Enhancing Fieldwork in Social Studies through Remotely Conducted Structured Academic Controversies

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Abstract
The Structured Academic Controversy was developed in the United States by Johnson and Johnson as a way of developing in students an appreciation of multiple perspectives of an issue. Much of the time, the exercise is conducted in a face-to-face group setting in a classroom. This paper explores Structured Academic Controversy in an out-of-class situation and is used in enhancing fieldwork in social studies. It describes a pilot study involving a class of secondary school students in Singapore, in which they were required to use the strategy of the Structured Academic Controversy to analyse socio-economic issues pertaining to several field sites. Pairs of students conducted their collaborative investigations in real-time while still in the field, using modern technologies of text- and picture-messaging.

Rationale and Background
Many Social Studies teachers in Singapore are still learning and reflecting upon how to translate the aims and objectives of the syllabus into actual pedagogical practice within the formal curriculum. Fieldwork can play a significant part in the teaching of Social Studies. Social Studies teachers often structure fieldwork activities such that the emphasis is almost entirely on content-knowledge acquisition — that is to say, how does the data in the field augment the facts and concepts elaborated upon in the textbook? They have difficulty in choosing appropriate fieldwork locations and also in constructing authentic field-based learning tasks. This is because much of the present Social Studies syllabus is either based on studying areas of on-going (or recent) conflict, or examining very abstract issues such as “education”, “health”, “housing” and “governance”. It is designed such that candidates are assessed based on the quality of their thinking (as well as on their ability to intelligently apply content-knowledge). How then can fieldtrip activities be structured to promote this largely-ignored aspect of the learning process? It is extremely challenging for teachers to design field-based learning tasks which truly add value to the learner, beyond simple and perfunctory Learning Journey visits.
This paper explores how fieldwork in Social Studies might be enhanced through the use of Structured Academic Controversies (Johnson & Johnson, 1979), crafted in such a way that the participants are not necessarily co-located. The experiential framework known as the Structured Academic Controversy has successfully been used in Social Studies education, with both secondary and post-secondary cohorts. Traditionally, the Academic Controversies have been structured such that participants engage in face-to-face debates. This form of interaction is somewhat contrived and cannot accurately mirror modes of adolescent discussion and negotiation outside the formal learning environment. It was to address this very critique that a pilot study was constructed and implemented with various groups of Social Studies students in an attempt to investigate the extent to which the skill-set (and not the knowledge-base) of Social Studies might be developed and practised in the field.

Theoretical Foundations and Key Definitions

One of the primary theoretical constructs underpinning the study is Pea’s idea of “distributed intelligence” (as described in Perkins, 1992). To quote Perkins,

“people think and remember with the help of all sorts of physical aids, and we commonly construct new physical aids to help ourselves yet more. People think and remember socially, through interaction with other people, sharing information and perspectives and developing ideas ... People sustain thinking through socially shared symbol systems — speech, writing, the technical argot of specialties, diagrams, scientific notations, and so on” (p. 133).

Perkins develops the idea further by elaborating on three ways in which intelligence can be distributed; namely physically (describing the gamut of student output from completion of traditional problem sets, to journals and portfolios, to simple programming and desktop publishing), socially (co-operative learning), and symbolically (for example, through diagrams and charts, mental maps and role-play).

The germ of these insights was planted in Vygotsky’s (1978) cultural-historical theory of activity, first formulated in the 1920s, in which the relationships between human agents and objects in their environment are mediated by culture, tools and symbols. These same notions of “culture, tools and symbols” are implicit in Perkins’s writings. Perkins’s contemporary at Harvard — Putnam (1993) — brings to the present discussion the term “social capital”. This refers to social networks which go beyond traditional familial ties and connect friends and strangers for mutual benefit. Social capital is therefore the basis of collaborative behaviour.

The Structured Academic Controversy has been defined as the “deliberate stimulation of intellectual conflict by creating a highly structured situation wherein one student’s ideas, information, conclusions, theories, and opinions are incompatible with those of another, and the two seek to reach an agreement by engaging in Aristotelian ‘deliberate discourse’” (Johnson, Johnson & Smith, 1997), such Academic Controversies permit investigations of the social distribution of intelligence,
by building on traditional models of debate and encouraging participants to reach shared consensual values.

Such investigations exemplify Habermas’s (1981) concept of “communicative action” — defined as “the use of language with an orientation to reaching understanding”. Defined thus, Myerson (2001) explains that communicative action is shared action — such “small-group engagement” is the “process by which people come to an understanding about something”.

