
Title	Using investigation and discussion to inquire about issues in primary social studies
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Source	<i>HSSE Online</i> , 5(1), 24-34
Published by	Humanities and Social Studies Education (HSSE) Academic Group, National Institute of Education, Singapore

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Citation: Sim, H. H. (2016). Using investigation and discussion to inquire about issues in primary social studies. *HSSE Online*, 5(1), 24-34. Retrieved from <http://www.hsseonline.edu.sg/journal/volume-5-issue-1-2016/using-investigation-and-discussion-inquire-about-issues-primary-social>

Using Investigation and Discussion to Inquire about Issues in Primary Social Studies

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Abstract

This article begins with the inquiry teaching approach for primary social studies and the rationale for its inclusion in the 2013 syllabus by the Ministry of Education, Singapore. It compares traditional instruction and inquiry-based teaching and describes the two types of inquiry that can be implemented in the primary classroom – discussion and investigation. Three useful inquiry models for primary children - Colin Marsh's (2001) investigation model and two discussion models - Diana Hess' (2009) town meeting model (TMM) and David Johnson and Roger Johnson's (1999) structured academic model (SAC) - are elaborated. The application of these models is illustrated in two issue-based, inquiry centred packages designed for primary children by student teachers from the National Institute of Education. The article also discusses the challenges teachers may face when implementing such inquiry-centred packages and suggests ways of how they can be overcome.

Inquiry in primary social studies teaching

In Singapore, the primary social studies syllabus produced by the Ministry of Education (MOE, 2013) advocates inquiry as a teaching approach in schools. It is understandable why such an approach is encouraged in the context of Singapore's development. Singapore is a knowledge-

based economy (Ngiam, 2011) with strong governmental emphasis on research and substantial resources are channelled yearly to the various universities, ministries and statutory boards in advancing the country's economy as a knowledge producer (*The Straits Times*, 2016). Research involves inquiry and it is never too young to start children to inquire in schools. Moreover, all children have an innate curiosity about the things around them and their incessant questioning of whys (Parker, 2012) should be tapped to promote their learning in the classroom. Inquiry can enable children to gain an enlarged understanding of the topic, problem or issue in question, develop essential skills such as critical thinking skills to evaluate the relevance, quality and strength of evidence, and to distinguish between well-reasoned and balanced arguments based on solid evidence, and acquire dispositions such as respect for diversity, empathy and perseverance and resilience in the face of challenges. Such learning outcomes can contribute towards citizenship education and participation in Singapore now and in the future. In recent years, the government has been more open to its citizens' views on policy matters and have tweaked several of its policies on health, social and economic matters by incorporating their views. It has also encouraged greater community involvement in partnership with it to make Singapore a better and a more inclusive home for all of its people (*The Straits Times*, 2014). Hence, children as future leaders of the country will

be well prepared for their citizenship roles if they start from young to learn in an inquiring environment.

Unlike traditional instruction whereby teachers teach content through telling and children learn passively in class by listening, teachers using the inquiry approach to frame their lessons around key inquiry questions about a topic, a problem or an issue and develop activities for children to play an active role in seeking answers to the questions and derive their own conclusion based on evidence. In the inquiry classroom, teachers are no longer the knowledge dispensers; rather they play the role of facilitators to provide the necessary scaffolding and resources to support their children's learning. The resources for inquiry go beyond the textbook which is the dominant material used in traditional classroom instruction. Instead, they can be drawn from a plethora of sources such as artefacts, pictures, video clips, audio-clips, maps, statistics and resource persons. The focus of inquiry lessons is the learning process of how information can be acquired by children and how they can make sense of the information through analysis, interpretation and conclusion and is not solely on the products of learning (Van Cleaf, 1991).

