

Working in Classrooms

Teaching, Time and Space

Writers | Nelleke Bak, Eghsaan Behardien,
Wally Morrow, Shirley Pendlebury

○ **Editor** | John Gultig

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for Distance Education

Working in Classrooms

Teaching, Time
and Space

Learning Guide

WRITERS

Nelleke Bak
Eghsaan Behardien
Wally Morrow
Shirley Pendlebury

SERIES EDITOR

John Gultig



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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 FOUR

Classroom time and space

How teachers shape classroom time and space for different purposes and different learners

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Classroom time and space

A schematic story of Section Four

How teachers shape classroom time and space for different purposes and different learners

Reflecting on your own experiences of classroom time and space

Reflect on your experiences of *physical space* in classrooms.
Reflect on your experiences of *clock-time* at school.

(SECTION 4.2; PAGES 75 - 77)

Arrangements of space and time shape, and are shaped by, our ways of doing things

Physical arrangements convey different messages about how to behave.
Different arrangements have different purposes.
When we arrange a space, we can do so for both *practical* and *symbolic* reasons.
When we arrange a classroom, we need to think about the *purposes* of our teaching and about what ways of *acting* we want to encourage.

(SECTION 4.3; PAGES 78 - 81)

Different arrangements of time and space for different teaching and learning purposes

Think about different kinds of learning and their enabling arrangements of time and space:

- learning that;
- learning how;
- learning to be;
- learning and play;
- learning and imagination;
- silence, solitude, and intellectual space.

(SECTION 4.4; PAGES 82 - 87)

Teachers can achieve an orderly learning environment through:

rituals;
routines;
rules.

(SECTION 4.5; PAGES 88 - 91)

Different arrangements of time and space suit different learners:

young learners and older learners; learners from different socio-economic backgrounds; novices and experts; learners with special educational needs.

(SECTION 4.6; PAGES 92 - 98)

Ideas for shaping classroom time and space to maximize learning time

Use the constitutive rules of teaching to help you to guard against inappropriate efficiency.
Define limits in the classroom.
Consider pacing and timing.

(SECTION 4.7; PAGES 99 - 103)

4.1

What can you hope to achieve by working through this section?



Week 10 begins.

Section Four focuses on internal arrangements of time and space and how these affect teaching and learning. By the end of the section you should be able to use the following concepts to help you think about how to arrange classroom space and time for purposeful learning:

- physical space and clock time;
- external and internal time and space;
- practical and symbolic reasons;
- allocated and engaged time;
- clock-time and lived time.

On the previous page you will find a map of the main concepts and key points in Section Four.

Classroom time and space and their role in teaching and learning

4.2

Section Three considered the relationship between *external* time and space and the orderly functioning of a school. Here we will think about classroom time and space and their role in creating an environment for systematic learning. This is the sphere within which teachers exercise their agency – and thus their responsibility - in arranging the internal time and space of teaching and learning.

By the end of this section you should be able to answer two central questions related to classroom time and space:

- 1 How can teachers arrange classroom space and time to promote systematic learning?
- 2 How does the organization of *internal* space and time constrain and enable teaching and learning?

If you think back to the discussion in Section Two, you'll realize that both of the above questions have to do with the *formal purpose of the practice of teaching*. Rather than answering these questions directly, we will provide some conceptual tools, illustrative examples and supporting readings to help you answer them for yourself. The first question is concerned mainly with the *regulative rules* that teachers need to set for using time and space in the classroom. The second question is concerned mainly with *constitutive rules* for teaching and learning.

Remembering your own experiences of classroom time and space

Here are two introductory activities to get you thinking about your own experiences of classroom space and time. The first activity focuses mainly on *physical space*, the second mainly on *clock-time*. Many of the questions are connected to key points from Section three, only here you will be thinking about them in relation to your own previous experience as a learner rather than from the perspective of a principal or teacher.

ACTIVITY 19

- 1 Try to remember two classrooms from your own experience – one from your early years at primary school, the other from your final year at high school. In your workbook, draw up two lists – one for each classroom- and write down all the details you can remember about the physical space in each classroom. Try to include details about:
 - *physical structure* (for example: size and shape of the classroom; windows and doors; type of floors, walls, and ceiling);
 - *fixtures* (for example: lights, chalkboard, taps, basins, electrical plug points);
 - *furniture* and its arrangement (for example: double desks arranged in rows or groups, teacher's table, bookshelves);
 - teaching and learning *resources* (for example: books, posters, over- head projector and screen, maps and globe);
 - *situation* or locale (for example: upstairs or downstairs, next to a noisy road, near the toilets, south-facing and extremely cold);
 - classroom *atmosphere* (for example: friendly and inviting; bleak, dirty and run-down; intimidating).



For Activities 19 and 20, give yourself time to remember. Try to set aside two hours of quiet, uninterrupted time, possibly with a 10-minute break between activities.

- 2 Now read your lists carefully and write brief notes in response to the following questions:
 - Are there any striking differences between the two classrooms? What are they?
 - Which, if either, of the classrooms provided the better space for systematic learning? Why?
- 3 Read through your lists again and identify any listed items that give clues about what kind of classroom it is. (A junior primary classroom may have a discovery table and a toy box; a science lab may have test-tubes, beakers and bottles of chemicals; a geography classroom may have maps, globes and models of volcanoes; an English classroom may have posters of well-known writers or charts showing the formation of different tenses.)

