Learners and Learning

Section Three: School Learning

Writers | Ian Moll, Jill Bradbury, Gisela Winkler, Maggie Tshule, Merlyn van Voore, Lynne Slonimsky

Editor | John Gultig

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1ST EDITION SERIES EDITOR: John Gultig
1ST EDITION AUDIOTAPE: George Lekorotsoana (producer) and John Gultig (concept and script)
DESIGN FOR DIGITAL VERSION: Michelle Randell
ILLUSTRATIONS: Andre Plant

SAIDE
PO Box 31822
Braamfontein 2017
T: (011) 403 2813
F: (011) 403 2814
www.saide.org.za; www.oerafrica.org

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SECTION THREE

School learning

Introduction 3.1

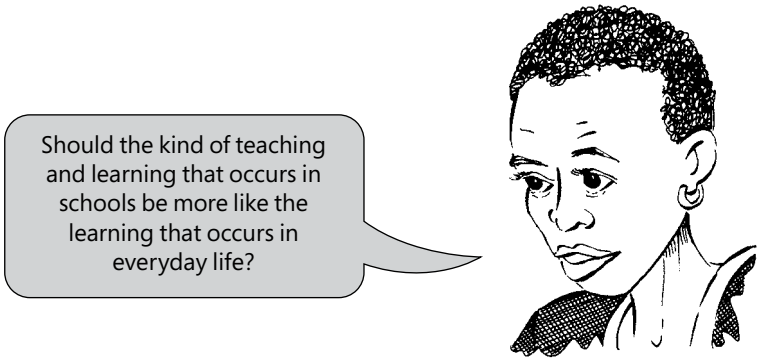
What will you learn in this section?

Week 7 begins.

In Section Two we examined three possible ways in which learners learn new things:

- First, we suggested that learning requires learners to take risks and make mistakes. We were challenged to rethink our assumption that mistakes are 'bad' and looked at how mistakes can become the secret of success.
- Second, we looked at how questions and answers can guide learners towards a new understanding of their world. We identified different kinds of questions (factual, relational, explanatory, and evaluative) and realized that more complex and open-ended questions generated different kinds of learning. We also noted that questions can tell us as much about what learners do know as they do about what they don't know.
- Finally, we explored the possibilities of learners using metaphors and analogies to imagine the unknown. In the process of doing that we discovered how learners could use the familiar to imagine the new.

In Section Three we will build on these ideas with special reference to schooling. In particular, we want to focus on the following question:



How will we answer this question? We will suggest that while we all learn from everyday life, the nature of this kind of learning is different in critical ways from school learning. For this reason, we disagree with those who suggest (through calls for relevance, or for learners to decide their own learning topics) that schools should become more like life, because we believe that this will weaken learning and leave South Africans without important cognitive skills.

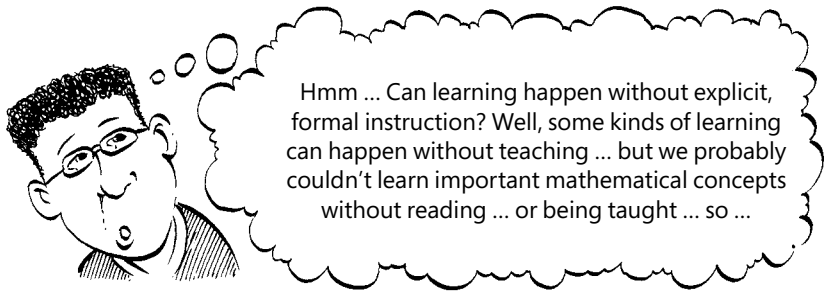
Schooling, through its focus on texts, language, and reading, allows us to develop a more ***generalized*** perception of the world. It enables us to move beyond the concrete, local, and practical limitations of our everyday experience and to develop our abilities to think abstractly. Teachers, we argue, play an essential role in this kind of learning process. They model ways of thinking, provoke and organize new ideas, and scaffold learners as they attempt to build mental bridges between what they know and the unknown.

More half-truths to get you thinking

Before we begin, here are some more half-truths to get you thinking. They also encapsulate ideas that this section will explore. Use them to guide your study.

Think of them as half-truths of the kind that Dwyer discusses in Reading 5. Use the same format as in Section Two and make notes about how each statement seems true to you and in what ways it seems inaccurate or false.

Statement about learning	What is true about the statement?	What is inaccurate or false about the statement?
School learning is similar to other ways of learning.		
Learning cannot happen without explicit, formal instruction.		
School can change the way you think.		
Learning at school involves learning a new 'language' – new ways of talking and thinking about things.		
The teacher's role is to tell learners what they don't know.		
School learning is not useful or relevant to the problems of everyday life.		



Is school learning different from everyday learning?

3.2

Learning from everyday life

We all know that a teacher's work is to care about learning. Making learning happen is what teaching is all about.

Yet many teachers find it difficult to explain exactly ***how*** their classes achieve their learning outcomes or how students learn. When we asked a group of experienced teachers in the Northern Cape to name ways in which learning happens at school, they came up with a long list:

Take some time to reflect on the issue being raised here.

STOP. THINK.

The ideas listed on page 75 include a variety of formal and informal learning activities. Which of these activities would you do in everyday life *as well as at* school? Which activities would you do at school *only*? Write down a few examples of each.

Exploring, discovering, learning

Human beings are curious by nature. Just think of how small children begin to observe and explore the world. They are constantly active – looking, touching, and tasting. They also use language to help them understand what they are doing and how their activity relates to what is happening around them. They ask a thousand questions to make sense of their everyday experiences and to develop their personal knowledge of the world.

Our learners don't arrive in our classrooms with 'empty' heads. No matter how young they are, learners are people who already have a great deal of personal and experiential knowledge of the world. We all ***actively*** and ***continuously*** construct our understanding of the world through the guesses and mistakes we make, the questions we ask, and the possibilities we imagine.

> ***We all actively and continuously construct our understanding of the world through the guesses and mistakes we make, the questions we ask, and the possibilities we imagine.***

Our colleagues from the Northern Cape were aware of this continuity between everyday learning and school learning. Many of the learning activities that they listed, such as sharing ideas, playing games, and problem solving occur inside ***and*** outside schools. We all need everyday knowledge (or common sense) to guide us through life. We use it to make sense of our experiences and give meaning to the work we do. We never stop developing and extending it, regardless of whether we are eight or eighty-eight years old. In this sense, everyday learning is a lifelong process.

How is it possible for ordinary people to continue to learn new things about the world even when they are not under the watchful eye of a teacher in a classroom? Piaget's theory (see Reading 3 and pages 39–42 in this Learning Guide) provides us with an explanation: through ***action***.

We make sense of our environments through our ***actions*** (both physical actions like touching and kicking, and mental actions like comparing and categorizing) and the ***effects that these actions produce***. The Northern Cape teachers described learning as a range of ***activities*** or things that learners ***do***, rather than things that they come to know. However, their list raises critical questions. There are some systematic activities (like reading, writing, calculating, and summarizing) that children don't spontaneously develop without going to school. So, we need to consider:

- Is there a kind of learning that happens ***only*** through schooling and not in everyday life?
- If there is, what is the connection between schooling and everyday life?
- Is our common sense (or everyday knowledge) altered or changed by our learning at school?

Take some time to reflect on the issue being raised here.

STOP. THINK.

Discuss the following issues with fellow teachers and record your ideas in your workbook. Think about the way learning has happened in your own life:

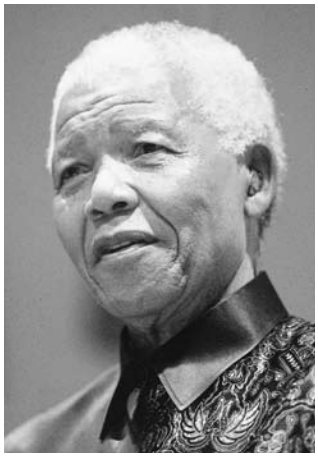
- Can you remember any learning experiences that happened only at school and not in everyday life?
- Can you think of something that you learnt in the course of everyday life – something that you definitely did not learn at school?
- Can you think of some way in which something you learnt at school was useful to you, or of relevance to a problem you encountered, outside of the classroom?

School-like learning

Although we have been talking about school learning (as opposed to everyday learning), it is not only ***where*** it happens that makes school learning different from everyday learning. To illustrate this point we will read about a context where there were no school classrooms but where people nonetheless constructed opportunities for school-***like*** learning. The following extract from Nelson Mandela's autobiography, ***Long Walk to Freedom***, describes how Robben Island prisoners continued their education despite restrictions placed on their daily activities:

Robben Island 'University'

This excerpt is from N. Mandela, *Long Walk to Freedom* (London, Abacus, 1995), Chapter 76, pp. 556–7.



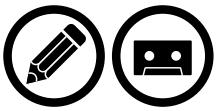
'In the struggle, Robben Island was known as "the University". This was not only because of what we learnt from books, or because prisoners studied English, Afrikaans, art, geography, and mathematics, or because so many of our men like Billy Nair, Ahmed Kathrada, Mike Dingake, and Eddie Daniels earned multiple degrees. Robben Island was known as "the University" because of what we learnt from each other. We became our own faculty, with our own professors, our own curriculum, our own courses. We made a distinction between academic studies, which were official, and political studies, which were not.

Our university grew up partly out of necessity. As young men came to the island, we realized that they knew very little about the history of the ANC. Walter, perhaps the greatest living historian of the ANC, began to tell them about the genesis of the organization and its early days. His teaching was wise and full of understanding. Gradually this informal history grew into a course of study, constructed by the High Organ, which became known as Syllabus A, involving two years of lectures on the ANC and the liberation struggle. Syllabus A also included a course taught by Kathy, A History of the Indian Struggle. *Another comrade added a history of the Coloured people. Mac, who had studied in the German Democratic Republic, taught a course on Marxism.*

Teaching conditions were not ideal. Study groups would work together at the quarry and station themselves in a circle around the leader of the seminar. The style of teaching was Socratic in nature; ideas and theories were elucidated through the leaders asking and answering questions.

It was Walter's course that was at the heart of our education. Many of the young ANC members who came to the island had no idea that the organization had even been in existence in the 1920s and 1930s. Walter guided them from the founding of the ANC in 1912, through to the present day. For many of these young men, it was the only political education they had ever received.

As these courses became known in the general section, we began to get queries from our men on the other side. This started what became a kind of correspondence course with the prisoners in the general section. The teachers would smuggle lectures over to them and they would respond with questions and comments. This was beneficial for us as well as for them. These men had little formal education, but great knowledge of the hardships of the world. Their concerns tended to be practical rather than philosophical. If one of the lectures stated that the tenet of socialism is "From each according to his ability, to each according to his need", we might receive a question back that said, "Yes, but what does that mean in practice? If I have land and no money, and my friend has money but no land, which of us has the greater need?" Such questions were immensely valuable and forced us to think about our views.'



Spend about 30 minutes on this activity. Part 3 begins with teachers talking about how an environmental *experience* helped them understand environmental theory. Then Morobe explains how learning political *theory* helped him understand his experience as a South African political prisoner. Finally, four academics – Ian Moll, Sandy Lazarus, Maggie Tshule, and Gill Adler – talk about the differences and relationships between school-like (theoretical) learning and spontaneous, experiential learning.

ACTIVITY 18

1 Listen to *all* of Part 3 of your audiotape. Pay particular attention to the interview with Murphy Morobe as it adds further insight to the way in which Robben Island was like a 'university'.
2 Now look at the description on page 75 by Mandela again:
   a Underline all the words that lead you to think that 'the University' was concerned with school-like learning and that people like Walter Sisulu had a formal approach to teaching.
   b How was learning through 'the University' different from everyday learning?