The inquiry approach can be implemented by using discussion and investigation (MOE, 2013). According to Parker and Hess (2001), discussion is defined as a shared inquiry which involves listening and talking to others about something – it could be a topic, a problem, an issue, etc. During a discussion, children air their views, evaluate their classmates' claims, make sense of what transpired and incorporate others' interpretations and life experiences into their own understanding. The outcome of such classroom inquiry is

shared and enlarged understanding (Parker & Hess, 2001; Walsh & Sattes, 2015). As for investigation, it is known as the scientific method whereby children go through a series of steps to find out something (Parker, 2012; Savage & Armstrong, 2008; Van Cleaf, 1991). Many types of investigation models are written in the general teaching and social studies methods books and these include Group Investigation by Shlomo Sharan and Yael Sharan (1999), WebQuest by Bernie Dodge (2011) and Walter Parker's (2012) Inquiry Model. Although these investigation models vary in terms of the number of steps, purposes and context for use, all of them have certain basic steps in common, and these are: a) identify the problem, issue, hypothesis or question, b) collect data, c) analyse data and d) draw conclusion (Savage & Armstrong, 2008; Van Cleaf, 1991). Based on the MOE's (2013) syllabus, discussion using questions for lower primary teaching is encouraged as teachers can utilise the ministry-produced social studies readers in the form of big books to promote young children's curiosity. For the upper primary children, investigation as an instructional approach is promoted to develop older children's critical minds.

Inquiry models for teaching primary social studies

In the National Institute of Education (NIE), Singapore, student teachers in the Bachelor's Degree programme (primary track) and taking social studies as their third curricular studies subject, are exposed to a myriad of discussion and investigation models in their social studies teaching methods courses. Three inquiry models taught will be shared in this section as they are suitable for implementation. These are the Colin Marsh's (2001) investigation model, Diana Hess' (2009) town meeting model and David Johnson and Roger

Johnson's (1999) structured academic controversy model.

Marsh's Investigation Model

The investigation model by Colin Marsh (2001) comprises eight steps and these are: a) tuning in, b) deciding directions, c) organising ourselves, d) finding out, e) sorting out, f) drawing conclusions, g) considering social action, and h) reflection and evaluation. The purpose of tuning in is to identify and define the issue whereas the goal for deciding direction is to generate hypotheses. In organising ourselves, it is about organising an approach to the investigation and in finding out, the focus is on developing student understanding from the data collection. Sorting out is a time for students to process, analyse and even refine the issue. Drawing conclusions is where students share their understandings with others and this is followed by social action, a time whereby students identify and even implement an action that emerged from the inquiry. Lastly, students get to reflect on the strengths and areas for improvement in their investigation during the reflection and evaluation. This step is essential if students were to become self-directed learners. The steps in the model are reflective of actual research processes and are a useful guide for inquiry of a topic, an issue or a problem. The main appeal of the model is that the advocacy for social action after investigation can be considered an important social studies goal that contributes towards the development of active citizenry.

Hess' Town Meeting Model

Contrary to the previous inquiry model, the end goal of the town meeting model (TMM) by Diana Hess (2009) is not about students taking social actions as part of their inquiry. Rather TMM will enable students to

develop multiple perspectives that exist for an issue and provide them opportunities to communicate with others who hold contrary views. Perspective taking is essential for effective participation in a democracy as it promotes empathy and understanding of a wide range of views that can contribute to a more informed and balanced decision.

For TMM to work, it is helpful to select issues that are current and controversial with competing views. Before the town meeting commences, teachers will have to equip students with the necessary background knowledge about an issue and identify and assign roles to them. They will provide students reading resources that focus on their assigned role positions and the accompanying worksheets that require them to state their positions and identify the pros and cons of the issue. Students will be given some time to prepare for their roles using these resources. On the day of the town meeting, students in role will be seated in a large circle. They will be identified by the paper tents listing their roles. At the start of the lesson, teachers will remind students of the issue for discussion as well as the assessment rubric which will focus on the subject matter knowledge, role portrayal and effectiveness as participants. Students will be made to introduce their roles and positions first before the actual discussion begins. They will raise their hands to speak. The teacher's role will be to call upon students to air their views, assess their performance as discussants and facilitate the discussion. For the lesson conclusion and debrief, teachers will sum up the main points that were raised during the town meeting and get the class to reflect on what went well and what did not. They will also provide students feedback on their performance.