ACTIVITY 20

Think back to your final year at high school and then, to the best of your memory, answer the following questions in your workbook:

- 1 Which subjects were usually scheduled for the first two periods of the school day? And for the last period?
- 2 Which subjects appeared on the timetable every day and which only once or twice a week?
- 3 In your opinion, what might have been the reasons for regularly scheduling particular subjects at the beginning of the school day and others at the end?
- 4 How long was each period? Did you have any double periods? If so, for which subjects? How frequently did you have a double period (once a week, every day)? What might have been the reasons for scheduling a double period for these subjects?
- 5 As far as you remember, in which subjects were the periods used most productively for systematic learning? Were there any subjects where periods were a waste of time? Why?
- 6 Class time is often interrupted – for example, by messages from the principal. List some of the kinds of interruptions that you remember from your own schooling.
- 7 In some South African schools there is a timetable but no one bothers to see that it is followed. Sometimes classes happen at the scheduled time; sometimes they don't. And some schools have no timetable at all. If you have experienced a school where there is no timetable or one where the timetable is not followed, jot down some of your memories of how the lack of a timetable affected teaching and learning at the school.

Teachers as agents responsible for organizing classroom space and time

In these first reflections on your own experiences of classroom space and time, you may have noticed how the organization of space and time shapes what happens in classrooms. As a teacher you will have to regulate and order the use of classroom time and space in a way that enables systematic learning. In other words, you will be the agent responsible for appropriate arrangements of learning space and time. We saw in Section Three that a well-functioning school depends on a set of regulative rules for ordering school life and the school programme. Similarly, a well-functioning classroom depends on a set of regulative rules that help to organize systematic teaching and learning. Regulative rules, you will recall, are 'governing rules' that define limits or boundaries for different activities, they define the ways in which time and space may be used.

Stop. Think.

What kinds of things will you have to think about in deciding how to regulate the activities in your classroom and establish it as a genuine learning environment?

The reflective tasks you have just completed suggest some aspects of space and time that teachers have to regulate to assist learners in developing habits of attention, inquiry and exploration. Of course, you may not be able to regulate them all yourself. When you begin teaching, you are unlikely to have much say over the school timetable or over the allocation of classrooms. You will also probably not have much say over the allocation of teaching resources in the school. You may find yourself with a run-down, poorly equipped classroom in a cold and noisy part of the school. What matters is how you arrange the time and space allocated to you and how these arrangements shape the ways of doing things in classrooms.



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

4.3

How arrangements of time and space shape, and are shaped by, our activities

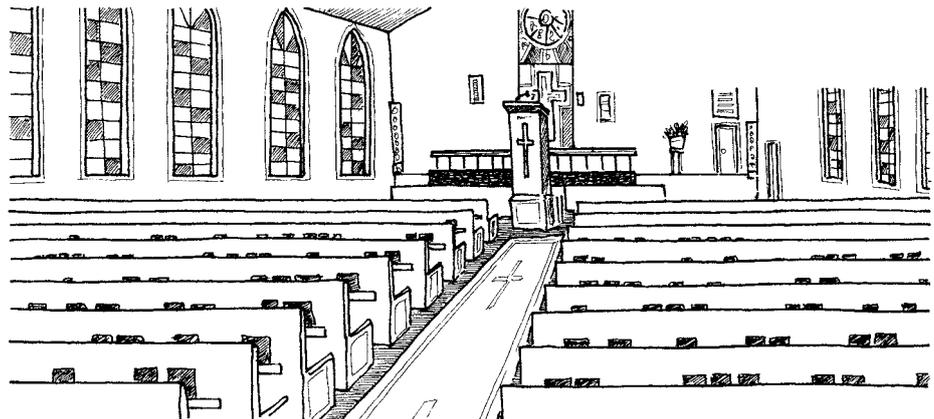
Section Two considered how arrangements of time and space shape, and are shaped by, different activities – for example, soccer and choral singing. To help you deepen your understanding of the relationship between time, space and human activities, let's now have a look at how spatial and temporal arrangements in rooms other than classrooms shape our ways of doing things.



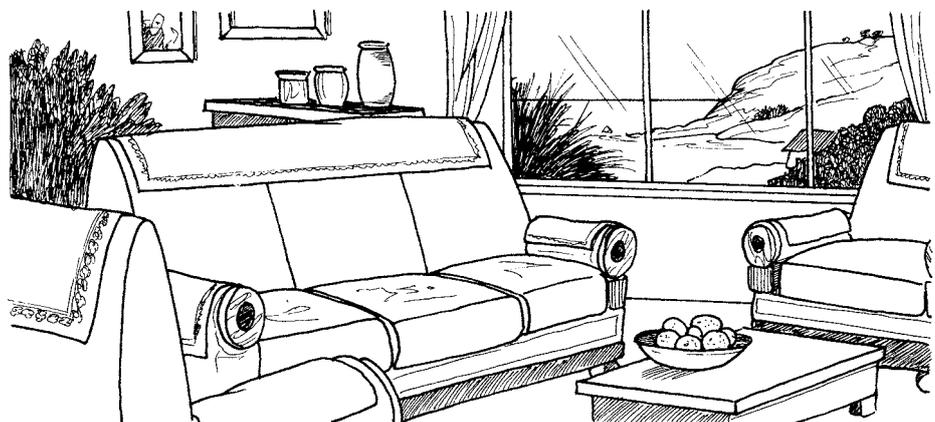
Set aside 45 to 60 minutes for this task. It's important for you to complete all parts of the task before proceeding.

ACTIVITY 21

Here are pictures of two different spaces. Picture A is a church interior; Picture B is a lounge.



Picture A



Picture B

- 1 In your workbook, make two columns. Head the left-hand column 'Picture A: church' and the right-hand column 'Picture B: lounge'. Now do the following:
 - a In each column write a sub-heading 'Physical arrangements'. Now, for each picture, note in point form the type of furniture, the way it has been arranged, the types of wall decorations, the placing and type of windows, and other physical details.
 - b Now think about the differences in the use of time in a church and in a lounge. In each column, make a note of these differences under a sub-heading 'Arrangements of time'.
 - c Think about why a church and a lounge have different uses and arrangements of space and time. Write another sub-heading, 'Purposes' in each column and make some notes about why you think the church is arranged as it is and why the lounge is arranged as it is.
 - d Imagine yourself in the church in the picture. How would you behave? How do people usually behave in a church? Would you behave in the same way as you would at home in your lounge with friends? Write a new sub-heading, 'Ways of behaving' in each column in your workbook. In point form, make some notes on the way people behave in a church and the way they behave in a lounge at home.

