

# Identifying What to Teach: Using Concepts, Generalizations and Driving Questions

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## Abstract

*Social studies lessons have often been criticized as being boring, just learning a list of factual details or doing meaningless activities that may be fun but do not lead to real understanding. As curricular-instructional gatekeepers (Thornton, 2005), how do we select content and teach it in a meaningful way? This paper discusses how we may enhance pupil understanding through planning instruction around big ideas such as key concepts and generalizations. A conversational style of writing is deliberately used together with prompts to think and examples of how the lesson may look like, to make this paper more interactive and engaging for the reader.*

## Introduction

*Ms Lee began the school year by meeting with the other Primary 4 teachers to review the curriculum. For each subject they discussed the “big ideas” they hoped their students would come to understand. Ms Lee likes to think about what she hopes her students will remember in the future, after they have forgotten many details. Ms Lee believes that when you have really learned something, it stays with you for life. She also believes that her students show they understand what they have learned when they are able to explain and apply it, rather than simply get correct*

*answers on a test. Ms Lee and her colleagues identify a few deep understandings for each course they teach and then they link each unit to one or more of those understandings. They have learned through experience that if they keep the big picture in mind as they teach, the students are more likely to make connections and develop deep understandings.*

Stop and think for a moment about why you want to be a teacher. You probably did not think, “Boy, I really want to make sure children do well on examinations,” or “I really want to help students memorize a lot of information.” While doing well on examinations is important and memorizing information has its place, you probably had other things in mind. Most people decide to be teachers because they like young people and they like learning. Teachers want to help young people grow, develop and learn. In this paper, we will help you think about what it means to learn and what the implications of that are for your thinking about what to teach.

You have probably realized that it is important to think about how to teach, but you may not have realized that you also need to think about what to teach. Although you will be given a syllabus and told what needs to be taught during the school year, this is only the outline. Rather than simply trying to “cover”

everything, it is important to understand the “big ideas” and identify the key skills contained in the syllabus. If you do not make sense of what is to be taught, how can your students begin to make sense? Let us begin by briefly thinking about what it means to really learn something and how people learn.

### How Do We Learn?

How people learn and what it actually means to learn something are subjects of vast fields of study. As you read this text, think about what you have learned previously about how people learn and try to make connections between what you know about learning and how you might teach. To help you do this, there are a few key points to keep in mind. Learning is generally seen as an active process through which new information is acquired, integrated and stored (Ornstein & Lasley, 2004, p.16). That is, even when learners are sitting quietly, perhaps listening to someone or reading something, their brains are active. They are trying to make sense of new information, to organize or “chunk” it in ways that seem meaningful. They are connecting new information to what they already know in order for it to make sense. Can you remember an experience where you tried to learn something very new, something for which you had very little prior knowledge? You may have felt as though the new information was going in your head and then right out again. You may have realized that you needed some very basic understanding in order to make sense of the new information. It is very likely that the children in your class may feel that way about some of what they need to learn in school. If it makes no sense they will not remember it, much less understand it.

Learning theorists tell us that as we learn we develop *schema* in our minds.

Jean Piaget, for example, used the term “schema” in the 1920s to explain how children develop understanding, and other learning theorists have further developed the concept (Piaget, 1928)<sup>1</sup>. *Schemata* (the plural of schema) refer to mental structures or the ways in which we organize knowledge in our minds. Without a mental framework about something, information about that something makes no sense; hence the phrase “in one ear and out the other.” The schemata we develop help us organize our world. Schemata contribute to the development of understanding; they can also contribute to misconceptions. If new information does not fit an existing schema it is likely to be rejected, hence misconceptions can be difficult to change. On the other hand, new information that does not fit existing schema can also cause what Piaget called “disequilibrium” and new learning can develop. This happens as the learner restructures his or her schema to accommodate new information. Keep in mind that as a teacher you are helping your students develop and refine their mental frameworks in order for them to really learn and understand.

### Concepts and Generalizations

Another way to think about learning is to think in terms of *understanding*. If we do not understand something we probably have not truly learned it; that is, we have not connected it to existing schema or prior knowledge. We may be able to retain new information for an examination. But that does not mean we really *understand* it. Wiggins and McTighe (2005) highlighted the difference between knowledge and understanding. “Knowing” is to possess the facts but “understanding” requires the ability to use, apply or transfer that knowledge. Ask yourself how you know when you really understand something. We generally know we

understand something when we can explain it, use it and apply it to new situations. So if as teachers we want learners to develop understanding we need to think beyond simply providing a lot of new information. We need to think about how learners develop the schema or mental frameworks that enable understanding. As a teacher, you need to think past simply *covering* the syllabus or the textbook, to making sure you organize the curriculum in ways that help children *uncover* the ideas in the new information in order to understand and learn.