Johnson and Johnson's Structured Academic Controversy

The structured academic controversy or SAC was developed by David Johnson and Roger Johnson (1999). They argue that conflict is inevitable in any cooperative effort because of the goal interdependence in the cooperative learning task. Contrary to the common perception that conflicts impede relationship development and work progress, the Johnson brothers believe that conflicts, if properly managed, can bring about benefits in student learning. These benefits include positive interpersonal relationships and psychological health and social competence, all of which are essential ingredients for active citizenry.

To implement SAC in class, the inquiry focus is an issue with two well documented positions (pros and cons). Resources include the instruction on the SAC steps and the identified interpersonal and discussion skills, descriptions of positions and the resources as supporting evidence. The steps are: a) assign each pair the tasks of learning their positions and the supporting arguments and information, b) assign each pair to learn the relevant information in the provided resources and prepare a presentation with persuasive arguments for the other pair, c) assign pairs to present their positions to one another, d) have students conduct open discussions by exchanging ideas and information freely, e) have pairs reverse their positions and present the opposing position sincerely and forcefully, f) have groups to drop their advocacy and reach a decision by consensus, write a group report that includes joint positions, evidence and rationale, take a test on both positions and do group processing.

For SAC to succeed, it is important to teach students appropriate conflict

management skills in order to reap the benefits of controversy. Some of these skills include focusing on obtaining the best decision possible and not on winning, being critical of others' ideas and not the persons, listening to all the ideas from both sides before integrating them together, taking the opposing position for the purpose of understanding both sides of the issues, changing one's perspectives if evidence indicates the need for change, paraphrasing unclear points and focusing on seeking the best possible answers. SAC is best used when the issue is contentious and there is scope for students to take opposing positions.

In the next section, two issue-based, inquiry centred packages designed for upper primary children by a group of fourth year NIE student teachers will be showcased to illustrate the application of the three described models.

Examples of inquiry-based instruction for upper primary social studies

Inquiry 1 on Foreign Workers in Singapore Using Marsh's Inquiry Model and Johnson and Johnson's Structured Group Controversy

The issue-centred, inquiry-based instructional package on foreign workers is developed by Cheryl Khoo Wan Shir, Jonathan Yang Qing An, Nur Afifah Binte Anwarie and Nurul Raudhah Binte Abdul Malek. The issue for inquiry is "Should Singapore hire more workers to contribute to its development?" This issue is chosen for a few reasons. First, it is current because the Singapore government plans to hire more foreign workers to develop the economy (National Population and Talent Division, 2012). Second, it is connected to students' daily living – they are familiar with the presence of foreign workers in their

neighbourhoods. Third, it is a relevant issue as it is an extension of student learning in Primary 4 which is about the early settlers' contributions to Singapore. The inquiry will enable students to compare the early settlers' contributions with those of the current foreign workers. The goals of the inquiry are for students to develop an understanding and appreciation of foreign workers' contributions to Singapore's development and develop their research, teamwork and presentation skills. The aim of the inquiry is to promote student learning of the core concepts of contributions and development. The guiding questions which are derived from the main inquiry question, which is also the issue question, are as follow:

- Who are considered foreign workers? (Lesson 1)
- What is development? (Lesson 1)
- How do foreign workers contribute to Singapore's development? (Lessons 1 and 2)
- What are the benefits of hiring more foreign workers in Singapore? (Lesson 2)
- What are the consequences of hiring more foreign workers in Singapore? (Lesson 3)
- Should Singapore hire more workers to contribute to its development? (Lesson 4)

The Marsh's model is used for the issue investigation and Johnson and Johnson's structured group controversy is the chosen model for the discussion of the issue.