Here's an example of the sort of chart you could compile:

Picture A: church	Picture B: lounge
Physical arrangements:	Physical arrangements:
Arrangements of time:	Arrangements of time:
Purposes:	Purposes:
Ways of behaving:	Ways of behaving:

- 2 Reread what you have written on your chart. Now write a paragraph of about ten lines in response to the following questions:
 - Should a church be arranged like a lounge, or a lounge like a church?
 - Why or why not?

From your comparison of the two pictures, you will have seen that the church and the lounge have different physical features and spatial arrangements. But the pictures provide no details about time, so your notes on time will probably have been drawn from your own experience or common-sense knowledge of how time is spent in lounges and churches.

Physical arrangements convey different messages

We can draw two important points from the comparison of the church and the lounge:

- 1 Physical arrangements convey different messages.
- 2 The messages of different arrangements are closely linked to the purpose of the arrangement.

Consider the physical arrangement of the church: it is highly ordered, with fewer distractions and is less comfortable than the lounge. High, patterned and illustrated windows discourage the worshippers from looking out of them. Rows of seats facing the pulpit (or the altar) at the front of the church draw the congregation's attention to the pulpit, which is the focal point of the space. In some churches the altar is the *focal point*. The lounge on the other hand is less structured, more comfortable, with more distractions and no particular focus. Chairs arranged loosely in a circle encourage relaxed conversation; large transparent windows invite one to look out. So, the message conveyed by the two different physical arrangements, are very different.

Now we can ask more specifically: *what is the purpose of the different arrangements?* Why is a church not arranged like a lounge, and why is a lounge not arranged like a church? The question is not as straightforward as it seems. We can answer it by thinking about two different kinds of reasons – *practical* reasons and *symbolic* reasons.

Practical reasons obviously have to do with practical issues. If you arranged a church like a lounge, there would probably not be enough space to accommodate everyone. This is one practical reason for not arranging a church like a lounge. Can you think of others? If a church were arranged like a lounge, would everyone be able to see and hear the minister? And wouldn't it be difficult for people to kneel and take something like communion if there was no specific space to administer this? And why is a lounge not arranged like a church? Think about the practical reasons for not arranging a lounge with rows of benches.

This brings us to the second and perhaps more complex set of reasons – *symbolic reasons*. Arranging a church like a lounge might not just be impractical, but it might strike you also as inappropriate. Such an arrangement might not fit the purpose of the church service. Nor would arranging your lounge with rows of benches be appropriate for the purpose of the space. So, what is the purpose of a church and what is the purpose of a lounge? Another way of trying to ask the question is simply: *why* do we have church services, and *why* do we have lounges?

What was your response to this in Activity 21? I hope you discovered a link between the different spatial and temporal arrangements you noted and the different purposes of a lounge and a church. A lounge is a place for people to relax, to talk informally and to interact in a socially familiar way, so the type of furniture and its arrangements, the decorations and personal ornaments, all help to encourage a relaxed, personal space. In other words, there is a link between different spatial arrangements and different ways of behaving.



Have another look at your response to question 1(d) in Activity 21 and then give some further thought to these questions.

Stop. Think.

Would you behave differently in a church than in a lounge? Why? If you had rows of benches in your lounge, would you be able to have a relaxed conversation with the person sitting behind or in front of you? Or does the circle of chairs facing one another encourage easy interaction? And does the row of benches in the church make it difficult to have a relaxed conversation with others? Does it rather encourage you to keep quiet and so be more introspective, or focussed on the minister? And because the church service follows a particular order, would you act spontaneously by, for example, bursting out in song when the minister is busy reading?

What these comparisons show is that specific arrangements encourage or discourage certain ways of acting. If so, then the person who controls the arrangements and uses of time and space is also the person who has some control over the ways in which other people behave.

The next activity calls on you to think about this in relation to classrooms.



ACTIVITY 22

Following directly from your responses in Activity 21, take about 15 minutes to think about spatial and temporal arrangements, purposes and forms of behaviour in classrooms and then, in your workbook, write a paragraph of about half a page in response to the following question:

- Should a classroom be arranged more like a church or like a lounge? Why?

Your answer to Activity 22 should show that you have started seeing the links between spatial and temporal arrangements, purposes and the ways in which these encourage (or discourage) certain ways of behaving.



Set aside about 30 minutes for the task – 15 minutes for thinking and 15 minutes for writing. Remember to reread and assess what you have written before you proceed.

What have we learnt so far?

From the tasks and discussion so far we can draw an important point:

- *The purposes of your teaching need to shape the way in which you arrange the physical space and time in which teaching will take place. These arrangements should encourage certain ways of acting and certain learning activities.*

This means that when you plan a lesson or series of lessons, you need to ask yourself:

- 1 What is the **purpose** of this lesson or series of lessons?
- 2 What kinds of **learning activities** do I want to encourage in my learners that will help to realize the purpose of the lesson (and of the subject)?
- 3 How can I **arrange** the space (furniture, pictures, who sits where, etc) and time (when to begin, the order of activities, the period available, etc) that will encourage such learning activities?

4.4

Arranging classroom time and space for different purposes



Week 11 begins.

The formal purpose of the practice of teaching is to organize systematic learning. But there are different kinds of learning and it may not be effective to organize all kinds of learning in the same way. To see why not, let's begin by distinguishing between two kinds of learning – learning *that* and learning *how*.