What did we learn from this activity?

You will have noticed that we refer to 'school-like learning' in Activity 18. By implication, we are interested here in what the difference is between learning in everyday life and learning that takes place in formal learning contexts like schools, colleges, or universities. For convenience, from now on we will refer to this distinction as one between ***everyday learning*** and ***schooling*** (by which we mean a particular type of learning).

Included under this notion of schooling is the kind of learning you are engaged in as you work through this module. Regardless of whether or not you are being assisted by a teacher, or whether or not you are sitting in a classroom, the way in which you are consciously building up a systematic network of concepts about learning is a kind of schooling.

Likewise, the systematic learning and reflection on politics that went on in the underground of Robben Island prison was a type of schooling. It is very easy for us as educated adults to lose sight of how this kind of learning differs significantly from the largely unconscious learning of everyday life.

What is the nature of school learning?

When we looked at the list made by the Northern Cape teachers at the beginning of this section, we could identify certain learning activities that happen mostly in the process of schooling. Examples of these include memorizing facts, drawing, repeating, and summarizing information. For many learners in our country reading and writing are also learning experiences that are limited to the confines of the classroom. However, when we reflect on the way in which 'the University' on Robben Island was organized, we can identify a few more important features that make schooling different from everyday learning:

Schooling extends everyday experience

Schooling is not limited to our everyday experience. Rather, it extends it. In this sense it can take us beyond the 'prison walls' of our immediate situation. We are given an opportunity to interact with ***other people's knowledge*** about the world; we can share their experiences.

But this extended knowledge is also presented to us in an organized and systematic way. We often find it in books as written text. For example, under the influence of Walter Sisulu, the ***informal*** history of the ANC (probably local and individual stories that prisoners told each other) 'grew into a course of study … involving two years of lectures'. The information was ***structured*** into a ***formal syllabus.*** By doing this the prison 'university' made it possible to provide lectures that taught others a more general history that was no longer limited by the personal and local context in which parts of this history were first developed. It could be used, as Mandela says, as 'a kind of correspondence course' that could be taught to prisoners from the general section.

Although the extract doesn't provide details, we would assume that the perspective of the course did not contradict the political ideals of the ANC. Even so, by

combining their personal experiences with the more organized and systematized knowledge they found in books, learners were introduced to both:

- a ***wider world*** than their personal stories reflected;
- ***different perspectives*** on similar situations.

Formal study, in other words, provides us with the conceptual tools to both ***broaden*** and ***deepen*** our understandings.

The existence of written texts and knowledgeable teachers – two key characteristics of most school-like learning – means that ***direct experience*** is no longer the ***only*** way to learn. We can't ***all*** have access to ***all*** the experiences in the world. In fact, our own ***direct experience*** is very limited. Formal learning gives us ***indirect access*** to a much wider array of experiences. These are often organized into more formal knowledge.

Even so, maintaining a balance between formal and everyday knowledge is important. We use our everyday knowledge to help us make sense of any new ideas we learn. For example, Nelson Mandela describes how 'teachers would smuggle lectures over to them [i.e. to prisoners in the general section] and they would respond with questions and comments … These men had little formal education but a great knowledge of the hardships of the world. Their concerns tended to be practical rather than philosophical … such questions were immensely valuable and forced us to think hard about our views.'

> ***Formal study provides us with the conceptual tools to both broaden and deepen our understandings. It involves working with language in particular ways, and requires us to use concepts and generalizations that take us beyond our immediate experience.***

School-like knowledge is text-based

Because formal school knowledge is often based on many other people's ideas it tends, as we said earlier, to be written down. Consequently we engage in schooling through the medium of spoken or written language.

School learning activities often involve learning ***new words to fit new ideas***. Formal study also requires that we work with language in particular ways. The formal courses offered by the teachers of 'the University' helped other prisoners to understand the history of South Africa in systematic and theoretical ways. Knowing about the past suddenly involved more than talking about personal or community memories. It included theoretical ideas such as feudalism, capitalism, and socialism.

School-like knowledge allows us to generalize and think conceptually

This theoretical knowledge about society allowed prisoners to see how their everyday experience of being poor was part of a system designed to keep them poor. They were able to move from their known (their ***individual experience*** of poverty and oppression) to a new, generalized, and abstract knowledge of concepts like socialism or liberty, for instance. These concepts not only enabled them to see that their experiences were shared universally, but also allowed them to ***explain*** their experiences. In turn, their everyday experience and knowledge of poverty allowed them to come up with critical questions that deepened their understanding of the system.

We can see from the above discussion that theoretical knowledge requires learners to use ***concepts*** and ***generalizations*** that take them beyond their immediate experience. Teaching conceptually is a crucial part of schooling.

But what exactly is a concept? What is a generalization?

This is another reading task. Use the good reading tips you have learnt. As you read, think of how these ideas would work in your subject area. Spend at least an hour on this activity.

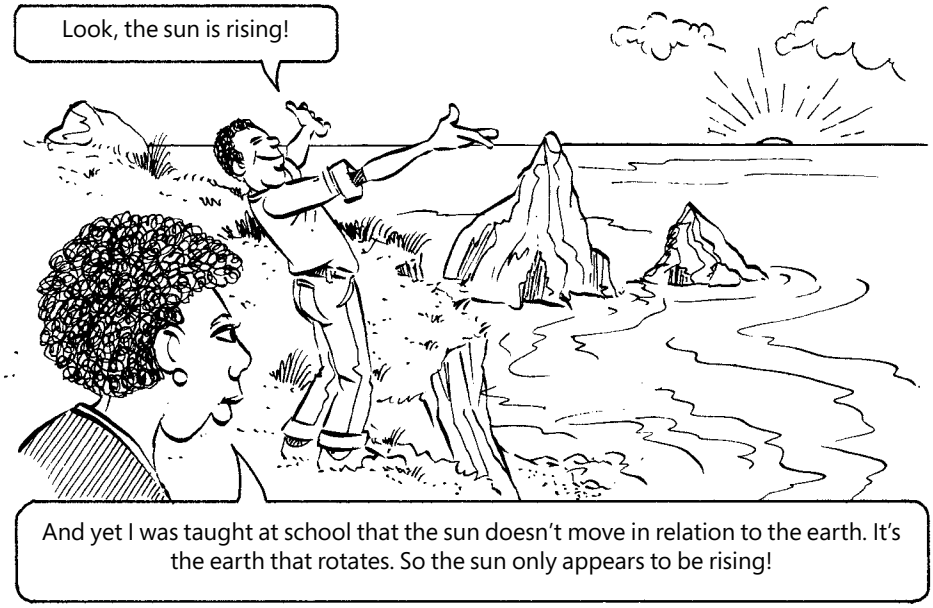
ACTIVITY 19

1 Turn to Reading 13, 'Teaching a concept-based course' by Stuart. Read through the introduction to get a sense of what the extract is about. Pay particular attention to words such as 'concepts' and 'generalizations'.
   a What do you expect to find out by reading this extract?

2 Now read the section called 'Concepts' and look at Figure 2. You might feel you need to read it two or three times before you have understood the section well.
   a What *kind* of knowledge can learners construct with the help of concepts and generalizations?
   b How is this knowledge different from knowledge that comes from everyday experience?
   c Figure 2 has arrows for teachers and learners that run in opposite directions. Can you explain why?

School-like knowledge is systematic

Sometimes our everyday experience of the world seems to contradict the theoretical knowledge we have of it. Why is this so? Here is one example:



Take some time to reflect on the issue being raised here.

STOP. THINK.

What does this cartoon show about the character of everyday learning? What does it show about the character of school learning? What would these two people need to know before they could begin to doubt that the sun rises? (Some ideas from Section Two could be useful here.)

The cartoon reminds us that our everyday experience of the world can be very different from our theoretical knowledge about it. When we look at the sun 'rising', it certainly ***appears*** to be moving upwards. When we think and talk about the sun in our everyday lives, we think about it moving across the sky, creating longer and longer shadows as the afternoon wears on, and giving us some relief from the heat when it finally moves behind a mountain in the evening. This kind of knowledge about the sun may be adequate for our everyday lives. After all, do we really need to know that it is actually the earth that is moving?

Scientists, however, who study weather patterns, or technicians who plan the fuel

consumption and flight paths of intercontinental jet airliners, can't rely on these everyday explanations about the sun. Imagine if they did! These kinds of people must have a ***systematic*** understanding of this phenomenon; it is crucial for them to understand that the ***earth rotates*** in relation to a ***stationary sun*** in order for them to be able to do their work properly. They can't acquire this knowledge from their everyday experience. In fact, as we have shown, everyday experience actually contradicts it! They (and we) acquire this kind of knowledge through schooling and tertiary education.

The fact that people like scientists, engineers, doctors and so on acquire systematic knowledge, does impact on our ability to live comfortable lives! Having a systematic understanding of the solar system also helps us in more trivial matters. What time will I have to wake up to watch live TV coverage of amaBokke-Bokke playing against New Zealand? Or how late will we have to stay awake at night to watch Bafana Bafana when they play in Mexico? Although we might do so unconsciously, we do draw on the systematic knowledge of the earth's rotation in a solar system in order to understand time zones. And we acquired this knowledge through schooling.

School knowledge is networked

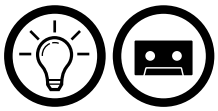
Did you notice in our previous discussion that we linked two phenomena that in everyday experience might seem like entirely different phenomena – the rising and setting of the sun, and the differences in times in different parts of the world? We can only link these when we understand that they both have to do with the way in which the ***solar system*** works. This ***concept*** cannot be seen or experienced (although manifestations of parts of it can, like the sun rising). Instead, it becomes a system of thought (a concept) through the combination of a number of smaller 'facts' (like the rising and setting sun) into an abstract network of ideas. Once this is done, and the concept is accepted, we can build new ideas off it.

> ***"Systematic thought, abstraction, and language are all vital to advanced learning."***

The idea of a network holds true at other levels too. Let us briefly return to the prisoners on Robben Island who challenged the ideas of their teachers with questions from their everyday experience. 'These men had little formal education but a great knowledge of the hardships of the world,' says Mandela. Although they were learning about abstract concepts such as capitalism, they managed to make meaningful links between these ***theoretical*** ideas and their daily lives. This relationship between theory and the everyday enabled them to change their thinking and become 'scholars' of history and economics. They were able to see beyond their experience and begin to recognize, describe, and explain features of their lives in the new ***language of theory***. In other words, the specific personal events of their own lives were linked to the general explanations of economics and history.

We have suggested that ***language*** is important in theoretical knowledge. We have also suggested that theoretical knowledge is ***abstract***. But what allows us all to ***share an understanding*** of abstract concepts like time zones or capitalism? Think of time zones. Although the idea is based on an understanding of how the solar system works, it is ultimately a set of ***humanly-constructed*** rules about how we should talk about time worldwide. In other words, our theoretical knowledge of the physical world allowed us to develop a system called international time zones.

We will return to the importance of systematic thought, abstraction, and language in school learning later in this module. For the moment, hold onto the fact that they are all vital to advanced learning, even if you don't fully understand their significance yet!



Take some time to reflect on the issue being raised here. Relisten to Part 3 of your audiotape. Concentrate on the discussion that follows the Morobe interview. Does it help you to rethink the half-truths?

STOP. LISTEN. THINK.

Go back to the notes you made in the thinking activity on page 80 about everyday and school learning. Do you still agree with what you have written? Do you want to make any changes? What new insights would you like to add?

How is school knowledge different from everyday knowledge?