The goal in social studies, as in any subject, is not simply to amass a lot of information. Rather, we want to enable learners to understand the world they live in and the groups within which they interact. We want learners to be able to use knowledge to make decisions as participants in the social world. An excellent way to help learners move from simply memorizing information to developing real understanding is to focus on *concepts* and *generalizations* or *big ideas* rather than only on information. Organizing the curriculum around concepts and generalizations can help learners develop meaningful understanding.

### *Concepts*

The term *concept* refers to a mental construct or organizing idea for specific information and experience. It is the means by which people organize information in their minds and is an essential aspect of the mind's operating programme (Van Cleaf, 1991, p 214). Every time you encounter a new chair, for example, you do not wonder what it is; you already have the concept of "chair" in your mind. Recent immigrants from traditional societies where people sit on the floor or a raised platform might be puzzled the first time they encounter a chair. They have not yet developed the

concept; they do not yet have the mental schema to accommodate an understanding of this new idea. They have not yet developed the concept of a chair. Concepts are generally expressed by one or two words. They may be concrete, like the concept of a chair, or abstract, like the concept of democracy. Conceptual understanding is crucial to developing the schemata that facilitate learning. Like the recent immigrant who has never seen a chair, young learners encounter many new concepts as they grow and learn. Developing accurate understandings of these concepts is an important part of learning.

Thus concepts provide the foundation for learning. How can we expect learners to understand their roles in the community if they do not really understand the concept of *community*? Students will have trouble making sense of maps if they do not understand the concept of *scale*. It is difficult to make sense of Singapore's early modern history if you do not have a grasp of the concept of *colony*. Concepts serve as building blocks for learning and they are the building blocks of the curriculum. Concepts differ from facts in that concepts are abstract ideas, while facts are items of information or data that are easily verifiable. Facts may change but concepts do not; that is, they apply across time and space. Take the statement, for example, *Singapore became a British colony in 1819*. This is a statement of a fact. It is an item of information that can be verified. The concept of *colony*, however, is an abstract construct that contains within it, many other ideas.

A concept thus refers to an entire group of objects, people, events or ideas. Children may, for example, know the community they live in, but that is not the same as understanding the concept of a community. Once they begin to

understand that there are many communities, in Singapore and throughout the world, and that communities existed in the past, then they are beginning to understand community as a concept and

not just their personal experience.

Now, it is your turn to identify the main primary social studies concepts in the syllabus (see Figure 1).

**Figure 1: Concepts in the primary social studies syllabus**

**THINK**

Take a look at the social studies syllabus and select the major concepts which seem to be crucial for understanding the content. Why did you select these particular concepts?

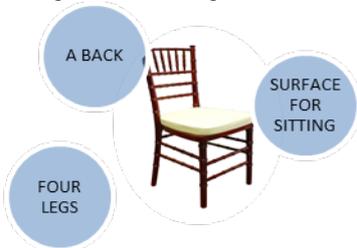
But concepts are more than just labels. I may understand that I live in a community and other people do as well. But just what is a community? In conceptual teaching, the challenge is to help learners learn about the **defining** or **critical attributes** of particular concepts. This term refers to the key characteristics of a particular concept that you want your learners to understand. Each concept has key attributes or characteristics that enable us to sort and group similar items into the concept. Thinking in terms of critical attributes rather than simply definitions will help you to focus on important characteristics

of a particular concept rather than simply giving your learners a definition to memorize. It is important to think about what you want your learners to understand about the concept. After all, whole books have been written about the concept of community. But what should primary learners understand about “community”? Similarly, sociologists have made extensive studies of communities. But what are the key points that matter for your primary school children? Let’s pause to identify the defining attributes of the concepts in the primary social studies syllabus (see Figure 2).

**Figure 2: Social Studies Concepts and Their Defining Attributes**

**YOU TRY**

Rather than simply listing defining attributes for important concepts, it may help you to develop a graphic representation. If you think about our very basic concept of a chair, a graphic representation of its defining attributes might look like this:



Return to the list of concepts you found in the syllabus and select one. What are the defining attributes of that concept that you think young learners should understand? Represent them graphically.

Conceptual teaching, then, is a powerful tool to enable your students to develop deep understanding at a developmentally appropriate level. It enables learners to rise above bits of information and see patterns and connections. It enables learners to develop the schemata through which they can integrate and connect new and existing information. Facts become, not ends in themselves, but supporting materials for the development of understanding. Facts become, not bits of information to be remembered, but the building blocks for concepts. It is this understanding that allows them to explain and apply what they are learning. When your students are able to transfer knowledge to new situations and times, they are demonstrating deep understanding.