Learning that and learning how

This distinction between two kinds of learning is related to a distinction between two kinds of knowledge – knowing *that* and knowing *how*. Knowing *that* has to do with knowing facts and content, whereas knowing *how* has to do with competence, in particular skills (including intellectual skills). It is fashionable to say that content knowledge is unimportant and that teachers should concentrate on developing learners' skills. But fashions can be dangerously misleading. Both kinds of knowledge are important. What is more, they often go hand-in-hand, each is dependent on the other.

But teachers may have to use rather different strategies and activities to enable learning *that* and learning *how*, and those different strategies and activities may need different arrangements of time and space.

Learning takes time, often a lot more time than teachers acknowledge in their planning for the term. And some kinds of learning take considerably more time than other kinds. Teachers often choose to develop learners' factual knowledge by means of telling, explaining and describing. Here the activity of learning often involves memorizing the information or facts, through drill and repetition. A prime example in most learners' lives is the drilling of multiplication tables. Other examples of learning *that* are being able to list events and dates in History, or to label the parts of a plant in Biology, or to label rivers and mountain ranges on a South African map in geography.

But knowing *that* is not sufficient for education. You could know a lot of isolated facts without being really competent to do anything. This is one reason why South Africa's new school curriculum focuses on learning outcomes such as being able to use critical and creative thinking to solve problems. These and other specified outcomes require teachers to enable learning *how*.

What's involved in learning how to do something? What is the role of teachers in enabling this kind of learning and how do time and space come into it? Consider an example: learning how to ride a bicycle. To be able to ride a bicycle does not involve learning the parts of the bicycle and the rules of the road. We don't teach someone to ride a bicycle by showing him or her pictures of different bicycles, by bringing a real bike into the classroom for learners to touch, or even by showing an exciting video of a bicycle race. Learners learn to ride a bike by actually riding it, crashing, getting back on again, and going a little further each time with a bit more confidence. This kind of learning develops through continuous training and frequent exercise. The more the learner does it, the more competent the learner becomes.

Learning *how* to do something is not confined to 'practical' tasks such as bicycle riding. We also learn how to do such 'intellectual' things as to write, to solve maths problems, to debate, to analyze arguments, to speak another language. In other words, learning how is not just a matter of learning skills that involve some physical prowess, it also plays a part in some of the most fundamental things we know and do. Knowing *how* is the development of an art, an intelligent craft. Learning how to ride a bicycle, or how to do long division, or how to analyze a poem, or how to calculate distances on a map, are all learnt by doing, by continuous practice, by repeated and varied exercise. And teaching someone how to ride a bicycle, or to do long divi-

sion, or to analyze a poem, or to read maps, is done by showing, coaching, training, supporting and guiding the learner. In summary, it is teaching by showing and by encouraging intelligent practice.

Learning how takes time

Think back to the example of learning to ride a bicycle. Of course you needed to know *that* the brakes were fixed to the handlebar, *that* the gear lever had various settings, *that* the saddle height can be adjusted, etc. How long did it take you to learn these? Someone probably told you: 'these are the brakes', 'this is the gear lever that changes the gears to suit the speed', 'over here is the lever to adjust the saddle height', and so on. But after someone telling you this, you still didn't *know* how to ride the bicycle – that took much longer to learn. You got on, probably with someone holding the back. **At first** you might have just sat there, getting the 'feel' of the bike, then **after a while** you might have asked the person to hold the saddle and to walk, **slowly**, next to you. Again, I'm sure this took **some time** before you gained a bit of confidence to go a little faster. Then **after a number** of these trial runs with someone supporting the bike, you might have ventured on your own, wobbling along the pavement. Perhaps as you tried to turn you couldn't control the bike and fell. And then it took longer **again** to regain your confidence. But you got back on **again** and practised the turn where you at first had fallen until, **day by day**, you became more and more confident. Maybe **after a couple of months**, you were so confident that you tried some tricks, like cycling without putting your hands on the handlebars, or doing wheelies.

Have you noticed that the bold words in the description above all have to do with time? The point is that learning *how* to do something takes time- often much longer than learning *that*. And in teaching, the focus is on helping learners to become competent and critical participants. In other words, you are helping them to *do* something. That means, essentially teaching *how* they can do something. We can't say of the people who have wobbled ten metres down the road on their first bicycle ride, that they now are skilled riders. To become a skilled rider takes time. This is also true for other kinds of learning *how*.

Think back to your own learning experiences at school. If you took Maths at school, you had to learn how to do arithmetic. When you first started doing it you, like me, might have been very unsure of how to do it. Perhaps you started off with some very simple sums and applying only one Mathematical rule. After doing a few of these sums, all with different numbers, you might have been given another rule to apply – something like 'You can't divide by 0'. You might have been taken through a lot of exercises that required you to apply that rule where appropriate, as well as applying where appropriate, the first rule you learnt. Perhaps when you got a little further you found that you had forgotten how to apply the first rule and had to go back again to see in your homework book how you did it before. And so, little by little, you were able to do more complicated sums, by building up on the previous exercises you had done.

ACTIVITY 23

We have looked at two extended examples of learning how (learning how to ride a bicycle and learning how to do arithmetic). Now examine two other examples of your own.

In your workbook, make brief notes on your own experience of:

- 1 learning how to do something physical or practical (for example, to play soccer, to bake bread, to swim)
- 2 learning how to do something 'intellectual' (for example, to read, to speak a second language, to play the piano).

Your notes should indicate what you learnt how to do, how long it took you, how much practice it needed, when you practised, and whether you



You will need 35 minutes for this activity. (Note that the value questions involved in this situation will be discussed in connection with another, similar situation in Section 6.5.)

had a teacher to support you and help you structure your time for practising. (Remember that the teacher needn't have been a schoolteacher, your teacher may have been a friend or a member of the family.)

The examples of *learning how* illustrate an important point: this kind of learning takes time, over a series of exercises, frequently repeated, and with constant training. As a teacher, one of your responsibilities is to structure learning time - and learning space - in a way that enables learning *how*. Later we'll investigate this a little further.