The study sought to apply the principles behind the design of Structured Academic Controversies to learning environments in which the protagonists were not necessarily co-located.

Methodology and Implementation of Intervention

In the study, teams of students from a Secondary Three Express class of a neighbourhood school explored a bounded area, looking for pieces of evidence which they could use to support different points-of-view surrounding a given issue. They recorded these pieces of evidence pictorially, using camera-phones, and exchanged these pictures in real-time while still in the field, physically separated from each other. This kind of task was only feasible given the affordances of the present generation of camera-phones. Students used the evidence to explore given issues regarding the bounded area, in the format of a Structured Academic Controversy. In turn, by analysing the pictorial exchange, teachers would better understand which particular aspects of their local environments adolescents perceive to be relevant to the given geographical themes.

The objective of this field activity was to investigate which aspects of the local environment adolescents find geographically meaningful. The underlying assumption was that if teachers are able to bring learners’ implicit preconceptions about geographical and social issues to the surface, they would be able to better address these very pre- and misconceptions.

The design of the model is given below:

<table>
<thead>
<tr>
<th>Team A</th>
<th>Exploring an area, gathering evidence to support a given point-of-view</th>
<th>Team B</th>
<th>Exploring the same area, gathering evidence to support another point-of-view</th>
<th>Engaging in a Structured Academic Controversy regarding the optimal land-use of the given area</th>
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The task comprised the following steps:

- Each team was made up of two pairs of students. Both teams were given a fixed amount of time (typically 45 minutes) to explore a well-delineated area, with a view to gathering pictorial evidence to support a certain point-of-view. Pairs
of students from the same team were encouraged to share their findings with each other, via text- and picture-messaging.

- For example, teams could have been tasked to investigate the extent to which a particular neighbourhood was meeting the needs of residents of public housing.
- After the initial time period was over, both teams were given an additional 45 minutes to engage in a dialogue along the lines of a Structured Academic Controversy. This dialogue did not take place through face-to-face interaction, but through an exchange of text- and picture-messaging, allowing the nature and modalities of the discourse to be easily archived for subsequent analysis. The attention of students was drawn to the parallels with essay-writing techniques which they were already familiar with from classroom-based Social Studies lessons; that is to say, the text-messages which the students would send to each other would represent the main points of their respective arguments, with the pictures annotated to the messages representing the evidence with which to substantiate those points.

In the above procedure, both teams are described to have been engaged in a dialogue regarding the needs of residents of public housing. Other topics which students were given the opportunity to investigate included:

- discussing the site and situation of a large convention centre/exhibition complex;
- evaluating the tourism potential of a given neighbourhood;
- discussing the tension between urban renewal and the preservation of cultural heritage;
- exploring the compatibility of land use around areas of scenic beauty or strategic importance; and
- projecting the extent to which the particular demographics of a given neighbourhood lent themselves to catalysing environmental activism.

Five sites in Singapore were chosen as the research neighbourhoods. These sites permitted various aspects of land-use compatibility to be explored. These sites are described briefly below:

- **Holland Village.** This area is popular with the local expatriate community, as well as with students of college-going age. There is a wide range of eateries, as well as handicraft shops. The area is bounded by a mix of both low-rise private and high-rise public housing, and is in close proximity to what is known, in Singapore, as the south-west technology corridor;
- **Little India.** This area has long been associated with the local Indian community in Singapore. It can trace its roots to the original Town Plan developed by Singapore’s founder — Sir Stamford Raffles — in which he attempted to enforce the *Pax Britannia* by a policy of “divide and rule”. Today, Little India is a designated urban conservation area;
- **Singapore Expo.** The Singapore Expo is Singapore’s newest and largest convention and exposition complex. Its site was specifically chosen for its
proximity to what is known as the north-east technology corridor, and also to Changi airport. The land use around it is primarily a mix of low-rise private residences and commercial space. The site is also within a stone’s throw from a water-recycling and processing plant;

- *Sembawang Hills*. This is a quiet suburb in the central rainwater catchment area of Singapore. Residential properties in this area are predominantly low-rise privately owned terrace houses. The area lies on the outskirts of a major New Town in Singapore, but has managed to retain a rustic ambience despite this. It is not uncommon to see troops of monkeys there;

- *Little Guilin*. Little Guilin is actually a disused granite quarry which, with the passage of time, has been filled with rainwater. It is presently considered an area of scenic beauty in Singapore, and is surrounded by both private and public high-rise flats, the developers of which specifically tout the view.