It is important for teachers to understand the differences between everyday knowledge and school knowledge as these differences influence the learning performance of children at school. The following extract, taken from the 1999 President's Education Initiative in South Africa, will help you to understand this point:

'The fundamental distinction between the formal knowledge of schooling and everyday knowledge is well illustrated by the following piece of research undertaken by Bernstein (1996).

*Two groups of seven-year-old children from the same school, one from **middle-class** homes and the other of **working-class** origin, were given a series of cards showing pictures of the food on offer for school lunch. After making sure that the children recognized the pictures, they were asked to group those pictures which they thought belonged together. They could use all or only some of the cards, and they could use any reason for grouping which they saw fit.*

***Working-class children** predominantly used criteria drawn from their own life context as a principle for classification ("I have this for breakfast", "I cook this for my mum"). For these children the reason for grouping comes from their **personal experience** of food.*

***Middle-class children**, on the other hand, were far more likely to use as their principle for classification something the pictures have in common ("They come from the sea", "They are vegetables"). For these children the reason for grouping is more **abstract and learnt** (they understand that "vegetables" are a category of things, for instance).*

*The children were then asked to put the cards together in another way. This time a significant number of the **middle-class children switched their classificatory principle** to one based on local context and personal experience, while the **working-class children** merely **used another reason based on personal experience**.*

In short, middle-class children have access to two principles of classification:

- *one formal and specialized (school knowledge);*
- *the other personal and localized (everyday knowledge).*

In the school context, where the research was conducted, the first principle was preferred by middle-class children. Working-class children only had access to informal and non-specialized principles of classification, based on their personal experience.

The problem raised by this research is obvious: middle-class children, because of factors such as the kinds of conversations which occur in their homes and access to books, computers, travel, and other sources of information or experience, have ready entry to the principles which underlie school knowledge. Consequently education tends to reinforce codes, which these children bring to school, and it provides more opportunities to the middle classes for success.

*While unequal distribution of material resources and quality teachers make an enormous difference to student learning, the greatest obstacle to equity in any schooling system is the **differential access to formal knowledge** open to children of different social classes.'*

This extract is from N. Taylor and P. Vinjevold *Getting Learning Right* (Johannesburg, Joint Education Trust, 1999). This is the report of the President's Education Initiative.

ACTIVITY 20

Spend about 30 minutes on this activity. After reading, discuss the questions in the activity with fellow teacher-learners.

1 Read the extract on page 80 again.
2 When you have finished, consider the following questions:
   a Several factors that seem to help children to do well at school are mentioned. Can you list them?
   b Think of your own education (at school or university), or think of the school in which you teach. Does this excerpt reflect your experience at all? Can you think of examples of how, for instance, your (or another learner's) education was limited by not having access to a variety of 'codes' or 'principles' for organizing knowledge?

Should school learning be more like everyday learning?

The extract on page 80 provides a challenging description of the ***power*** of school knowledge. It also shows how the reliance on everyday experience can limit our learning. The children who ***only*** had access to classification principles based on personal experience were only able to complete the task in ***one way***. They had less choice and were less flexible in their thinking because they didn't have the means to move beyond their immediate experience. This influenced their performance at school. Although they managed to do the task presented to them, they did not excel in it.

The middle-class children were able to access classification principles based on their personal experience ***and*** other classification principles they had learnt through communicating their ideas in school-like ways. As a consequence, their thinking was more flexible (they were able to change the ways in which they organized information when requested to do so). They could move beyond their personal experience, and so they had much more choice.

The excerpt suggests that middle-class children enter schools with a wider variety of classificatory principles because of their home experiences. They have an intuitive understanding of the ground rules of school knowledge because they have done things like read storybooks, listened to radio conversations, and engaged in school-***like*** conversations with their parents. Instead of just talking about what is happening around them (which does happen in working-class families) they would also talk about ***ideas*** they had heard or read about. They had developed an understanding that words and ideas can take us ***beyond the things we see and do***. This made them flexible in their approach to their tasks and as a result they did better at school.

These ideas are controversial. Some people have argued that they suggest that working-class people are less intelligent than middle-class people. This isn't a correct interpretation. If you read the extract carefully, it says precisely the ***opposite***:

- It argues that working-class children, for many reasons ***other*** than a lack of natural intelligence, don't tend to learn school-like thinking at home. The reasons include the fact that many working-class parents were denied formal schooling themselves. Because of this, and a lack of money, they don't tend to buy books for home use. Many also don't have time to spend talking at length with their children because they work from 6 a.m. to 6 p.m.! This lack of talk also impacts negatively on school learning which is so language-based.
- Consequently, schools (especially those that teach formal, systematic ways of thinking rather than everyday knowledge) become ***doubly important*** for working-class children. If schools were to become more life-like, working-class children would lose out on the one place they have to learn formal ways of thinking. Middle-class children, on the other hand, would still learn to think in school-like ways at home.

Educational research that suggests that there should be a difference between everyday learning and schooling is controversial in another way too. It challenges an important, common-sense idea about teaching and learning, namely that schools must ***build on***, and be ***relevant to***, ***learner experience***. Some people argue

that we can ***only*** learn if we build on what we already know through experience. We have suggested that things aren't as simple as this and that learners must ***also*** be introduced to ***new*** and ***strange*** ideas and ways of thinking. Others have argued that school learning must offer a ***complete break*** with experience in order to be successful. What do you think? The following reading encourages you to explore this debate further.

You will need about an hour for this activity. Don't forget to use the good reading tips we have introduced you to.

ACTIVITY 21

1 Turn to Reading 16 'Guided adventures in learning' by Floden and Buchmann. Read the introduction and look at the subheadings to get a feel for the argument of the authors.

2 Carefully read the section called 'Why breaks with everyday experience are necessary for everyone'. Then answer the following questions:
- **a** Why are breaks with everyday experience necessary for everyone?
- **b** In what way is 'learning from experience' limited?
- **c** Can you think of an example from your own life where you experienced the limitations of everyday learning?

3 Now read the next section called 'Effecting breaks with everyday experience'.
- **a** How do the ideas in this section compare with our common-sense understanding that 'teachers must begin where learners are at'?

What did we think of these ideas?

Floden and Buchmann agree with Bernstein's observation that many children struggle with the abstract, theoretical nature of schooling. But, contrary to our expectations, they don't blame schooling for the problem. They don't say that because learners struggle with school knowledge it is therefore irrelevant to their lives. They also don't suggest that schools should be changed to be more 'relevant'.

Instead, they present a surprising argument ***in favour*** of the 'separateness' of the school. They argue that 'everyone lives in a particular restricted time and place, but [***because***] school and university are places apart, [learners are] ***emancipated*** from the limitations of [their] local circumstances.' In other words they suggest that learner freedom is ***only possible*** because formal learning (at schools and university) is different to, and separate from, everyday life!

Later on they suggest that 'to have equal opportunities, children must ***imagine*** themselves in futures not determined by their immediate environments and local beliefs'.

Did you notice that both in their concern with the power of *difference* and with the power of *imagination*, Floden and Buchmann map the path from the known to the unknown in ways that should be familiar to you from Section Two?

They also argue strongly that learners first have to develop new concepts ***before*** they integrate their everyday experience into their new generalized way of thinking about the world.

So, say Floden and Buchmann, teaching should ***begin*** with topics and ideas that aren't related to the learners' lives. Once learners understand new concepts, and once they can think '***within*** the abstract conceptual system', links to experience (everyday examples) can be made.

Take some time to reflect on the issue being raised here.

STOP. THINK.

These ideas may well sound strange given the kinds of ideas about learning that are dominant within OBE. But take them seriously. Think about them. Think about your own experiences of learning. Do these ideas not have some validity?

What are the ground rules of school learning?

3.3

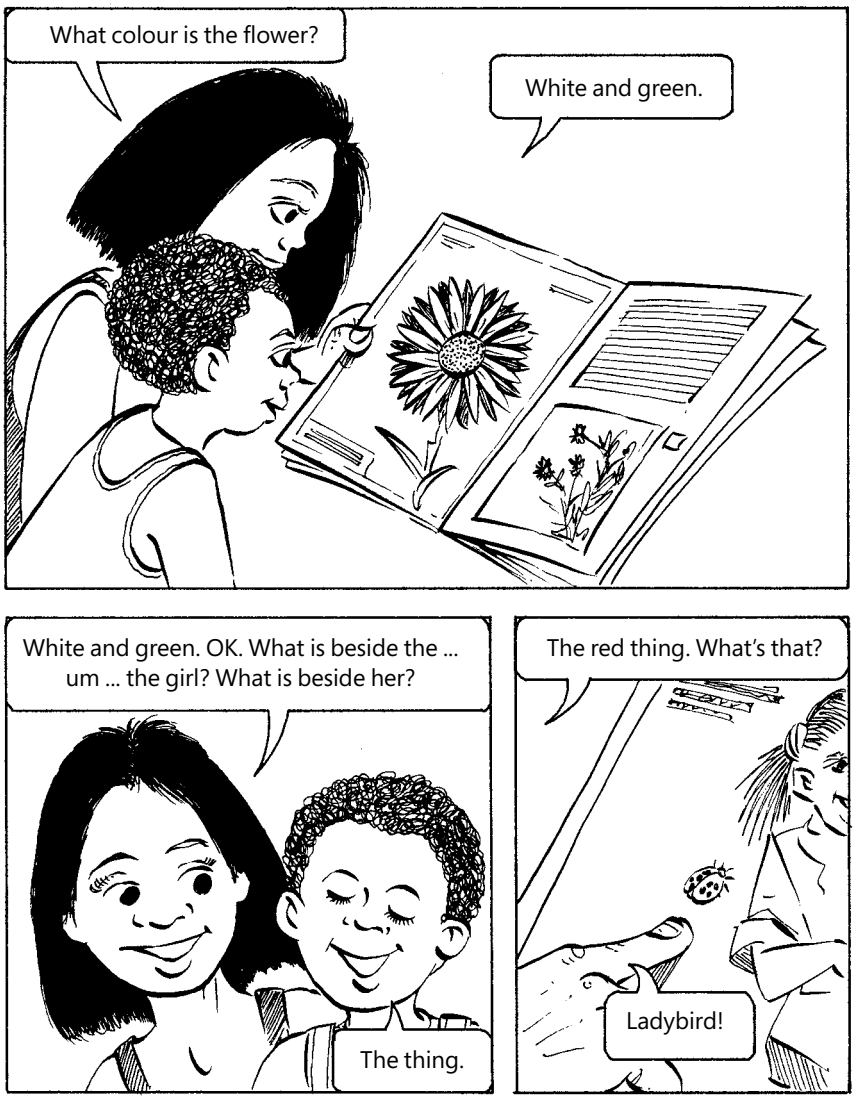
In the previous subsection we discovered that ***good*** schooling is quite distinct and distanced from our everyday experience. We noticed that it:

- is theoretical;
- is systematic;
- leads to a generalized perception of the world.

We will now investigate what these ideas mean more carefully so that we can discover the ***ground rules*** of schooling.

Developing a systematic use of language

Let us begin with the following dialogue between fifteen-year-old Rahilla, and her four-year-old sister, Asiya. The two sisters are looking at a picture book and talking about it.



This dialogue comes from K. Norman (ed.), *Thinking Voices: The Work of the National Oracy Project* (London, Hodder & Stoughton, 1992), p. 77.

Take some time to reflect on the issue being raised here.

STOP. THINK

Read the dialogue again. Pay particular attention to what *Rahilla* is saying. Look out for examples of 'school talk' Rahilla might be using. Write them down.

What did we learn?