There are four one-hour lessons for the inquiry. In Lesson 1, an introduction, the teacher will first recap with students their prior learning on the contributions of early settlers before introducing the lesson focus on foreign workers and showing the link to their prior learning. The lesson objectives will be shown to the class and these are: At the end of the lesson, students will be able to:

- distinguish between the different types of foreigner workers found in Singapore;
- explain the types of contributions made by them to Singapore's development; and
- show appreciation by reflecting on their contributions in their reflection journals.

The teacher will elicit students' prior knowledge of foreign workers and teach the concept of foreign workers before making a distinction between the skilled foreign workers (also known as foreign talents) and the semi-skilled or unskilled ones. Examples for the two categories are provided by showing pictures. The teacher will also explain the concept of development. Next, students will work in groups of five to find out the contributions of foreign workers in five different sectors (healthcare, education, finance, construction and domestic) to Singapore's development. Each group will be given a stack of five information cards and each member will read his information card and share with his group. They will create a group mind-map at the end of the sharing. The teacher will then call upon the groups to share before summarizing the lesson and leading them to understand that both skilled and semi/unskilled workers contribute to Singapore's economy in their own ways. The teacher will end the lesson by instructing students to show their appreciation to the foreign workers by writing an entry in their reflection journals. They will also reflect on how they can further improve their teamwork.

In Lesson 2 on the benefits, the teacher will first recap with the class what they have learnt in lesson 1 before setting the stage for inquiry by showing them a video entitled, "On the Red Dot 13 Singapore Foreign Workers". It is about Singaporeans' views on whether the country needs to hire more foreign workers. The teacher will show the lesson objectives on slides which are: At the

end of the lesson, students will be able to:

- explain the benefits of hiring more foreign workers in Singapore; and
- gather and analyse information from the sources provided.

A scenario about the need to hire more construction workers is provided as the hook and students will work in their groups to find out about their contributions before making the decision of whether they should be hired or not in the later lessons. The cooperative learning structure of an expert-group jigsaw will be used in the activity. Each student in his home group belongs to an expert group and students in the expert groups will read, gather and record information in their activity books before sharing them with their home groups. The teacher will elicit student responses on the benefits before reinforcing them by presenting them a mind-map. The teacher will also ask students to think about the inquiry or issue question.

In Lesson 3 on the consequences, the teacher will begin the lesson by reviewing with the class what they have learnt about the benefits of foreign workers' contributions using the mind-map in Lesson 2. A video entitled, "Can we survive without foreign workers?" is used as a hook to get students to reflect on and discuss problems associated with the hiring of foreign workers. The lesson objectives are then reviewed at the end of the lesson.

Like Lesson 2, the expert-jigsaw strategy will be used in Lesson 3. Each expert group will gather at its dedicated learning centre to collect and record information in the activity books before sharing them with their home groups. Again, the teacher will get groups to share what they have learnt before reinforcing the consequences by presenting

them a mind-map. The teacher will also ask students to think about the inquiry or issue question.

Lesson 4 is the final lesson and students will discuss the issue question. The teacher will surface the issue question, recap the learning in the first three lessons and state the discussion rules for SAC. They will further divide each group into smaller teams, A and B. Team A will take the stand to support the hiring of foreign workers and Team B will take the stand to oppose it. Students will prepare their arguments using their activity books containing the information gathered in the previous two lessons. Next the teams will present their most compelling points before they swap their stands and present from the opposing team's perspective with time given for preparation for their new stand before the presentation. During the presentation by one team, the members of the other team are to take down the points in their activity books. The final step is for all the teams to drop their stands and come together to deliberate on the issue based on all the points presented and agree on a common group stand with supporting reasons. The teacher will elicit some group responses before instructing them to do a 3-2-1 reflection on their learning. The main learning points will be summarized and the lesson is ended by announcing that students will be writing to the government on the matter as their social action.