**Results of the Pilot Study**

A total of 39 students (25 females and 14 males) participated in the study. The subjects of the various photographs which the students took and selected to be incorporated into multimedia messages, as evidence of their respective given perspective, were analysed in order to gain an insight into the kinds of issues, scenes and objects which the students found meaningful with respect to their given topic. Chandler’s (2002) caution that “just because an item occurs frequently in a text does not make it significant” notwithstanding, the strategy chosen for this part of the study was indeed that of content analysis, as opposed to a more semiotic one. This decision was made because it was assumed that the spontaneous way in which the photographs were taken, and the fact that they were taken by amateurs using relatively simple cameras, would mean that attempts to analyse them from a structural-semiotic perspective (with its consequent presumptions of deliberate compositing and juxtaposition) would be misleading at best.

From this premise, it was therefore interesting that although each of the students in the pilot conducted their Structured Academic Controversy task at one of five different locations, and each location had its own unique discussion topic, there still emerged several common subjects in the photographs which they chose to take, and subsequently to select for incorporation into their multimedia messages as pictorial evidence supporting their respective perspective.

For example, photographs illustrating various forms of pollution, those illustrating flora (both native and alien), and those related to accessibility and modes of transport were frequently taken by the students regardless of whether they were of direct relevance to the given topic of discussion. Fellow classmates were able to detect such use of irrelevant evidence — this was seen during the peer critique session which followed the fieldwork, with written comments such as “why is all about rubbish and dustbin but not other things to against the question” and “why are all related to pollution”.
These emphases accorded by adolescents to these subjects in particular are most likely explained, not only by prior knowledge from the curriculum, but also by the conditioning they have received throughout their lives so far (in both formal and non-formal educational contexts), that as Singaporeans, they live in a land-scarce nation state with few natural resources of its own. Since independence, the national government has thus needed to woo foreign investment and to plug into the global economy. Two strategies by which it has chosen to do so are to promote Singapore, through high-media-saturation public education campaigns, as a "clean and green" Garden City, as well as to ensure that the country has a world-class public transport infrastructure integrated with carefully planned policies regulating private-car ownership and usage to prevent gridlock. It would appear, at least from the evidence of the pilot study that the government has been successful in this regard, and teachers might wish to take these biases in students' preconceptions into consideration when planning their lessons.

All students in the study were able to show at least rudimentary evidence of having attempted to reverse their initial perspective at the appropriate juncture in the activity. From the pilot data, no clear trend can be discerned (for example, with respect to either gender or linguistic ability) regarding which kinds of students are better able to adopt multiple perspectives.

To a large extent, the latter attribute would appear, at least superficially, to be governed somewhat by the motivation of the student to participate actively in the exercise, and also by the extent to which the student had been paying attention during the pre-exercise briefing. It is, however, clear that students are indeed able to reverse perspectives beyond cursory verbatim parrotting of their peers' initial arguments — clear attempts were made at re-expressing what were perceived to be the best arguments in the protagonists' own words.

It should be noted that an analysis of the nature of the discourse modes used in the debate was not explicitly an objective of this study. This is because the format of the Structured Academic Controversy is, by definition, already highly structured as it is, in that there is a clear delineation of turn-taking according to a predetermined temporal sequence. Given this rigid discourse structure, the design decision was taken early in the planning process to focus on the nature of the evidence that adolescents found meaningful to defend their respective points-of-view.

As a way of consolidating their learning in the field, it is recommended that sufficient time be set aside once back in the classroom for the groups of students to each craft an artefact representing what they have learnt about the given issue. Typically, such artefacts would be in the form of a PowerPoint presentation, and could form part of a larger portfolio for Project Work.
Conclusion

It is acknowledged that the specific methodology described in this paper might not be readily duplicated by practising teachers, at least not without considerable outlay in terms of time, human resources and capital expenditure.

Yet that should by no means detract from the necessity of designing field-based activities which permit students to practise the requisite thinking skills demanded by the syllabus, as well as simply providing them with convenient vehicles for content acquisition. Handphones and digital cameras are commonplace in schools, and while the latter are already acknowledged as valuable arrows in one’s pedagogical quiver, prevailing attitudes towards the former are generally more ambivalent.

This study, at the very least, illustrates what is possible with current technology and infrastructure in terms of crafting learning experiences in the field which permit not only the acquisition of content-knowledge, but just as importantly, of critical and creative thinking skills as well. Valuable skills, such as perspective-reversal, can therefore be taught and practised not only in the classroom face-to-face (as has always been the case), but now also in remote locations when the collaborators are not necessarily co-located. In an increasingly globalised socio-economy, such a finding can only be heartening.

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References