This is what Rahilla said:

- 'What colour is the flower?'
- 'White and green. OK. What is beside the ... um ...the girl? What is beside her?'
- 'The red thing. What's that?'
- 'What colour is the ladybird?'
- 'Oh, look, there's a feather there!'

Do you notice that Rahilla talks like a teacher? She ***asks*** a lot of ***questions*** and through her questions she approaches the pictures in the book ***systematically***.

In her mind Rahilla uses the ***system*** of colours to decide what to talk about in each picture. She points out colours to her little sister ('the red thing') and often asks her about the colours of things ('What colour is the ladybird?'). This mental system can be called a ***frame of reference***.

By the final picture Asiya (the learner) has worked out that Rahilla (the teacher) is only interested in colours and so she happily volunteers information about the colour of the feather ('Yay! ... White!') before Rahilla even has a chance to ask. Asiya has understood the ***system*** behind her older sister's interactions and has ***accepted*** her ***frame of reference*** for the duration of the reading task.

Some of you might be thinking, 'That is bad … she is giving the teacher what she wants … she isn't really learning.' If Asiya ***never*** moved to a point where she ***understood*** the classification rules, this criticism would be valid. But difficult and abstract concepts are built on sets of rules and assumptions. In order to understand (rather than simply recite) them, learners need to be inducted into these rules. In the above excerpt Asiya learns a new frame of reference – a new set of rules for classifying. This allows her to understand the world in new ways.

You may remember that the extract about the difference between school and everyday knowledge (which you read earlier on page 82) suggested that children who grow up with books have entry into the principles that underlie school knowledge long before they even go to school. The above dialogue presents us with a good example of how this happens at home, in this case through the mediation of an older sister.

Here is another example of a teacher using language to encourage Lizeka, a Grade 1 learner, to think in a ***systematic*** way:

Teacher: *Look at the picture. How many rabbits are there?*

Lizeka: *My uncle has baby chickens. They are ... um ... sooo tiny.*

Teacher: *That's wonderful. Tell me, how many chicks are there at your uncle's place?*

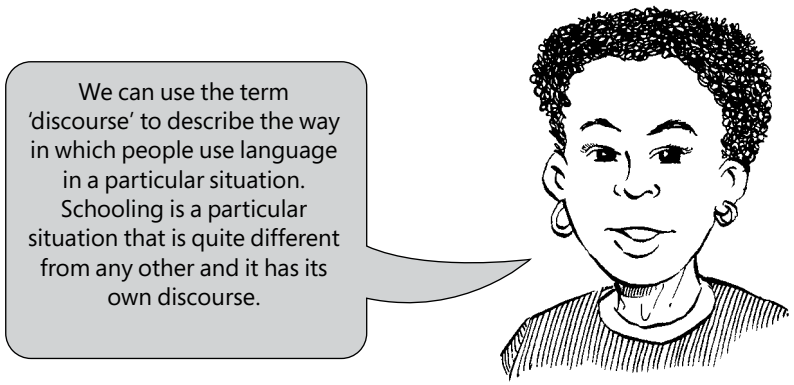
Notice how the teacher refuses to be side-tracked by Lizeka's story. But also notice that she doesn't ignore Lizeka's contribution either. Instead, she builds on what Lizeka brings to the class ***in a particular way***. There are three points of enormous teaching importance here:

- Don't get distracted by the everyday knowledge that learners bring to class.
- Don't ignore it either.
- Instead, use it to build more systematic ways of thinking and talking; use it to build school-like knowledge.

In the above example you can see how the teacher uses language as a tool to 'systematize' the little girl's response. Without ignoring Lizeka's immediate experience, the teacher shifts the attention of the class from 'chicks' back to '***numbers***' and in so doing, excludes any information that is not part of her lesson. Like Rahilla, this teacher uses a particular ***frame of reference*** while she is teaching. But unlike Rahilla, she has chosen a frame of reference that lies beyond the immediate lives of her learners. Even though Lizeka talks of her everyday experience, the teacher responds in a way that changes the meaning of Lizeka's words. The teacher ***generalizes*** Lizeka's experience (the real story of the little chicks) from an ***everyday*** situation and turns it into a number problem (school learning).

Learning an academic or school discourse

We have made frequent reference to the importance of language in school learning. The examples have shown that one of the most important kinds of formal learning is learning to use language in different and more systematic ways.



The two dialogues illustrate the ***discourse of schooling***. When Rahilla and Lizeka's teachers talk, they are not only communicating on the level of everyday experience. Like the teachers on Robben Island, they are using questions and answers to draw the learners into the ***world of organized knowledge***. Because it is ***generalized*** knowledge, it lies beyond the immediate reality of the learners.

Another way of saying this is that these teachers introduce their learners to the ***formal and literate discourse*** that operates at school. The most important thing to remember about the discourse of schooling is that it ***organizes knowledge in a theo-***

retical way and *follows similar rules* regardless of where you are in the world. As learners become familiar with this discourse, they not only develop a new kind of knowledge, but also begin to have more choice about the way in which they approach and solve problems, both at school and in everyday life.

Both Rahilla and the teacher demonstrate, through their teaching, that the discourse of schooling has certain rules. Here are three rules that seem to apply in their interactions with learners:

- The teacher's talk (or discourse) is usually based on a ***system of knowledge that lies beyond the everyday experiences*** of the learners.
- The learners are expected to ***become familiar with, and operate within, the frame of reference of the subject*** the teacher is trying to introduce.
- The learners are expected to ***extend their everyday understanding of the world*** and to make the discourse of schooling meaningful for themselves.

Learning to classify

Spend about 30 minutes on this activity. Do it on your own first, then share your ideas with other teacher-learners.

ACTIVITY 22

1 Look at the photograph below of a teacher in class. Pay particular attention to the words she has written on the board and how she has organized these words. (We have reprinted the words next to the photograph, so that they are easier to read.)

Electricity

Sources:
battery
dynamo
cell
accumulator

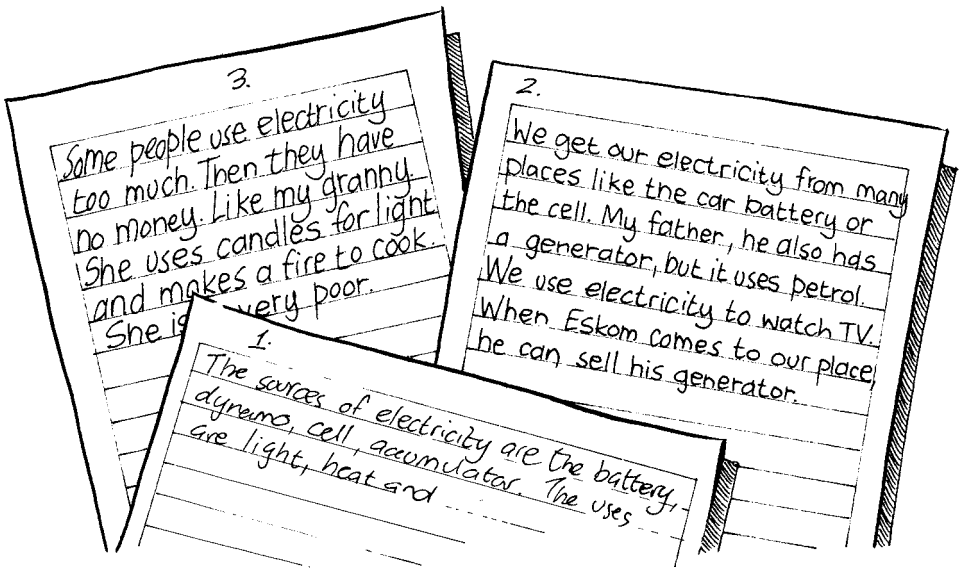
Uses:
light
heat
sound
movement
magnetism

A class in Nyanga near Cape Town learning about electricity.

2 Answer the following questions:
- **a** What do you notice about the way in which the teacher organizes information on the board?
- **b** Can you describe the system that the teacher uses to organize the ideas the learners come up with?
- **c** Whose ideas about electricity are important?
- **d** How do the three rules for school discourse apply in this situation?

What did we think?

Before we give you any feedback, we'll tell you what the learners, who had to write their own explanation of the sources and uses of electricity, came up with:



STOP. THINK.

Which of these three students do you think has best understood the lesson? How do you know?

Take some time to reflect on the issue being raised here.

OK. What did we think?

We think that the teacher wanted to encourage her learners to think about electricity in a systematic and generalized manner. To achieve this she chose 'sources' and 'uses' of electricity as headings on the board. These headings represent her classification system for the lesson.

Obviously the teacher is interested in the ideas of the students, but as they respond, she ***uses their ideas and classifies them*** under her own headings. You may be thinking, 'This teacher isn't respecting learner ideas by doing this. She is saying that her ideas about electricity are more important than the learners' ideas.'

We don't think that the teacher is disrespecting learner ideas. Instead, we think she is operating as a very good teacher. She uses learner ideas, but then 'models' to learners ways in which their ideas can be organized systematically. Her headings help learners to recognize and use a ***new system*** of thought.

This process, however, takes time. The written explanations of the learners show how strongly they rely on their immediate experience to make sense of the lesson. Like the learners in Bernstein's study (see page 80), these children don't all use ***abstract classification principles*** when they think about the uses and sources of electricity. However, the more successful learners do begin to add a new layer of understanding to their everyday knowledge of electricity and show some flexibility in their thought.

School discourse: formal, abstract, and regulated

Activity 22 once again shows us how ***formal, abstract,*** and ***regulated*** school discourse really is.

The teacher applies the first rule of school discourse (teacher's talk is based on a ***system of knowledge that lies beyond the everyday experiences*** of the learners) when she presents her two headings and organizes learner information into a system of thought that is outside of their immediate experience. (Remember also that the learners are not doing anything with electricity in class. They are only talking about it.)

In their homework, the learners are seen to apply the second rule (to ***become familiar with, and operate within, the frame of reference of the subject*** the teacher is trying to introduce). When they write about electricity they try to fit in with their teacher's frame of reference.

The picture doesn't really give us enough information to judge whether the learners are ***changing their everyday understanding*** of electricity. (The third rule of school discourse is that learners are expected to ***extend their everyday understanding of the world*** and to make the discourse of schooling meaningful for themselves.) The written answers, however, show that the level of understanding varies from student to student:

- Learner 1 has copied the teacher's notes, but has added no ideas of her own. So we are not sure if she has really understood what the lesson is about.
- Learner 2 seems to be thinking carefully about electricity because she can apply the idea of sources and uses of electricity to her own life. Although she seems to have understood the lesson, she still struggles to write about electricity in a systematic way.
- Learner 3 seems to be unsure of what the lesson is all about. He links ideas such as light and heat back to his immediate experience and does not shift to a more formal level at all. He turns his science answer into a story about his granny. As teachers, we can see how he will struggle at school because he has not yet understood the ground rules of school learning and begun to work with his ideas in a systematic way.

Take some time to reflect on the issue being raised here.

STOP. THINK.

Go back to your initial response to this activity on page 88. Were your ideas similar to our ideas? How did they differ? Why? Has your understanding changed now? Why?

How school learning develops thinking

To conclude this section on the ground rules of schooling, we would like to present you with four thought-provoking observations about the effects that schooling has on the development of our thinking.

Explicit, general rules are integral to the discourse of schooling

Explicitly-formulated, general rules help learners to look beyond ***specific*** problems and to search for the ***pattern or rules*** on the basis of which many other problems of the same kind can be solved.

By going to school, learners begin to see everyday situations as examples of general rules and their thinking becomes systematic.

