the problem and students’ emotional connection to the problem. 13 out of 15 students responded positively when asked about their interest in the inquiry. Some attributed the source of their interest to their learning experience which influenced their developing interest in social studies,

“If I had the opportunity, I would participate. I believe that I will be able to gain more knowledge on my surroundings and further understand the value of heritage sites and what they provide the society with.”

More importantly, the students were seen to grow to really care about the problems and issues that arose in the course of the KB discourse.

“I realised (or so I thought) that REAL town council officers would come and the residents of KB really depended on this. Nevertheless, even after I knew they were fake I still treasured the experience and the project.”

We also observed students perception of the issue at hand grew from merely tackling the design and utility of space in Kampong Buangkok (Spatial) to that of taking the lens of the residents of Kampong Buangkok (Social). This Social dimension included students' attempt to understand the behaviour and activities of people in Kampong Buangkok (Social), to considering specific events or organization (Temporal) (Table 1). Though all three types of considerations increased, the most significant increase was the social perspective (Fig.1, from 6.7% to 21.4%).

Table 1: Three main categories of considerations revealed in students’ posts

Codes	Descriptions	Examples
Considering from a social perspective	Considering human needs, behaviour, and their social activities.	“Kampung Buangkok is valuable to - the residents there. They might feel very awkward in another housing estate without the hustle and bustle of the kampong.”
Considering from a spatial perspective	Considering utility of space, including location and scale.	“KB can be made into shopping centres and sports facilities as there are not many near that area.”
Considering from a temporal perspective	Considering organization of time and significant event	Will we still have this Kampong 20 years from now? 50 years? Our "heritage homes" are important, but people whom they benefit are the extreme minority”

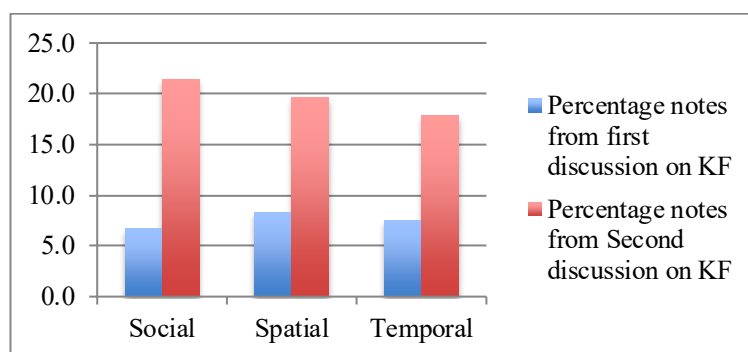


Figure. 3. Percentage of students' notes that revealed different sets of consideration.

We noted an affective dimension emerging in students' notes. The tone and vocabulary used by the students showed their concern about their ideas and proposals. We were detecting notes that revealed analysis of the problem through description of feeling (e.g. *"if they wanted to trespass and disrespect the residents, they could, couldn't they?"*), notes containing emotional expression (e.g. *"don't you think that residents will feel cooped up in KB with buildings around?"*) and even notes with moralising tone (e.g. *"This value is important, but - progress from destroying people's homes?"*).

The 'aha' moment in these lessons was the teachers' account of his students asking him what would happen after they presented their plans to the "town council". They wanted to know if it would make any difference to the real Kampong Buangkok. And if it couldn't, they asked the teacher if they could speak to someone genuine (like a real town council) who would do something about the real problem.

Conclusion and Discussion

The evidently positive results showed in this group of high achievers regarding their motivation in tackling social issues and especially with their increased focus and connection with the social aspects of the problem within such a short implementation cycle surprised both the researchers and the teachers. An anecdotal but important observation from the teacher was that he noticed his class becoming less competitive in this KB journey. Competitiveness is a common trait in these high-achievers in previous years. Though we also managed to see a corresponding improvement in the quality of students' explanation, that was not the most critical to the teachers. Teachers saw that the students were pursuing real-life problem beyond just an academic pursue when they fostered KB culture in class. It was sufficient to convince them in sustaining such practice in their class.

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