Let's now think about some other kinds of learning and their relationship to time and space.

Learning to be

Content knowledge, concepts, and skills are not the only things to be learnt at school. People learn lots of other things at school as well. For example, they may learn how to interact with others, how to be flexible, how to address various people; they may learn that honesty is an important virtue; that it's important to accommodate different points of view; they may learn about their own self-identity. All these are a significant part of school life. This kind of self-knowledge and social awareness grows out of a learner's interaction with teachers and other learners, even though not all these are specified outcomes of school learning. When people talk about 'educating the whole child', this is the sort of thing they mean.

Stop. Think.

Pause for a moment and think about the time involved in learning to be the kind of person you have become. What part did your schooling, teachers, and fellow learners play in this?

How can we as teachers create space and time for *learning to be* – for the development of self-knowledge and social awareness? How can we shape time and space that enables children and adolescents to *learn to be* particular kinds of people – for instance, critical creative thinkers, caring and responsible citizens, or systematic and active learners with an orderly approach to work?

If you are interested in these and other questions about learning, you can read more about them in another module in this series: *Learners and Learning*. Now let's look at the suggestion that play and imagination may both contribute in important ways to what we have called *learning to be*.



Have another look at your response to question 1(d) in Activity 21 and then give some further thought to these questions.

Play and learning

Botshabelo Maja, a South African educational researcher, has written about the importance of play for learning. Reporting on a recent study done in primary and secondary schools in three of the provinces in South Africa, he writes:

At the primary schools it was also generally clear that play was continually employed as didactic principle. Play, being one of the earliest means by which the individual learns to relate to reality, was prevalent in most of the classrooms. It is indeed through play that a child comes to terms with himself/herself and establishes a relationship with his/her own identity. Children also have an inborn desire to play and this leads them to discovering the world around them. Most of the teachers in primary school classes observed applied this inborn willingness of the child to play as an integral part of their methods of presentation. The great advantage was that passive learners then changed into active participants in the teaching and learning process. There was very little memorization, drilling or choring evident in these lessons. However, it does happen that some of the seemingly difficult areas are drilled and memorized; though this is done meaningfully in a manner that seemed to enhance understanding. In the most active class observed at one school, pupils moved around the classroom to check on their peers' work and helped each other to understand the lesson. Pupils would rush to the chalkboard to assist their peers with the allocated tasks, whilst some would complete them individually, and use a variety of teaching and learning aids.

This extract is from Maja, B. 'Access to learning: the enabling conditions for learning environments' in *Going for the Gap – Kenton* (Juta, 1998), p.12.

Maja notes that while memorization and drilling do take place in successful learning environments, they are targeted at specific tasks and made meaningful. Drilling seems to be kept to a minimum, rather than being the general rule of teaching. Meaningful drilling implies repetition of what needs to be memorized – and that means that adequate time must be made for this in the lessons. Secondly, Maja describes a situation of *learning how ...* with learners helping one another to do the work, rushing to write on the board and being active. This means that the classroom must have enough space for the learners to be able to move around, unlike Emma's over-crowded and cramped classroom (described in Case study 1 on pages 43 to 45). Play is not just 'filling up time' or 'passing the time of day'. It is an important way of engaging learners as well as a way of developing their self-understanding, especially in primary schools.

When, where and how to use play to enable learning depends on:

- The teaching purpose of the playful activity. (Is it to stimulate interest? Is it to encourage learners to think creatively? Is it to make something come alive, as, for example, a role-play in a history lesson of an imagined dialogue between a white settler and a Xhosa cattle farmer over a border dispute in the Eastern Cape?)
- The kind of play appropriate to realize this purpose. (If the purpose is to encourage learners to think creatively, then a strict, prescribed game and prescribed roles would seem to work contrary to the teaching purpose. Should the learners be divided into groups or should individual play be encouraged? Should it be a competitive or non-competitive game? Should it emphasize physical or intellectual play?)
- Who the learners are. (Would young learners enjoy physically active games? Would older learners have enough social confidence to enjoy role-play?)
- The kind of space and time that is available. (What are the resources in the classroom that the learners can use for play? Can the furniture be rearranged to create space for play? How much time is available to allow play to develop?)

Imagination and learning

We've suggested that play and imagination both play an important part in our learning to be particular kinds of people. The following extract will give you an idea of what we mean when we speak of developing learners' imaginations:

This extract is from Egan, K. *Imagination in Teaching and Learning*, (University of Chicago Press, 1992), p. 65.

I think imagination should properly be very pervasive in education. Such a view is difficult to take only if we think of imagination as a thing, as a particular, distinct part of the mind. If we see it rather as a particular kind of flexibility, energy, and vividness that comes from the ability to think of the possible and not just the actual and which can imbue all mental functions, then its role ... becomes easier to understand. To be imaginative, then, is not to have a particular function highly developed, but it is to have heightened capacity in all mental functions. It is not, in particular, something distinct from reason, but rather it is what gives reason flexibility, energy, and vividness. It makes all mental life more meaningful; it makes life more abundant.

Take note of the following key concepts from this extract:

- imagination;
- flexibility;
- energy;
- vividness.

Stop. Think.

In what ways do you think these words are key in thinking about what it means to be a critical and imaginative thinker, an active participant in the learning process? What do you suppose are the links with the ways in which time and space can be arranged in classroom teaching? You might want to jot down some ideas in response to these questions before proceeding.



Take some time to reflect on the issues raised here.