Think back to Rahila's behaviour (pages 83–84). It is her school experience that makes her attend to the pictures in the storybook in the particular way that she does. Although she is surely aware that the book tells a story, she is also able to respond to the pictures in a more abstract way, thinking about the images in terms of the ***category*** of colour that distinguishes some objects from one another and forms a likeness between others. The way she involves her younger sister in such a

classification or categorization activity shows how her thinking has been shaped by the schooling experience.

Language is the main tool for teaching and learning

Language is the main tool for teaching and learning because it is through language that learning can happen ***outside everyday activities and without immediate problems that need to be solved.***

This means that learners begin to think about questions and problems as language-based, theoretical tasks that extend beyond the limitations of everyday life. In other words, they develop a theoretical discourse.

Once again the experience of the prisoners on Robben Island is a good illustration of this point. As they studied secretly at 'the University', they engaged mainly in a lot of talking and reading, and even some writing when they could copy and distribute texts. Yet because of the ***kind of discourse*** that was used – they organized individual experiences into a generalized history of South Africa, of apartheid, of colonialism etc. – they developed a deeper theoretical understanding that extended and changed their practical, activist knowledge.

By doing this they became more flexible thinkers and were able to read about other struggles for liberation and understand the commonalities between their own struggles and those in other countries.

Schools are organized to teach specific habits of learning

Schools are organized to teach specific habits of learning which affect the way learners use language or approach tasks. Over time, learners ***internalize these habits*** and begin to ***adjust the way in which they approach the world***. In doing this they begin to ***develop concepts*** that ***allow them to move freely between the discourse of everyday life and the discourse of schooling.***

If you think back to our observations on the work of Learner 2 (page 88) you will remember that she was the only one who showed signs of shifting between the discourse of everyday life and the discourse of schooling. Only when these shifts happen, can we begin to see evidence that a development in thinking has occurred.

Schools teach people to read and write

Schools teach people to read and write. ***This gives them access to systematic ideas and knowledge that go beyond their immediate experience of time and space.***
Schooling introduces learners to a literate discourse and leads them into unlimited new worlds that exist only through a system of concepts captured by language. Reading and writing also help learners to become more aware of their own thinking and force them to be disciplined and systematic in the way that they share their ideas.

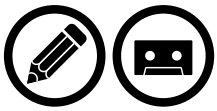
Think again of the Robben Island 'University'. While learners there learnt a lot from the experiences of fellow prisoners, they still felt the need to copy out 'Das Kapital' so that it could be read by a number of learners. Like these learners, we read in order to extend our world by sharing in the experiences of other people. Reading and writing also teach us the organizing concepts that enable us to see the similarities between our situation and other situations.

Introducing Vygotsky

Many of these ideas about the importance of school learning stem from the work of the Russian psychologist Vygotsky. He was particularly interested in the ***developmental*** significance of ***schooling*** and argued strongly that there are important differences between ***everyday learning*** and ***learning in school contexts.*** Here is a summary of his ideas:

We will learn more about Vygotsky's important ideas later (see pages 93–94 for further discussion of his work). This table is constructed from ideas in L. Vygotsky, *Thought and Language* (Cambridge, MIT Press, 1962), Chapter 6, and L. Vygotsky, 'Thinking and speech' in R. W. Rieber and A. S. Carton (eds.), *The Collected Works of L. S. Vygotsky, Volume 1: Problems of General Psychology* (New York, Plenum Press, 1987).

	Everyday knowledge and concepts	**School knowledge and concepts**
***Where* do we learn them?**	In the course of everyday activities.	In the context of schools and other formal learning activities.
***How* do we learn them?**	Spontaneously, in action.	Via instruction, in lessons.
***Why* do we learn them?**	Simply because we do the activity – the learner and others are engaged together in an everyday task.	Because we want to develop knowledge and thinking – a teacher deliberately develops the learner's knowledge.
What is the *nature* of the learning?	Unsystematic: we learn by trial and error in context.	Systematic: we learn by drawing attention to salient features of a system of knowledge. (We may also use mistakes, but will do so deliberately and consciously.)
How *aware* are we of learning?	We aren't conscious of our learning. We can do it, but cannot say how.	We are conscious of our learning. We attend, can do things, and can explain why and how we do things.



Spend about 45 minutes on this activity.

ACTIVITY 23

1 Go back to your responses to the thinking activities on pages 74, 78, and 80, and to Activities 18–22. Then take another look at the table above before you answer the following three questions:
   a How has schooling changed the way in which you think and learn?
   b What happened to your everyday knowledge as you progressed through school?
   c How has being able to read and write changed the way you learn?

2 Now listen to the interview with Murphy Morobe (Part 3 of the audio-tape) again and think about the way in which formal learning influenced the thinking of political prisoners on Robben Island.
   a What difference has schooling made in the lives of these men?

What did we think?

Although each person's experience will in some ways be unique, it is possible to make a few general observations about the relationship between everyday knowledge and school learning.

When asked to comment on their learning, many people will only talk about their ***formal education***. In their minds, everyday learning does not really count as real learning and so they automatically ***separate*** everyday and school knowledge completely. This complete separation often devalues everyday learning, or it renders schooling meaningless. As we have seen in Section Two, we use the ***known*** to imagine and construct the ***unknown***. Our everyday knowledge is part of the known that we ***must*** draw on when we learn at school.

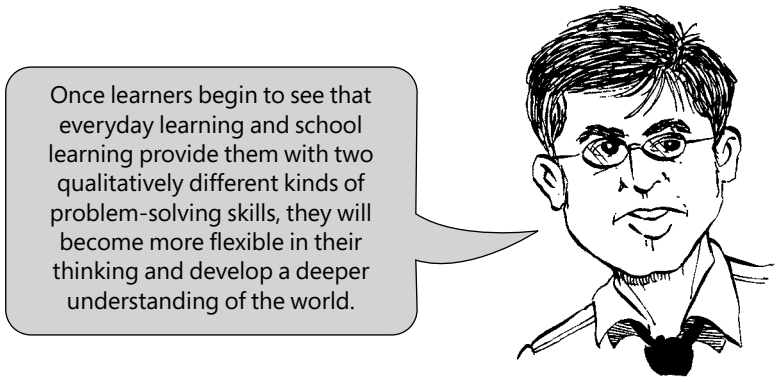
However, in order to be successful at schooling, we need to ***move beyond the known*** and enter the unknown world of systematized thought. We can't do this unless we recognize the ways in which school learning is ***different*** from everyday learning.

As Floden and Buchmann argued, it is often easier to understand these differ-

ences when teachers help learners to make a ***complete break*** with everyday experience. Once learners have developed a new 'school-like' way of thinking, they can go back to their everyday experience and integrate it into the newly-acquired pattern of thought.

This going back from school knowledge to everyday knowledge is a very important step in learning. For example, the two people looking at the rising sun in the cartoon on page 78 make the link between school knowledge and everyday knowledge with the comment that the sun 'only ***appears*** to be rising'. If they had failed to understand the relationship between the two ideas ('the sun does not move in relation to the earth' ***and*** 'the sun is rising'), then their everyday knowledge would have seemed inadequate and their school learning meaningless.

The real challenge for teachers is to enable learners to make a break with everyday experience ***in order to recognize*** the specific demands of school knowledge. But that is not enough. Teachers then have to encourage learners to ***move beyond the separateness of everyday contexts and schooling*** (which the teachers have themselves created) and ***help them to reintegrate the two ways of thinking***.



3.4 How does school learning happen?

Week 9 begins.

Learners come to school and bring with them valuable experiences and insights that come from their everyday experience of the world.

The learners in the photograph on page 86 already have an everyday understanding of electricity, even if they have not studied it in a systematic way before. Many of them are thinking about electricity in a ***practical*** way while they are trying to respond to the teacher who is thinking about electricity in a much more ***theoretical*** fashion. Unless the teacher is able to bridge the gap and link the two different ways of thinking and talking about electricity, the learners will experience many misunderstandings and frustrations in class.

In other words, if the teacher would like the learners to participate fully in class, she must lead them from the known to the unknown in a way that helps them to shift from their everyday discourse to a scientific discourse about electricity.

How can teachers encourage this change in thinking to happen?

Turning experience into thought

Spend at least an hour on this activity. Read carefully and consciously link these ideas back to what you have already learnt and to your own experiences of teaching and learning. Once you have done your own thinking, you may want to share your ideas with other learners.

ACTIVITY 24

1 Turn to Reading 6 'How children learn: implications for practice' by Bennett and Dunne. The introductory section of the article will give you a good overview of what the authors are planning to say about how children learn. The last paragraph of each section will also give you a good summary of the argument up to that point.

2 Read the first section under the subheading 'How children learn'. As you read the extract, write down a few notes to help you answer these three questions:
   - **a** How do Bennett and Dunne define learning?
   - **b** How do they explain the process that makes children change their thinking?
   - **c** How do they see the role of language in learning?

What can we learn from Bennett and Dunne?

Did you notice that Bennett and Dunne describe learning in a way that builds on Piaget's theory of equilibration? (If not, stop and think again.)

They suggest that children come to school with existing knowledge that is organized into cognitive ***schemata*** (ways of knowing).

If the children learn something new, they have to ***reorganize*** or ***reconstruct*** what they know.

- Sometimes they simply add more information to what they know and ***extend*** their schemata.
- At other times they begin to understand things more deeply and realize that things are more complex than they thought. In this case they ***elaborate*** what they already know.
- If the learning process forces children to change the way they think, they can be said to ***modify*** their cognitive schemata.

STOP. THINK.

How would Piaget describe the process outlined at the bottom of page 94? What language would he use?

Take some time to reflect on the issue being raised here.

Like Piaget, Bennett and Dunne believe that children cannot learn without being ***active.*** They have to make their own links between what they know and what the teacher is telling them. By making these links, they are constructing new meaning. As we have seen, this view of learning is called ***constructivist*** because learners are not receiving knowledge from the teacher. Instead learners are always actively making links within their networks of knowledge and using these links to construct their own understanding of the subject they are learning.

However, ***unlike*** Piaget, the authors of this article stress the importance of children learning ***together*** and ***sharing meaning with each other.*** They believe that ***language*** is an important tool for developing new ways of thinking and it is most powerfully used in a setting 'where social interaction, particularly between a learner and more knowledgeable others, is encouraged'. They suggest that 'through speech to themselves (inner speech) and others, children begin to organize their experiences into thought'.

Here Bennett and Dunne are drawing on the work of another great cognitive development psychologist of the twentieth century, Vygotsky, whose ideas on the difference between everyday and systematized concepts we encountered earlier in this section.

Vygotsky's theory of the Zone of Proximal Development (ZPD)

As we have already seen, Vygotsky was particularly interested in the ***developmental*** significance of schooling. He argued that the ***development of concepts*** in school contains the key to the whole history of a child's mental development.

The Russian psychologist, Lev Vygotsky (1896–1934), developed a theory of the socio-historical construction of knowledge and cognitive processes. As in the case of Piaget, his is one of the most important psychological theories of the twentieth century.

He contributed significantly to our understanding of the teacher-learner relationship in learning, and the kinds of action the teacher should take in order for new learning to occur. We can all remember teachers who made a particularly important contribution to our own learning and development, and Vygotsky's theory provides us with a way of understanding exactly how and why teaching is so important for learning.

Vygotsky introduced us to the notion of teaching as ***mediation.*** A teacher (and this teacher could be a schoolteacher, an adult caregiver, or a more experienced colleague or peer) is seen to interpret and pass on to the learner the knowledge that a community has built up over time. This passing on of the knowledge built up by the community is called mediation.