### ***Strategies for Teaching Concepts***

The first step in developing a strategy for teaching a concept is to determine the critical attributes of the concept. These, of course, would be age-appropriate; that is, what are the critical attributes of a concept which both help to define the concept and that the learners will understand. For example, the concept of *justice* can be very complex. But by helping young learners to think about *fairness*, how we recognize when something is fair, you are helping to lay the foundation for more sophisticated thinking about social justice when they are older.

In thinking about strategies for teaching concepts, it is useful to think of **expository** or **deductive** approaches and **discovery** or **inductive** approaches.<sup>ii</sup> Using an **expository** approach, the teacher provides the age-appropriate definition directly, being careful to emphasize the critical attributes that are determined to be important. However, it is important not to

simply give a definition, ask the children to remember it, and then move on. Rather, give the children experiences that will help them to more fully understand the concept. This might be done by using examples and non-examples to draw the students' attention to the critical attributes (or lack of critical attributes in the non-examples). When they seem to have understood the concept, ask the students to explain it in their own terms and then to connect the concept with their prior knowledge. Where does this idea fit in with what has already been learned? You can assess their understanding of the concept by giving new examples and non-examples and seeing if they can discriminate between them. A more advanced understanding of the concept might involve applying the idea to a new situation. An example of how the deductive approach is used in social studies teaching is shown in Strategy Example 1

**A discovery or inductive** approach enables learners to construct their own definitions and understandings based on information and examples. Using this approach, the teacher may provide, or elicit from the children, information about an important idea and have the children examine that information to determine what common characteristics they can see. Children are comparing and contrasting facts and information and determining for themselves what *critical attributes* tie these facts together. The children can then be asked to supply a label which would be appropriate to group together like information; or the teacher can supply the label. This can be reinforced with the use of more examples and non-examples. An example of how the inductive approach is used in social studies teaching is shown in Strategy Example 2.

### Strategy Example 1: Deductive Teaching

Mr Singh is teaching a unit on Singapore's resources. In the first lesson, he focuses on the concept of *natural resources*. He begins by giving his students a definition of natural resources: *Natural resources are the materials and living things that occur naturally and can be used by people*. He focuses students' attention on two defining attributes – *occur naturally* and *can be used by people*. To illustrate, Mr Singh shows pictures of examples of natural resources such as a river, trees, rocks, etc. With each example, attention is drawn to the defining attributes – they occur naturally and they are useful to people. He then shows pictures of non-examples of natural resources, such as cars, buildings and bridges. With each non-example, he again draws attention to the fact that these do not meet all the defining attributes – they do not occur naturally, even though they may be useful to people.

To assess if students have understood the concept, Mr Singh shows more pictures of examples and non-examples and asks the students to identify if these are natural resources. Students, working in groups, are then given sets of picture cards depicting examples and non-examples of natural resources to sort out. Finally, students are asked to add to the picture cards by drawing examples of natural resources that they use in their everyday life.

### Strategy Example 2: Inductive Teaching

Mdm Jamilah is teaching her Primary 1 class the concept of *identity*. She writes on the board the question: *Who am I?* She then asks the students to describe themselves to their partners. After giving them some time to buzz, Mdm Jamilah asks for volunteers to describe themselves to the class. As each volunteer describes himself/herself, Mdm Jamilah puts the words on the board, for example, 7 years old, tall, short, slim, dark, fair, good at running, like to play hide and seek, etc. Sometimes she will ask questions to cue students to give more varied descriptions of themselves, for example, quiet, friendly, good at art, from China, etc. After some students have described themselves and there is a substantive list built on the board, Mdm Jamilah asks her students if there are words that they can group together. Mdm Jamilah leads the children to group items into categories. The children may not know what these categories are called and Mdm Jamilah helps by using phrases like "What I look like"; "What I like to do"; "What I am good at" and "Who my friends are". As they explore further, the children begin to see that the concept of *identity* includes more than just their names and what they look like.