Mary Warnock has some ideas about what features a curriculum should have in order to stimulate learners' imaginations. She identifies four features, which are:

- 1 The curriculum should give learners a wide choice of options.
- 2 Learners should engage in some form of specialization which, she argues, is likely to stimulate the imagination because 'it is only by considering a thing deeply and for its own sake that one can properly begin to enjoy or understand it' (Warnock, 1977, p. 157).
- 3 Art activities and time to contemplate the beauty of the natural world are crucial because they encourage finer and more thoughtful perception and deeper emotional experience. (This is likely to lead to the educational development of learners' perceptions and emotions.)
- 4 Each learner needs solitude because the imagination works quietly and surreptitiously, and it is in the silent recollection and contemplation of what has been learnt or experienced that the imagination goes most effectively to work.

Silence, solitude, and intellectual space

So, for learners to become critically engaged, to think imaginatively and flexibly, the teacher needs to create space and time for the imagination to do its work. The last two features on Warnock's list highlight the need for 'time to contemplate' and for 'solitude'. Solitude here doesn't mean physical aloneness, but mental solitude - a kind of 'silence of the mind' - that can kindle the imagination. An important part of

teaching, for Warnock, is to allow learners time and space for their minds to relax and wander, for them to daydream, to gaze out the window, or to stare at the ceiling! She worries that the pervasive belief in the benefits of co-operative work tends to encourage conditions not especially favourable to imaginative thinking. Of course, learners working together may stimulate each other's imagination, but Warnock thinks that solitude, comfort in being alone, and enjoyment of a silence of the mind – free from incessant talk and noise – are greatly underestimated in teaching. She argues for a curriculum structure that has lots of space and time for learners' minds to range free. We could say that Warnock is arguing for intellectual space – the space for learners to explore ideas without the intrusion of the teacher and other learners.

If a purpose of teaching is to stimulate the learners' imagination, possible ways to plan to do this are:

- to organize the space in your classroom so that desks are not clustered together, but rather 'free-standing' from other desks;
- to have 'quiet time';
- for the teacher to occupy a space that is unobtrusive, perhaps in the back of the class out of the direct vision of the learners;
- to create space and time for individual learners to engage with a particular piece of work over a long period of time.

4.5

Routines, rituals, and rules

A central idea of this module is that the definitive or formal purpose of school teaching is to enable systematic learning. Systematic learning doesn't just happen. It depends on an orderly environment where learners can develop habits of attention, imaginative exploration, and disciplined, reflective practice. Achieving an orderly classroom environment isn't easy, even in a school that runs fairly efficiently. Perhaps you can remember what it was like when you were a learner who had to change from subject to subject, from teacher to teacher, every 30 to 50 minutes or so, interrupting the learning process of the previous lesson to come to the next one. And perhaps you remember just how confusing this constant changing between classes and learning processes can be.

Consider, for example, the difficulties faced by Emma in her geography class (see Case study 1 on pages 43 to 45). Emma has learners coming into her class from different places. Maybe some were doing physical education on the outside soccer field, maybe others in the class have come from the science lab, maybe others still have come from the library – all different kinds of spaces which encourage different kinds of interaction. The learners coming from the soccer field have been engaged in an energetic team effort and will most probably be talking loudly, shoving and pushing. Learners coming from the science lab may have been doing a small-group experiment and may still be discussing some of the things that happened during the experiment. On the other hand, those coming from the library may have been quietly reading a book and are still in a somewhat reflective mood. Emma's task is to focus the attention of all these learners to the here and now of her geography classroom and lesson. How can she do this?

How teachers can achieve an orderly learning environment and focus learners' attention

One way in which Emma can achieve an orderly learning environment is to establish various routines that will help her learners recognize the specific space and time of her class. Here are some of the routines that Emma could set up over time:

- After giving learners some time to settle down, Emma could greet them formally as a group, signalling the beginning of the lesson.
- She could mark the beginning of specific activities within the period with signals such as 'for the next ten minutes it's discussion time', or 'now it's quiet work time'.
- A few minutes before the end of the lesson, Emma could give clear instructions about what needs to be done before the next time they meet.
- When the bell signals the end of the lesson, Emma could again formally greet the group, clearly indicating the end of the lesson.

By having established routines in the classroom, teachers make it possible for learners to come to recognize specific activities, and they give familiar structure to the learning process. By greeting her learners formally, Emma draws their attention to the here and now of her lesson. She also signals to learners that they need to focus on the task at hand. Clear markings of beginnings and endings help to bring some order into the learners' full and varied day with all its different demands. Routines, like regulative rules, can help to facilitate systematic learning. Everybody needs routines in the day, especially where large groups of people work together, such as in a school or classroom. It is a purpose of routines to make people feel secure enough in the consistency of the setting and its requirements to use this as a base from which to move into the unfamiliar and unknown of the learning process.

Routines are those accepted ways of doing things that lend a sense of purpose and order to everyday life.

So far, we have listed some of the things Emma can do to signal clearly the beginnings and endings of lessons, but what about the organization of time within the lesson? What about signalling the beginning and endings of different phases within the lesson? For example, a language teacher may need to signal the end of role-playing a character from the set book, and then signal the beginning of a different learning activity such as analyzing the plot of the book. We'll look more closely at this later when we think about timing and pacing within the lesson.

Routines and rituals are sometimes described as being part of the *hidden curriculum* of schools. A hidden curriculum is not part of the planned learning programme, but nonetheless influences learners' lives by habituating them to particular ways of doing things. Lining up before entering a classroom, raising hands before answering a question in class, packing up promptly when the bell rings at the end of the lesson – all these routines and rituals are common elements of the hidden curriculum of schools.

Clock time and experienced time

While routines are important, if a teacher follows them mindlessly or without paying attention to the learners' engagement in the lesson, routines may simply result in boredom. This brings us to an important distinction, between *clock time*, and *lived or experienced time*. Clock time, obviously, has to do with the minutes and hours allocated to parts of school life (duration of lessons, timetables, etc). But we all know from personal experience that time flies when we are enjoying ourselves and an hour can seem like a few minutes. On the other hand, a boring hour or time spent impatiently waiting for somebody can drag and seem much longer than the clock indicates. In other words, lived or experienced time is not the same as clock time. Experienced time is flexible - a boring minute can seem like an hour, and an enjoyable hour like a few minutes. In an educational context, when learners immerse themselves in an activity, they 'forget' about time, but when they are bored or distracted, time drags and the learners fidget or get up to mischief to pass the time.