Vygotsky put forward the notion of the ***zone of proximal development*** to model how it is that teachers ***mediate new understandings***. For him, there are two levels of development that exist simultaneously in a developing child:

- the ***actual*** level of development, which is manifest in what the child can do ***without help***;

- the ***potential*** level of development, which is manifest in the child's abilities ***with optimal guidance from a teacher***.

The gap between these two levels of development is the ***zone of proximal development,*** or the learner's potential for learning or developing.

Vygotsky summarizes the importance of the teacher-learner relationship in developing a learner's understanding in the following way:

> *'The essential difference in the case of the child [when compared with the way an animal learns] is that he can **imitate** a number of actions which go beyond the boundaries of his own potential […] . With the help of imitation in collective activity, under adult guidance, the child does much more than he can do with understanding, independently.*
>
> *The divergence between the level of performing tasks which are accessible under guidance **with adult help**, and the level of performing tasks which are accessible to **independent activity**, defines the zone of the child's proximal development. Here is an example:*
>
> > *We have before us two children with a mental age of seven. One [child], with a little help, can do tests that nine-year-olds [normally do] but the other can only do tests seven-and-a-half-year-olds do.*
>
> *Is the mental development of these two children equivalent? Their **independent** activity is equivalent but from the point of view of **future potentiality for development** the children differ radically. That which a child is in a position to **do with adult help** we call the zone of his proximal development.*
>
> *This … method allows us to measure not only the process of development up to the present (the stage already accomplished, the processes of maturation that have taken place), but also those processes which are in the course of becoming established, which are now only maturing, developing.*
>
> *What the child can do today with adult help he will be able to do independently tomorrow. The zone of proximal development allows us, therefore, to determine the child's next steps, the dynamics of his development, to consider not only what development has been brought about but what will come about in the process of maturation.'*

This quotation is from L. Vygotsky, 'Learning and mental development at school age' in A. N. Leontiev and A. R. Luria (eds.), *Selected Psychological Works* (Moscow, Progress, 1955), pp. 446–447.

Mediating learning

Bennett and Dunne, and Vygotsky, teach us two important things about teaching:

- First, they show that children construct their own learning but do so best when teachers put in place certain conditions. One of the most important conditions is to involve learners in some kind of action, in particular a mental action.
- Second, another important condition for constructing learning is the mediating role played by a teacher. In particular, these experts show how important the discourse of 'knowledgeable others' is to draw the learner beyond the known into the unknown.

For example, all the 'paths into the unknown' that we suggested in Section Two are approaches to learning which use language. By encouraging guessing and reflection on mistakes, questioning and answering, and the use of metaphors and analogies, we engage learners in a discourse about the unknown. As learners ***participate*** in the discourse, they begin to follow its rules and use these rules to organize their own thought.

Let us investigate what these principles mean in the context of your study of this module.

ACTIVITY 25

Spend about 40 minutes on this activity.

1 You are a learner in this course. You are learning about learning. When you started reading this section, you did not come to it with an empty head. All your previous knowledge about learning (whether based on schooling or everyday experience) helped you to make sense of this section and to follow our argument so far.
   a Are any of the ideas we have discussed similar to what you already knew about learning before you began this course? (You may want to go back to your early notes on activities to remind yourself of your earlier thinking.)
   b Identify new conceptual terms you have learnt that enable you to describe and explain these ideas in formal academic discourse.
   c In what ways does the new language change your understanding?

What has our approach been to teaching and learning?

Each student's learning experience of this course will be different, not least because each student enters the learning process with different prior knowledge and experience and will therefore find different aspects of the course more or less difficult, more or less interesting, and more or less familiar or new.

To assist you in your reflection on your own learning, we will reveal ***our*** teaching intentions for some of the activities that you have done.

When we designed Activity 22 (page 86) the photograph was carefully selected to illustrate an everyday experience of teaching and learning. Like Rahilla did in the dialogue on pages 83–84, we followed a ***systematic and questioning*** approach to the task. We asked questions to focus your attention on aspects of the photograph that we believed would extend your everyday knowledge of learning and lead you to think about the way school discourse works in a classroom setting. That is why all our questions focused your attention on the ***classification exercise*** in the picture.

After each activity we provide comment on the activity. This is, in our minds, another opportunity for learning. By commenting on the photograph and student tasks, for instance, we tried to ***elaborate*** and extend your understanding. Our aim was to encourage you to think about school learning as characterized by a particular kind of discourse. While our comments cannot substitute for your own thinking and writing in response to the tasks set, they should help you to reflect on your response and guide you into another cycle of thinking.

Of course, some of you may have skipped the activities and gone directly to our comment. This is your choice but it is also likely that you will not develop your ***understanding*** of concepts by doing this. Remember the importance of action? The activities are this mental ***act***. Our comments that follow each activity attempt to assist you in ***accommodating*** and ***assimilating*** the new ideas evoked by the activity. This is also why we often ask you to go back and rethink or reassess previous answers.

Like the teachers from the Northern Cape, you will have had many everyday experiences and many common-sense ideas about how learning happens at school. We chose ***not*** to build on these ideas at all. Following Floden and Buchmann's suggestion, we began our discussion about how school learning happens with a ***complete break*** from everyday experience. We introduced you to Bennett and Dunne's discussion of learning first and then encouraged you to use the general conceptual framework of their article to reflect on your own experience.

Before we move on to the next subsection on teaching, we would like to give you an opportunity to reflect on some more powerful, common-sense ideas about school learning that you will meet in your practice.

ACTIVITY 26

Spend about an hour on this activity. Think deeply. Don't allow superficial feelings to get in the way of your thinking.

1 Read the six statements about learning in the first column of the table below. These are the half-truth statements which Dwyer investigates in his article in Reading 5. Note that we have expressed each one as a statement about school learning.

Statement about learning	What is true about the statement?	What is inaccurate or false about the statement?
Learning in school is the act of acquiring and retaining information.		
Learning in school is an unnatural activity.		
Learning in school is tied to instruction.		
Learning in school is the same for everyone.		
Schoolteachers are the experts.		
Learning in school is best undertaken in a structured, orderly manner.		

2 In the light of what you have discovered about the systematized learning of the school context in the section so far, would you still agree that each statement contains a half-truth? In each case, explain what is true and what is inaccurate or false

3 Look at your answers in the second column ('What is true about the statement?'). What kind of teaching strategies are suggested by these 'truths'?

4 How do you think the writers of this module would respond to these statements about school learning? Find evidence in the module to support your answer.

What is the role of the teacher in school learning?

3.5

What do we know about learning?

Week 10 begins.

Firstly, we know and can see why everyday knowledge is important for school learning. If learners construct new knowledge by extending, elaborating, and modifying their existing cognitive schemata, then the everyday learning of children is the *foundation* on which all other learning is built. Because everyday learning happens every single day of our lives, we cannot think of it as something that ends when school begins.

However, we understand that everyday learning and school learning are two different ways of learning that involve learners in different kinds of discourse. If our aim is to enable children to live creative and full lives and to go on to be successful adults in the workplace, we need to find ways in which to encourage learners to:

- develop their competence in both kinds of thinking;
- create fruitful links between school and the everyday world.

Secondly, we now know that language is extremely important in learning. We also learnt that different contexts (for instance, school as opposed to everyday discussions about soccer) and different subjects (history as opposed to science or maths) have their own discourses with their own specific rules. It is therefore crucial that we make learners aware of the ground rules of classroom (or school) discourse, as this creates the framework for success at school.

Are teachers still important?

If learning is about learners actively constructing their own meaning, what is the role of the teacher? Can't learners learn by themselves? In the following activity we will try to reflect more critically on the role of the teacher during a learning activity.

ACTIVITY 27

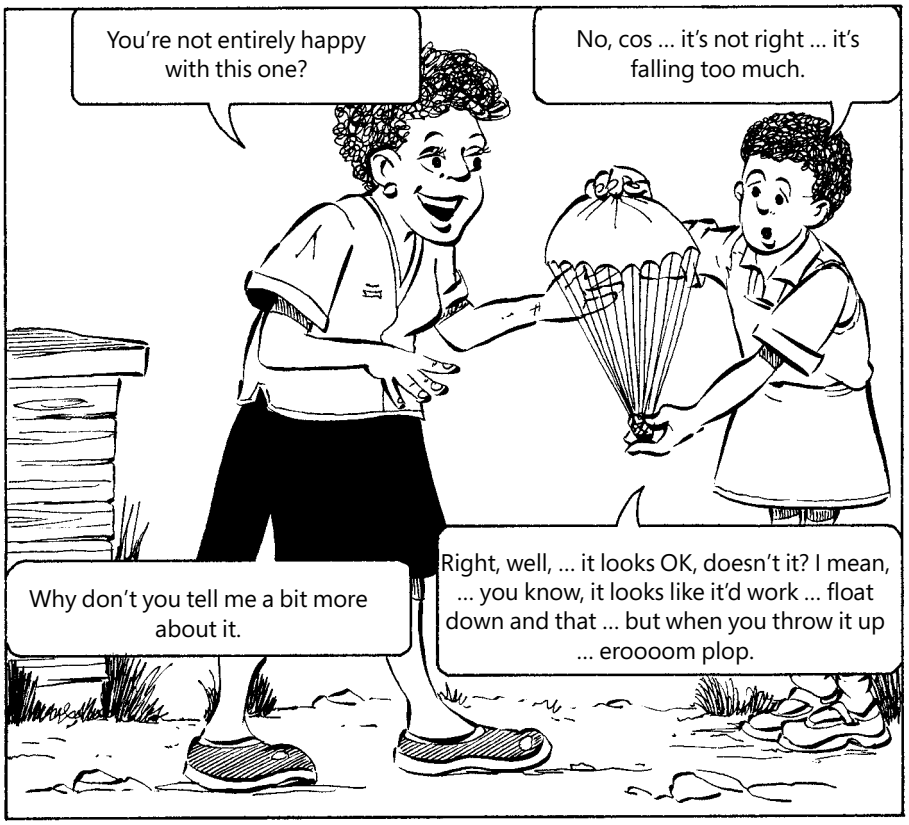
Spend at least 30 minutes on this activity.

1 Read the exchange between Raina and her teacher on page 100. The discussion takes place in a primary school class, where the learners have been building little models to show how plants disperse seeds. Raina has made a model parachute using paper, string, and a little stone to show how seeds get blown away by the wind and glide to the ground as if they are tiny parachutes. Unfortunately her model does not work very well. The discussion with the teacher begins after she has tried several times to make her model parachute glide.

2 As you read the words of the teacher and Raina, think about how you will answer the following questions:
   a What do you notice about the way the teacher talks?
   b How would you describe the role of the teacher in this learning situation?

Teacher: How's the experiment going then?

Raina: Well ... it's OK, but, well, ... I can't work out why this one isn't working very well.



Teacher: Shall we try it ... oh yes, ... plop ... I see what you mean.

Raina: Something needs changing.

Teacher: Yes, you're right ... have you had any thoughts?

Raina: I thought maybe ... to change the stone ... use a bit smaller one.

Teacher: That is a good idea, yes ... to lighten the load a bit.

Raina: Yeah, lighten the load, that's first ... mmm ... and then if that doesn't do it ... doesn't work ...

Teacher: We'd need to make changes somewhere else perhaps.

Raina: Well, all these ... I might have too many strings ... you know ... if I had a few less strings.

Teacher: To make it lighter, yes ...

Raina: And, yeah, and cos they're pulling it in all too tight ... too much.

Teacher: Oh, I see ... it also needs to catch enough air, doesn't it, to stop it ... plopping?

Raina: Yeah, to stop it doing a plop dive ... that's the main thing that is ... catching ... spreading out flat to catch the air ... I think that's the main problem, the strings are pulling the paper down too much ... like too tight.