#### **Generalizations**

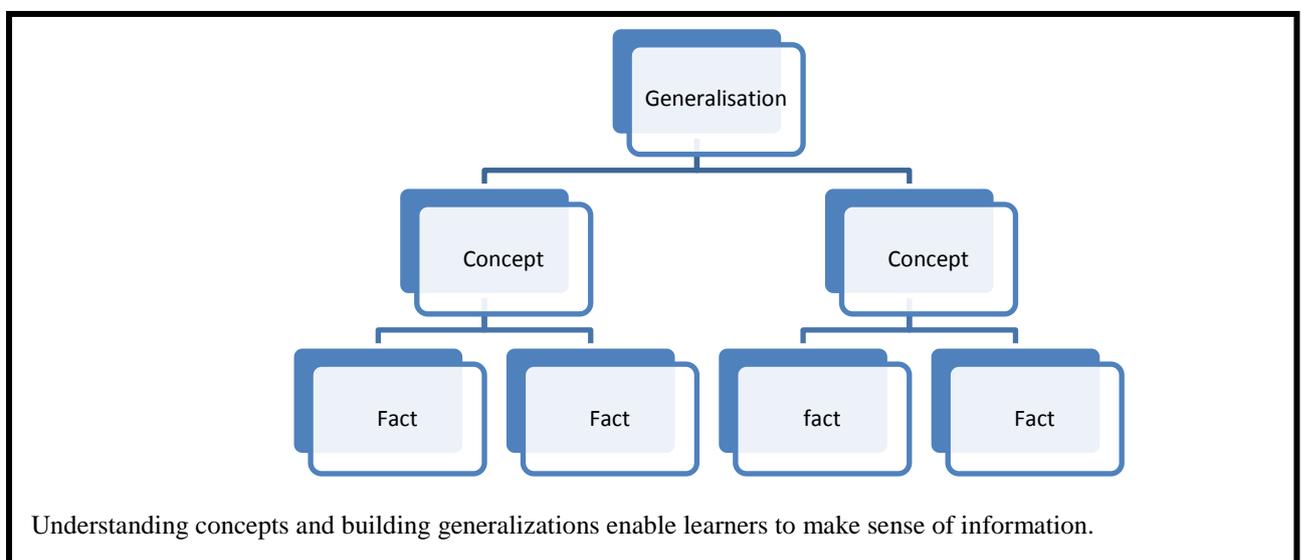
The term *generalization* refers to verifiable statements about the relationship

of two or more concepts. Like concepts, generalizations are also big ideas and they can be simple or complex. Strong generalizations are statements that get to

the heart of a subject being taught. That is, strong generalizations are generally timeless and applicable across various situations. For example, a factual statement, or low level generalization might be: *one reason people migrate to Singapore is to find work*. A strong generalization, verifiable across time and place, might be: *the movement of people is influenced by the need or desire for better living standards*. The first statement tells us about why people might migrate to

Singapore today. The second statement tells us about why people are likely to migrate generally. It is an understanding that can be tested in other times and other places. Notice how the concept of *living standards* is linked to the concept of *movement (migration) of people*. Generalizations are the next higher level in the building blocks of understanding. See Figure 3 on the relationship between generalization, concepts and facts.

**Figure 3: From Facts to Generalizations**



### ***Designing Curriculum Around Generalizations***

We began this paper with the argument that it is important to help children learn “big ideas” rather than simply amass a lot of information. That is not to say that facts and information are not important; rather, facts make sense only when they are organised and connected. In planning for meaningful learning, it is important to begin by asking yourself: “What are the big ideas I want the children to take away?” Rather than focusing on what facts are to be covered, it is important to focus on what understandings are to be developed.

What is essential, what lies at the heart of this unit of study? What are the core concepts of the unit and how do they relate to one another? A useful early step in planning a unit of study is to develop a few, perhaps three or four major understandings you hope your learners will develop as a result of the learning activities of the unit (see Figure 4).

Once you have determined the major understandings to develop, you can begin to plan activities that will enable learners to develop those understandings. You will be planning ways to enable the learners to **develop** the understandings of the unit.

It is important to note that the generalizations are not simply statements to be given to the learners for them to remember. Rather, they are statements which guide your thinking about planning for teaching. Having determined what the broad generalizations are which will drive the unit, you now want to think about structuring your unit so that the children are first “hooked in” and then have opportunities to engage with materials

which will help them develop understandings. Finally, how will the learners be expected to pull together what they have learned and to demonstrate their understanding? There is no one best way to help learners develop the generalizations which will guide your teaching. On the other hand, children, like adults, develop real understanding when they actively engage with the materials being learned.

#### **Figure 4: Generating a Generalization**

##### **YOU TRY**

Take another look at the social studies syllabus and text materials. You have already identified several key concepts. Now try writing at least one high level generalization. Remember, this should be a statement about conceptual relationships that goes beyond the specific topic. It should be an important idea that would apply across time and space.