Allocated time and engaged time

The amount of clock time that a teacher sets for an activity is *allocated time*; the extent to which learners are actively involved in the activity is engaged time. As we discussed in Section Three, the timetable allocates blocks of time and specifies the length of period, what is taught when, to which class, by which teacher. Once the learners are in the classroom, it is up to the teacher to allocate time for various activities. Of course, learners may also influence allocated time by complaining if they realize that there is too little time to do what the teacher requires of them.

In a study on exemplary schools in the USA, David Berliner found that teachers varied considerably in how they allocated time within a period. Yet, he argues, time allocation is a significant factor in good teaching. Here's an extract from Berliner's study:

Teachers show enormous variability in their decisions about how much time to spend on each curriculum area. . . . It is not surprising to find that allocated time predicts achievement, and therefore must enter into discussions about effectiveness of teaching. The variability in allocation is what is most important. Because teachers do not usually keep track of their expenditure of time, some teachers probably spend too



If you have a copy of the video that accompanies this module, look at the two lessons on the video. Although both lessons have the same amount of allocated time, you'll see that one lesson has more engaged time than the other.

This extract is by Berliner, 'Effective classroom teaching' in Brookover W. (Ed) *Research on Exemplary Schools* (1985), p. 127.

little time per day on the subject matter they are committed to teaching. When teachers allocate too little time to a subject, the achievement scores of students will be low. The effective teacher, at a minimum, allocates sufficient time for learning a subject. ... In general, teachers who allocate greater amounts of time to some content area have students who perform better in that content area. Thus, in this discussion of the relationship between allocated time and effectiveness, we seem to be saying that more is better. If this rule is not adhered to blindly, it is, within limits, often true. Certainly we must remember that more is only better up to some point. When that point is reached, then more of the same thing is bound to be boring. Nevertheless, effective teachers seem to keep clearly in mind the fact that some curriculum areas will never be learned well if they do not allocate enough time to them.

Two of Berliner's findings provide guidelines for your own teaching:

- Up to a point, the more time allocated to learning, the better the learner achievement.
- Beyond that point, too much time allocated to a learning topic or task results in boredom.

Stop. Think.

Reread the extract from Berliner's research and see whether you can identify any other useful ideas about structuring learning time.



Take some time to reflect on the issues raised here.

So little time!

How much time in a year do teachers actually have to help learners achieve the planned learning outcomes? Let's do some arithmetic. Most school years are not a full calendar year. Although a South African school year usually averages about 190 days, these days are not all spent in the classroom on teaching and learning activities. From the 190 days allocated by the Department of Education, subtract:

- five days per year for public holidays;
- five school days at the beginning of the year and five days at the end of the year for administrative tasks;
- two weeks (ten school days) for mid-year exams as well as another two weeks for end-of-year exams;
- five days during the year for athletics meetings, field trips, concerts, and other extramural activities
- five days during the year for the teacher being absent due to sick leave or school business.

That leaves about 145 days per year for classroom teaching. Now, let's say that you are a subject teacher and that you see each class for 30 minutes every day. From this subtract:

- five minutes at the beginning of the period for the class to arrive and settle down;
- five minutes for distributing materials, interruptions, extended breaks, meetings, and so on.

That leaves you with about 20 minutes per day per class. If you multiply 20 minutes per day by 145 days of teaching time for the year, then you have about 48 hours contact teaching time per year per class. That's not very much, is it?

Here is a further consideration: you may have about 48 hours of allocated contact time per class per year, but for how much of that time are learners *actually* engaged with the work? In other words, how much of the allocated time is engaged time? For all sorts of reasons learners may be distracted during a lesson. Even though you may be teaching, some learners might not be paying attention. Berliner's study shows that learner engagement time can vary from very high to almost none; some learners are engaged, motivated and focused on the work for perhaps the full 20 minutes of the period, others perhaps engage only for about five minutes! Let's say that a learner in your classroom is engaged for about 15 minutes of the 20-minute teaching time (the other 5 minutes are spent perhaps daydreaming, chatting to a friend, staring out the window, doing some other task, etc.). Now that means that the learner engages for about 15 minutes per day for 145 days over the year, that is just over 36 hours per year to achieve all the stipulated outcomes of the curriculum for the year!

So, added to the first question the teacher asks about knowing how much time to allocate for various learning activities, we can add a second question: 'How can I encourage these specific learners to engage with the work when there is so little time?' We'll examine two ways in which teachers can do this. First, in the next section we'll investigate how teachers organize classroom time and space so as to attract and sustain learners' attention and engagement in learning activities as much as possible. Later, in the following section, we'll think about the importance of organizing systematic learning beyond the classroom and outside of school time.

4.6

How teachers shape classroom time and space to suit different learners



Week 12 begins.

Different arrangements of time and space may be appropriate for different kinds of learners. Let's think about some of the ways in which suitable arrangements of classroom time and space may need to vary depending on the age of learners, their social class background, their level of expertise, and so on.

Young learners and older learners

The following activity will help you to prepare for our consideration of learning time and space for young and older learners.



Set aside about 60 minutes for this activity. It's important for you to form your own impressions before reading the comments and questions on Lewis's article that follow.

ACTIVITY 24

- 1 Turn to the article 'Time and Space in Schools' by Beverly Hardcastle Lewis in the reader for this module. For an overview, skim through the whole article quite quickly.
- 2 Now go back and read the section with the main heading 'Filters on Action'. Pay special attention to the sub-section 'Time values'.
- 3 In your workbook, make your own brief notes about concepts or points from the article that you find interesting or important. You may also want to note anything that puzzles you.