Teacher: I'm wondering what we can do about it.

Raina: Change the stone for a littler one ... take some strings off, and then shall I test it?

Teacher: Yes, give me a shout. I'll come and watch.

This dialogue is from K. Norman, (ed.), *Thinking Voices: The Work of the National Oracy Project* (London, Hodder & Stoughton, 1992), p. 177. Note: the text has been adapted slightly.

The importance of teacher talk

Did you notice that the teacher doesn't ***tell*** Raina what to do? All the questions or comments have one common purpose: to help Raina clarify her own understanding of what is happening with her parachute. Remarks like 'Tell me about it' or 'Have you had any thoughts?' encourage Raina to ***identify the problem*** and to ***offer a solution*** herself. In this way the teacher allows Raina the space and the time to construct her own understanding of the experiment.

Although the teacher doesn't tell her what to do, she is fully involved in ***guiding Raina's thinking*** towards a solution. She mediates actively. We can recognize the frame of reference of the teacher's talk (or discourse) when she says, 'That is a good idea, yes … to lighten the load a bit'. She is thinking about ***aerodynamic laws*** when she points out that Raina is right to lighten the load, and that the paper needs to catch more air.

So, although the teacher does not tell Raina what to think, the ***interaction*** between them is definitely influencing the direction Raina's thoughts take. The remarks about lightening the load and later, about catching enough air also demonstrate how the teacher ***shifts the discourse*** to a more formal level. The teacher stimulates Raina's thinking process so that she ***herself*** can make sense of the way in which parachutes work.

Lastly, it is useful to note that the teacher doesn't say anything negative about the parachute that fails to work. Raina isn't blamed for doing something wrong. The teacher is encouraging and interested and this gives Raina the feeling that her teacher believes she can succeed and is really interested in her work. Her teacher's interest and support make it easy for Raina to make mistakes, and to try again.

> ***"A teacher's active interest and support can make it easy for learners to make mistakes and try again."***

STOP. THINK.

Page back to the explanation of Vygotsky's zone of proximal development (pages 93–94). Does it help us understand what this teacher is doing with Raina? Does this example help you understand Vygotsky's ideas about learning?

Take some time to reflect on the issue being raised here.

The dialogue on page 98 demonstrates the essential role teachers play in the learning process. They make deliberate and powerful interventions in the learning of other people. These interventions affect learners in at least three ways:

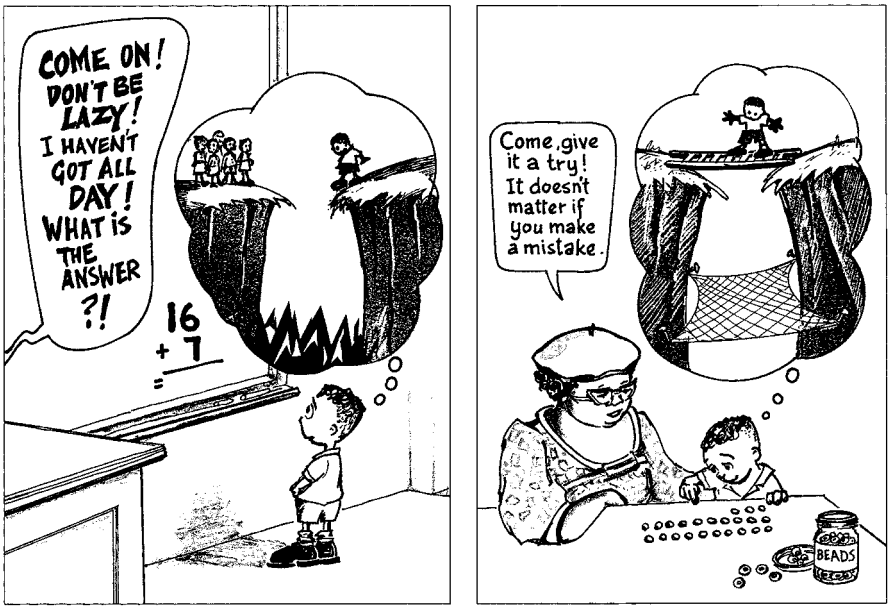
- Teachers not only influence the content of what is being learnt, but their discourse affects the way in which learners think about the content and the task. Teachers can influence the content, direction, and form of thought of their learners.
- The way in which teachers design learning tasks has an influence on the time and space learners have to construct their own understanding of the work.
- The way in which teachers relate to learners during the learning activity influences how learners feel about themselves.

Spend about 20 minutes on this activity. Do it with other teacher-learners. This cartoon is from G. Winkler, *All Children Can Learn* (Cape Town, Francolin Publishers, 1999), p. 13.

The importance of scaffolding

ACTIVITY 28

1 Look at the two drawings below.



2 Think about the influence of the teacher on each learning situation. Then write down your responses to the following questions:
- **a** Which drawing shows the better learning environment? Why?
- **b** How does the design of each task influence the experience of the learner?
- **c** How does the relationship between the teacher and the learner influence the feelings of the learner about his chances of success?

What did we think?

The cartoon illustrates very clearly that all learning is about ***bridging gaps***. When it comes to school learning, teachers not only set up these gaps for the learners, but they also ***structure the learning task*** and ***choose the level of support*** the learners will receive.

Some educators use the term ***scaffolding*** to describe the process through which a teacher can structure and support learning. The concept of scaffolding learning was put forward by Bruner and his colleagues and is an ***interpretation*** of Vygotsky's ***zone of proximal development.*** The following reading will explain the concept of scaffolding in more detail.

Spend at least an hour on this reading. Again, think of how these new ideas relate to other ideas you have learnt (like the ZPD) and to your own experiences of learning.

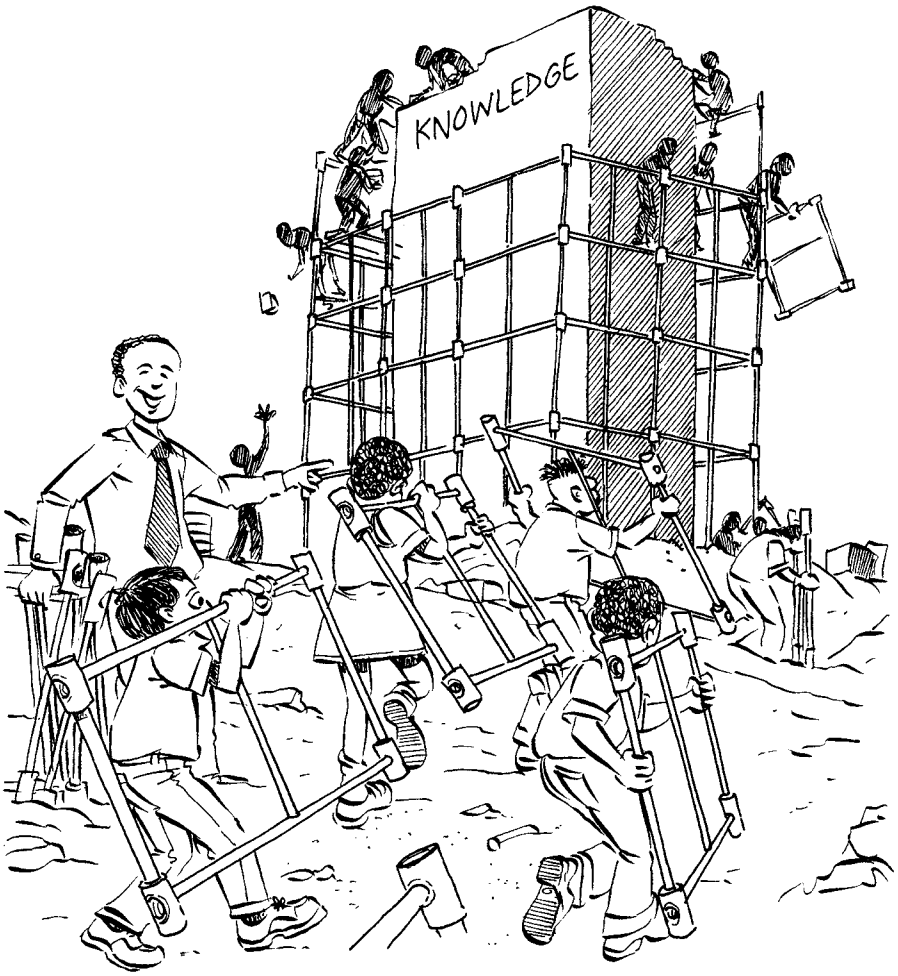
ACTIVITY 29

1 Turn to Reading 7 '"Scaffolding" learning in the classroom' by Maybin *et al.* Note that:
- The first part of the reading explains the concept of scaffolding in a theoretical and generalized way.
- In the middle part, the authors try to show what this concept means in a teaching context and provide classroom scenarios to illustrate their point.
- Finally, in their conclusion, they list the factors that support the scaffolding process.

2 As you work through the article, take note of any information or ideas that will help you to answer the following question: 'Scaffolding is clearly a form of help, but what kind of help is it?'
3 Write about a page, explaining the kind of help scaffolding provides for learners. (It may help you to note that scaffolding is a metaphor. Think about the ways in which this kind of teaching activity is similar to the scaffolds that builders erect on building sites.)

What did we learn about scaffolding?

We know that teachers help learners all the time, but not every kind of help is a scaffold for learning. Scaffolding refers to the help teachers give learners that enables them to ***extend their knowledge*** and to ***try something they would otherwise not manage on their own.***



Learners must build their own tower of knowledge, but if the teacher does not provide the scaffold, they cannot extend their knowledge beyond what they already know.

> ***All learning is about bridging gaps. Scaffolding by teachers enables learners to extend their knowledge and try something that they would otherwise not manage on their own.***

In other words, scaffolding is concerned with qualitative leaps in the ***performance*** of learners.

In the maths lesson shown in the illustration on page 100, both the teacher's ***encouragement*** and the ***counters*** are scaffolds because they help the boy to complete a sum he couldn't manage on his own.

In the discussion with Raina (page 98), not everything the teacher says is a scaffold. Only her response, 'That is a good idea, yes ... to lighten the load a bit ... Oh, I see ... it also needs to catch enough air, doesn't it, to stop it ... plopping?', provides a link

between Raina's experiment and the aerodynamic laws that will help her to know how to improve her parachute.

Scaffolding is particularly important when teachers introduce learners to new ideas or new ways of solving problems. The way teachers talk (their discourse), the kinds of conversations they encourage between learners (learner discourse), and the way school tasks are designed, are powerful opportunities for scaffolding.

In addition, good scaffolding requires a particular kind of relationship between teachers and learners, and adequate time and space for completing learning tasks. The next activity will explore how we can implement these in practice.

Spend at least 40 minutes on this task. The reading explains the implications a contsructivist view of learning holds for teaching. Think carefully about what this means for your teaching! Maybe you'd like to talk to other teachers about these ideas?

ACTIVITY 30

1 Turn to Reading 6 and take another look at 'How children learn: implications for practice' by Bennett and Dunne.

2 Pay particular attention to the second part of the reading entitled 'Implications for practice'. Here the authors make several suggestions about the ways in which teachers can scaffold learning.