Inquiry 2 on Usage of Plastics Using Marsh's Inquiry Model and Hess' Town Meeting Model

The next issue-centred, inquiry-based instructional package on plastics usage was developed by Eliza Tan Hui En, Lian Zimin, Joycelyn Poh, Jurveen Kaur and Aneesa Rehana. The issue for their package was:

Should plastics be banned at the supermarket? The issue is chosen because worldwide, there is excessive usage of plastic bags and the improper disposal can lead to environmental pollution. In Singapore, the excessive use of plastic bags is a concern because the current landfill at Pulau Semakau will run out of space by 2030; improper disposal can cause the clogging of the drainage systems and impact marine animals negatively; and the irresponsible littering of plastic bags by people can tarnish the good reputation of Singapore as a clean and green city in a garden and hurt its economy, especially in tourism. It is an appropriate issue for inquiry as it serves as an extension of Primary 3 syllabus on environmental protection. It can be taught in the Primary 6 chapter on “The way we live in Southeast Asia”. The unit goals for the instructional package are to promote student understanding of the implications of excessive plastic bag usage and improper disposal on the environment and measures for environmental protection, develop their skills in research, presentation and teamwork, and inculcate a sense of personal responsibility in plastic bag usage and waste management. The two concepts for learning are environment and human responsibility, and the generalisation is “People have the responsibility in protecting the environment.” The guiding questions for the five one-hour lessons are as follow:

Lesson 1

- What are the different uses of plastic?
- How effective is the disposal of plastics in landfill?
- What are the properties of plastic bags that make them attractive to users?
- Why should Singaporeans be concerned about the use of plastic bags?

- Which organisations target to raise public awareness of the need to reduce the use of plastic bags?

Lesson 2

- Where do the plastic bags we use daily land up in the end?
- What are the consequences of excessive use of plastic bags on the environment?
- Who are affected by the consequences of our actions?
- How does excessive plastic bag usage affect Singapore’s image to the world?

Lesson 3

- What are some measures undertaken by Singapore and the other countries in reducing the use of plastic bags in supermarkets?
- How effective are these measures?

Lesson 4

- How will the ban of plastic bags in supermarkets impact different groups of people in Singapore?
- Do you agree that plastic bags should be banned in the supermarkets in Singapore?

Lesson 5

- What can we do to resolve this issue while meeting the needs of affected people?
- What are some alternatives to using plastic bags?

The issue investigation is based on the Marsh model and the issue is discussed using Hess’ town meeting model.

In the Lesson 1 introduction, the teacher will first show students a figure for them to guess what it represents before showing

them a website that illustrates the rate of plastic bags used worldwide. The teacher will state that plastic bags are commonly used in the Singapore supermarkets and then show students pictures of excessive use of plastic bags and get them to think of the ensuing problems. For the lesson development, students will be divided into 8 small groups with Groups 1 to 4 grouped under Group A, and Groups 5 to 8 grouped under Group B. Each small group will be given different articles to read. These articles will help students understand the annual amount of plastic bags used in Singapore, why plastic bags are commonly used, organisations that target the reduction in plastic bag usage by the public, the disposal in the landfill and the reasons for Singapore's growing concern for the increase in plastic bag usage and disposal. Once the groups have read the articles, they will use the 2-stray, 3 stay strategy by asking two members of each small group to stray to the next group in a clockwise direction in either Group A or B to gather information whereas the other three members will remain behind to explain the article to the visitors. The teacher plays the role of the facilitator and monitors student teamwork performance. The lesson ends by instructing students to create a role on the wall that will illustrate the human qualities associated with environmental care and to explain the importance of the traits. Students also have to do a reflection on their learning.