You may be saying to yourself, “Teaching concepts and generalizations is fine for older learners, but primary children aren’t ready for such higher order learning.” The fact is that primary level teaching **must** be about concepts and generalizations or your learners will never be able to learn. Even very young children are constantly making sense of the world around them. They are sorting and arranging new information and experiences all the time. A curriculum based on concepts provides learners with tools to help them in this process. Your students, like all of us, are likely to forget bits of information. What you are helping your learners, even very young learners, to do is to grasp big ideas upon which they can build as they continue to gain information and experiences. In fact, rather than wait until children are older before focusing on concepts, it is best to start introducing concepts to them at a young age so that they can develop a schema for more complex information when they are older. As they revisit these concepts they would have developed

conceptual frameworks or schemata for integrating a lot of new information. Concepts and generalizations should form the core of your teaching units or themes. These big ideas can take your learners beyond specific topics to broader understandings which can go beyond the classroom.

#### **Driving Questions**

Generalizations are crucial to establishing the understanding goals for a lesson, a unit or a course. However, it is questions that can drive teaching and learning. When you frame your unit understandings as over-arching questions, worded in ways that are appropriate to your learners, you provide the direction for inquiry. Over-arching questions signal to learners that they are going to be figuring something out, rather than simply taking in pre-determined facts. A few carefully worded questions can become the driver for the activities of a unit and a lesson. They can provide coherence for your learners as they work to make sense of

what they are learning.

Driving questions can and should be posed at a variety of levels. The most overarching questions would go through an entire semester or year; they would provide the framework for your work in social studies overall. Such questions could be asked over and over again and answered with increasing thought and sophistication. For example, the question “What does it mean to be a Singaporean” has no easy or “right” answer. But it can be examined and re-examined throughout the year. These questions should be broad and few in number.

Unit questions are more specific. Such questions should relate to one or more of your overarching questions. Unit questions are intended to provoke students to explore one aspect of the broader question. At the unit level, you would develop a few, perhaps three to five overarching questions that would begin to direct learners in the direction of your major generalizations. Good over-arching questions provide coherence and direction for the unit activities. Thus they focus your instruction and student learning. You would use the generalizations you developed as you organize the unit around big ideas and re-phrase those as questions that are worded appropriately for your learners and will make clear to them the direction for learning and thinking during this unit. For example, an understanding goal for a unit might be that the interactions between human beings and their environments shape the way people live. Your unit question might ask how geography has shaped life in Singapore. At the same time, it is important that questions be phrased in kid-friendly terms. It helps, then, to think of “entry questions.” For example, rather than asking young learners directly about how geography affects Singapore, your entry question

might be “Where is Singapore?” From an exploration of Singapore’s location on the map, the class might explore geographic elements such as climate, location and size. From there, you might go on to explore how the climate, location and size of Singapore have influenced our way of life such as our attire, housing, transportation system, etc.

Building your curriculum and your teaching around questions is intended to provoke thought, not to overwhelm children. Students should not be expected to simply come up with answers and then move on to something else. In fact, good driving questions, you will remember, cannot and should not be easy to answer or asked only once. Rather, questions become the “driver” for the activities you plan to engage your learners. With understanding goals (important generalizations) clearly in mind, the challenge is to develop the activities designed to help learners develop understanding. Your questions should be scaffolded in the same way. Thus you might present students with an entry question to “hook” them: “Where is Singapore?” After engaging in an introductory activity, you might pose the important unit question: How does geography influence our way of life in Singapore? With this question, you can develop a variety of activities designed to get your learners to explore the various ways in which geography impacts life in Singapore. A culminating activity would allow learners to draw together everything they have explored in a unit on geography and its impact on life in Singapore. At this point, you could refer back to one of the over-arching questions for the course: What does it mean to be Singaporean? In this way, good driving questions enable your children to learn facts in a meaningful way and their explorations through these questions will enable their understanding

of Singapore and what it means to be Singaporeans will be deepened.

### Conclusion

When planning for instruction, it is as important to plan what to teach and how to teach. In this paper, we have highlighted the importance of designing curriculum around big ideas – key concepts and generalizations. These are the building blocks of deep understanding. Crafting instruction around big ideas eschews the pitfalls of focusing on trivial and unrelated facts and figures. Instead of the teacher “covering” the syllabus, children are encouraged to “uncover” concepts and generalizations through the use of driving questions. In this way, meaningful learning and deeper understanding of pertinent issues will be achieved.

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<sup>i</sup> For more information on Piaget’s ideas of schema, you may refer to Halfpenny, A.M. & Pettersen, J. (2014). *Introducing Piaget* (E-book). New York: Routledge.

<sup>ii</sup> To learn more about deductive and inductive approaches to teaching concepts, see Van Cleaf (1991), *Action in Elementary Social Studies*, pp. 219-228.