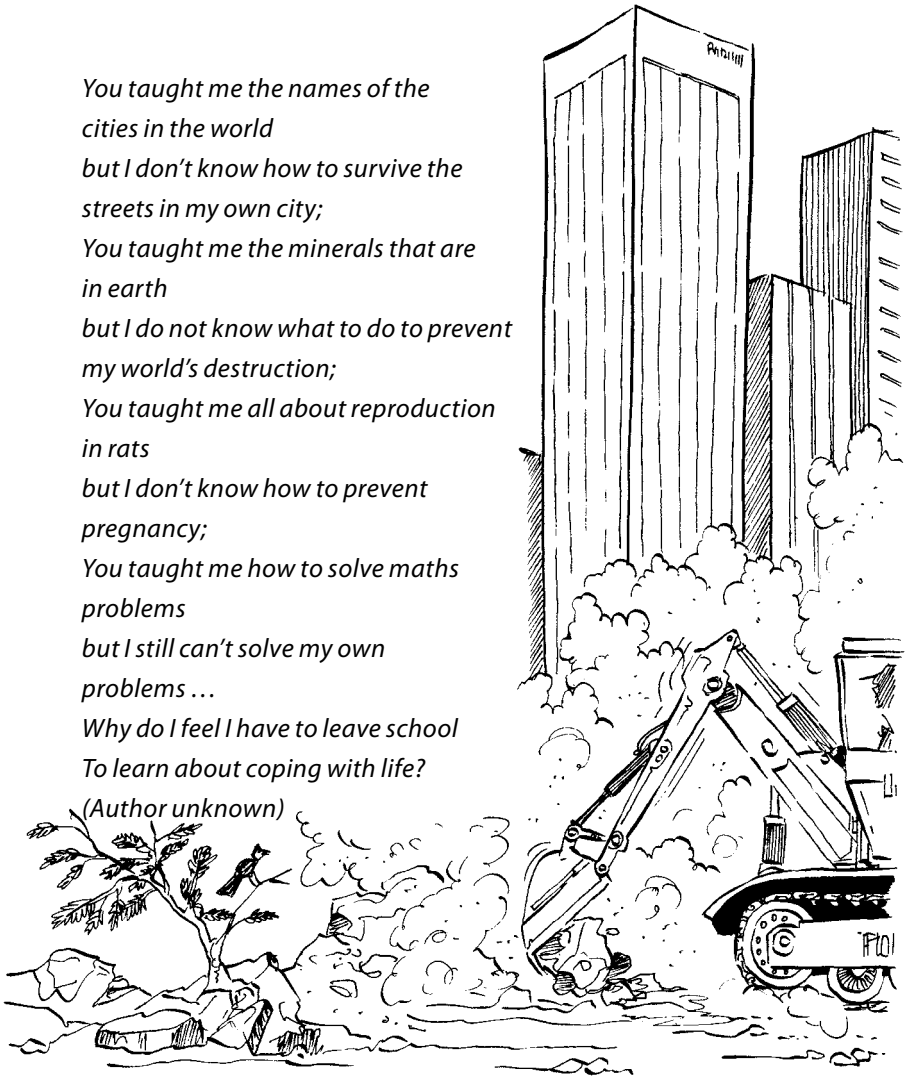
- **a** What teaching practices are mentioned in the article that could be helpful scaffolds for learning? Why do you say this?
- **b** Can you provide any other examples – drawn from your own experience – of teachers scaffolding learning? Explain how these actions assist learning.

School learning and OBE

3.6

The following poem was published on a poster which hangs on the walls of a good number of senior officials of the national and provincial education departments in South Africa.

You taught me the names of the
cities in the world
but I don't know how to survive the
streets in my own city;
You taught me the minerals that are
in earth
but I do not know what to do to prevent
my world's destruction;
You taught me all about reproduction
in rats
but I don't know how to prevent
pregnancy;
You taught me how to solve maths
problems
but I still can't solve my own
problems …
Why do I feel I have to leave school
To learn about coping with life?
(Author unknown)



The poem tells us a lot about the intentions of the planners of OBE. From the beginning, OBE in South Africa was underpinned by a particular principle about learning, namely that school learning should occur in a ***meaningful context*** and not be separated from learning and knowledge that children develop in the ***real world.*** As one of the policy papers at the time said:

> *'[We take] a broad view of education and training, seeing it not only as something that happens in schools or colleges, but in all areas of our society – homes, workplaces, public works programmes, youth programmes, and in rural areas.'*

This quote comes from the *Reconstruction and Development Programme White Paper* (September 1994).

OBE planners were critical of an education system that separated ***contemplation*** and ***physical work.*** They argued that such a system is an unhappy one because it divides people into workers and thinkers whereas people are naturally capable of both action and critical thinking.

By the time the ***White Paper on Education and Training*** was published in 1995, education policy was firmly committed to:

> *'a view of learning which rejects a rigid division between "academic" and "applied", "theory" and "practice", "knowledge" and "skills", "head" and "hand"'.*

This quote is from *Government Gazette*, 357:16312, (Parliament of the Republic of South Africa, Cape Town, 15 March 1995).

The great OBE debate

This principle of the ***integration*** of learning across school and everyday life contexts has produced a very important debate amongst teachers. Again, we can discern two opposing positions in the debate, although the vast majority of teachers seem to sit somewhere on a continuum between the two. The poles of the discussion are:

Position 1: Schools shouldn't teach dry subject knowledge; instead, they should teach useful, real-life knowledge

On the one hand, OBE is seen by many to herald the end of formal, disciplinary learning in school. In order to set up learning experiences, teachers who hold this view seek to bring everyday-life situations directly into classrooms as the ***substantive content*** of learning. Alternatively, they take learners out on visits and excursions into community contexts. Where they ask questions from history or maths or whatever, they do so ***only*** in the context of real-life activities and not in the study of the discipline as such.

In holding these views, such teachers take their inspiration from education theorists like Bill Spady, who believes that:

> *'existing school curricula are based on irrelevant subject-based learning. We should rather ask what learners need to be able to know and do in later life, and design curricula backwards from there'.*

This quote is from W. Spady, 'It's time to take a close look at outcome-based education' in *Outcomes* 11:2 (1992) 6–13.

Position 2: Schools should teach subject knowledge and show learners how to use it to solve real-life problems

On the other hand, another group argues that the main schooling problem is one of not being able to bring school knowledge to bear on the real-life contexts of learners. Teachers who hold this view strongly affirm the importance of the disciplinary knowledge acquired in school as the basis of OBE. But they try to avoid teaching it in a way that leaves it divorced form the everyday lives of learners. The notion is that while learners benefit greatly from the systematic study of history or maths or whatever, they only fully internalize new conceptual frameworks when they use them to interpret and solve problems in their own community contexts.

Such teachers regard it as important to bring local knowledge under the scrutiny of the new, systematic insights that their learners acquire in school.

What position do we hold?

In this section, our focus has been on the ***distinctiveness*** of schooling as a mode of learning. We saw that school learning is necessarily 'formal, abstracted, and regulated'. It ***isn't*** bounded by everyday experience, but instead, aims to provide learners with systematized thinking abilities and concepts.

We also reflected on the role of the teacher in this context. In school, learning activity takes place on the basis of someone ***else's*** understanding (usually the teacher's). It is this understanding which engages the prior understanding of learners. It puts them in a position, by the end of the process, to be able to reorganize their own thinking and prior knowledge. This enables them to move ***beyond*** their everyday experience, but in the end to ***come back*** to their everyday-life worlds with new understandings of how to solve problems.

It should be obvious that we tend to support the second position. Schooling is a ***particular way of knowing.*** By learning to know in this way, learners develop ever more complex ways of engaging in their communities and life worlds. Without this learning, learners are trapped in the immediacy of their communities. All problem-solving tends to be of a trial and error kind rather than being based on some systematic understanding of the problem being tackled.

STOP. THINK.

Read the poem on page 103 again. Now explain what you think it means. Do you agree with its sentiments? Why? Why not?

Take some time to reflect on the issue being raised here.

A simplistic analysis – and we'd argue that position 1 is simplistic – may conclude that this poem suggests we drop formal history teaching ('you taught me the names of the cities in the world') and instead teach learners how to 'survive the streets in my own city'. Or that biology teaching be dropped ('you taught me all about reproduction in rats') in favour of short, practical, life-skills courses that will enable learners to 'prevent pregnancy'. In other words, a simplistic analysis would conclude that the poem advocates that school should teach us how to cope with the immediate problems of life.

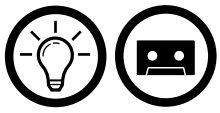
We'd interpret the poem differently. We would agree that schooling should enable people to live better lives. But we'd differ as to how we'd teach in order to achieve this outcome.

We would probably argue that to teach about the problems encountered by large cities ***throughout the world*** (in other words, develop a generalized understanding of concepts like urbanization) puts us in a better position to help learners to survive the streets in their own city. Or that to know the ***technicalities of mining and mining processes*** (have a deep, theoretical, and systematic understanding of mining) will help learners to better know what to do to prevent the destruction of the world's natural resources (and how to do it). Or that to ***understand reproduction*** in human beings and animals puts learners in a better position to make informed choices about family planning and reproductive rights.

There is certainly also room in school to learn to solve ***both*** maths problems and personal life problems. The importance of learning in school is that it allows us to do both, and to ensure that each adds learning value to the other.

3.7 Conclusion and key learning points

Reassessing the half-truths



Take some time to reflect on the issue being raised here.

STOP. LISTEN. THINK.

To check your learning we'd like you to go back to the six half-truth statements at the beginning of this section (page 72), and those on page 96. Decide if you still agree with your original responses.

- Are there any statements that seem to have changed their meaning for you?
- Are there any assumptions you now believe are wrong?
- Why have these changes occurred?

Relisten to Parts 1, 2, and 3 of your audiotape. See whether the conversations make more sense now that you have learnt so much more. Remember the point made about learning in Section Two, that the more you know the more you realize you don't know? How valid do you think this statement is?

Key learning points

We began this section by asking the general question, ***'What is school learning?'*** In trying to answer this question we discovered that everyday learning is very different from schooling and so we tried to deepen our understanding of the specific nature of school learning.

This led us into a discussion on the discourse of schooling and the importance of language as an instrument for learning. Through language, learners can develop a more generalized perception of the world that allows them to move beyond the limitations of their everyday experience.

Throughout this section we built on our ideas from Section Two and used a constructivist view of learning to sharpen our understanding of how learning happens at school. We agreed with the view that learners actively construct their own knowledge, but then began to question the role of the teacher in this process.

As we analysed different learning situations, we realized that teachers play an essential role in the learning process because they make deliberate and powerful interventions in the learning of their students. These interventions can be compared to scaffolds that learners can use to bridge the gap between the known and the unknown.

Here is our summary of this section's key points:

- Schooling is not limited to everyday experiences or specific contexts.
- School learning can change the way learners think, because teachers help them to develop new concepts and to generalize their perception of the world.
- Once learners have developed a 'schooled' way of thinking, they still have to integrate their everyday experience into their new, generalized way of thinking about the world.
- School learning is grounded in disciplines of learning and the rules of each discipline have to be learnt and respected.
- Learners who understand the ground rules of schooling generally do well at school.

- Language is the main tool for teaching and learning.
- The discourse of schooling has an effect on the development of our thinking.
- Learners do not 'receive' knowledge from the teacher at school, but rather have to make active links and construct their own understanding of the subject they are learning.
- As learners participate in the discourse of schooling, they begin to follow its rules and use these rules to organize their own thought.
- Teachers play an essential role in the learning process, providing scaffolds for learners with which they can extend their knowledge and try something they would otherwise not manage on their own.
- An important form of scaffolding involves linking specific examples or experiences to general categories or explanatory principles. By providing learners with a new discourse or language with which to redescribe things in theoretical terms, teachers provide scaffolding for learners to enter the unknown worlds of expert knowledge.

> ***A school teaches in three ways: by what it teaches, by how it teaches, and by the kind of place it is.***

This quotation comes from L. Downey, *The Secondary Phase of Education* (Boston, Ginn, 1967).