For lesson 2 on consequences, the class watches a video on the journey of plastic bags prior to a class discussion on the video. Using Think-Pair-Square, students will work in groups and discuss key information. They will outline their work on Padlet for presentation. They will be asked to identify the similarities and differences in the final destinations of the plastic bags. A video on the effects of plastic bags will be played,

after which students in groups will create a concept map on the negative impacts of plastic bags using butcher paper. They will display their maps on the wall and the class will do a Gallery Walk. The teacher will ask the class to think about the impacts on Singapore and write their thoughts on the Padlet. The lesson is concluded by making linkages to Singapore's image as a city in the garden and economy which will be affected if plastic bags are improperly disposed. The main learning points are summarised and the class writes a reflection on the consequences of plastic bag pollution.

In Lesson 3 on measures, students are given a scenario on Titiwangsa, Malaysia and tasked to help it solve its excessive usage of plastic bags. Before they provide their solutions, individual students need to work in their respective expert groups to gain knowledge of how a particular country tries to solve its plastics problem before sharing it with the members in their home groups. Information on China, US, Ireland and Singapore is provided. A class discussion on what they have learnt will follow before they apply their knowledge to the case study. The teacher will also ask the class to reflect on Singapore's measures and whether it should ban the use of plastic bags in preparation for Lesson 4 when a town meeting on the issue will be conducted.

In Lesson 4, students will review their learning from previous lessons before getting in groups to prepare for their assigned roles for the town meeting. The class will be seated in a circle and the discussion on the issue about banning the use of plastic bags at the supermarkets at the meeting will be facilitated by the teacher. Students should speak in their roles and provide compelling reasons to support their roles. The teacher will then debrief the meeting by asking students whether they

have gained a deeper understanding of the issue after hearing different perspectives and whether their original views have changed. The lesson will conclude with a student reflection on the lesson.

In Lesson 5, the main learning points from Lesson 4 will be reviewed and students will have to place their points under the appropriate column of “pros” or “cons” when they provide the learning points. Students get back into groups with a mix of perspectives in each group. Each group is now a management committee of a supermarket and they have to provide an alternative solution on mahjong paper if plastic bags are banned. Students will put up their work on the wall and do a gallery walk and put their comments on each other’s work. The lesson is concluded by highlighting the main generalisation and by referring to the Role on the Wall of a concerned citizen completed in Lesson 1. Students will do their final reflection on their overall inquiry experience.

Challenges to implementation and suggested solutions

Although there is much value in implementing issue-based, inquiry centred teaching in the social studies classroom, there are challenges to be overcome when planning and teaching such lessons. Some of these challenges have to do with availability of suitable issues and supporting resources, the lack of student research and discussion skills, time, school support and teacher factor.

It is not easy to look for suitable issues that cater to primary school children as many are too complex for their understanding. Issues need to be relevant to the primary social studies syllabus, appropriate to children’s understanding and

emotional maturity and connected to their daily living (Evans, 1989; Shaver, 1977). Issues also need to be authentic, recurring and the study will help children to become informed and thoughtful citizens (Skeel, 1996) who will participate actively to effect positive changes to the society around them (Massialas, 1996). Often, relevant resources have to be adapted to make them more child friendly and age appropriate for teaching and learning and teachers may not have the time to prepare and adapt them. The lack of research and discussion skills in students can be another challenge for implementing issue-based, inquiry centred teaching. These skills need to be taught to students and be developed over time if inquiry and discussion are to be carried out successfully. Often, the situation arises when schools do not emphasize such skills in the teaching and learning. The lack of time in the overcrowded school curriculum is also an issue. Teachers may not have the necessary knowledge and skills to carry out issue-based, inquiry-centred teaching themselves.

Despite the challenges, they can be overcome. Teachers can collaborate together to actively source for appropriate issues for students and that are relevant to the social studies curriculum. Professional development classes on research and discussion skills can be conducted for teachers to upgrade their teaching skills. With the new knowledge gained, teachers can then teach the inquiry skills to their students. Through lesson study on inquiry teaching, teachers who are sceptical can observe the benefits of inquiry based teaching and be convinced to give it a try.

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