Lewis asks: 'Are we tuned to children's time orientations? Which time tense predominates in our classrooms?' There are teachers, Lewis argues, who are orientated to the future. They know what goals they are steering towards; they see it as important that children sacrifice their immediate pleasures for future rewards that their successful learning might bring them. On the other hand, there are teachers who are orientated to the present and so are more concerned with satisfying their learners' immediate wants, even if these are not educational in nature. Lewis maintains that both present and future orientations have merit:

The selection of a single time tense is actually not necessary. All may be integrated into our school time with emphasis on shifting among the two according to the group's nature and needs.

This is from Lewis 'Time and space in schools' in *Children in Time and Space* (Yamamoto, K. (Ed) Teachers College Press, 1979), p. 151.



Read the story Lewis tells about Malcolm X, the famous African-American civil rights lawyer.

Lewis' reference to the group's nature and needs links to our earlier discussion about how the purposes of the lesson shape the way in which it is appropriate for teachers to organize their time and space. The nature, needs, and purposes of young learners, say in a primary school, will be different from the nature, needs, and purposes of older learners, say in a high school. So a teacher of young learners will need to organize time and space differently from a teacher of older learners. According to Lewis, young learners will be more present-orientated. If this is true, it has a number of implications for how teachers of young learners should structure learning space and time. You should be able to think of several of these implications yourself. Below are some teaching implications drawn from Lewis's article. As you read them, think about their relationship to arrangements of time and space.

- To delay rewards would be a weak motivator for young learners to engage with the work; the more immediate the reward for young learners, the greater the motivation to become engaged. However, for older learners, future orientations

may be the very spur that drives them to work hard in order to work towards their ambition.

- It is advisable to set learning tasks that are fairly short in duration for young learners; the longer a task takes to complete the more chance of the young learner becoming disengaged from the learning process. Older learners, on the other hand, can sustain interest and attention over much longer periods and so learning projects that take a substantial amount of time to complete can be beneficial.
- Younger learners do not have as long an attention span as older learners. In other words, their engaged time-span is shorter than that of older learners. Learning tasks, therefore, need to be not only short in duration for younger learners, but also varied. That means teachers plan activities during the day that range from practical activities such as experimentation, and constructing, to writing, and reporting; problem-solving; discussion, and listening; making some choices; and practising a range of skills. Of course, all learners benefit to some extent from variety, but older learners are perhaps more able to cope with a lack of variety than younger learners.
- Young learners are physically more active and restless than older learners. They need to move around, run, and play, so arrangements of space in the classroom should make it possible for them to do so. Older learners, on the other hand, are able to sit for longer periods of time. This means that classrooms need not necessarily be organized to allow learners to move around freely. Of course, classrooms that are so overcrowded that any kind of moving about is difficult, even by the teacher, are classrooms that do not encourage sustained interest. Even older learners need to stretch and move around from time to time.

Stop. Think.

Have a look at the floor plan of two different classrooms in the article by Sally Lubeck in the reader for this module. You'll notice that although they differ in layout, both have extensive open spaces where young learners can move around freely.

We've been thinking about time and space in relation to learners of different ages. Let's now think about learners from different backgrounds. We'll look specifically at socio-economic backgrounds.



Janet Moyles has written a very helpful book called *Organizing for Learning in the Primary Classroom* (Methuen, 1992). The reader for this module includes abridged versions of two chapters from the book- 'The children and their learning needs: balancing individual and whole class teaching' and 'Time for teaching and learning'. You may find it useful to set aside time to read these two chapters.



Take some time to reflect on the issues raised here.

Learners from different socio-economic backgrounds

To prepare yourself for this sub-section you will do some more reading from the reader for this module.

ACTIVITY 25

- 1 Skim-read the full article by Sally Lubeck in the reader for this module to get an overview of its structure, main themes and argument.
- 2 Then read the article a second time, paying particular attention to:
 - a the different *purposes* of the two schools that she describes
 - b the different *kinds of learning activities* and interaction that are encouraged in each school
 - c the way in which *time and space in the classroom* are organized.
- 3 In your workbook, make some brief notes on what you have read.



You will need about 60 minutes to read through the article twice and make brief notes.

In your reading, you will have seen that Lubeck compares the organization of time and space within the classrooms of two different schools - Harmony, which is a

mainly middle-class white pre-school, and the Irving Head Start Centre, which is mainly a working class black care centre. Harmony has an educational purpose; its learners follow a learning curriculum. Head Start Centre, by contrast, has a caring purpose; it monitors and encourages the well being of children in the community it serves.



Set aside about 30 minutes for this activity. Once again, it's important for you to think about your own responses before reading the comments that follow.

ACTIVITY 26

Compare the different time allocations in Figure A of Lubeck's article. Then use the following questions to help you think about the different purposes for which time is allocated. While it is not necessary to write anything for this task, we recommend that you make brief notes in your workbook in response to each question.

- 1 Why has the Head Start Centre allocated time to breakfast and lunch? (Think of the location of the school and the likely family background of the learners.)
- 2 Why is so much time allocated to 'free play' at Harmony Preschool? (Think of the interpretation of 'free time' given by the head teacher at Harmony, where the purpose of free play is 'first to orchestrate the environment and then to maximize the use of it for *individual* children'.)
- 3 Why should there be so much emphasis on 'individually chosen' activities in the Harmony Preschool?
- 4 Why is there more 'group time' at the Head Start Centre than at the Harmony Preschool? (Think of the head teacher's response at the Head Start Centre of group time as a time when children are expected to listen attentively to the teacher, as a time of 'getting the children ready to listen to the teacher'.)

When you read the article, you may have noticed that teachers at Harmony Preschool have far fewer interruptions to their classroom work. They have time to consult with parents after the class and have the time before class starts in the morning to prepare the classroom space for the day. In contrast, the teachers at the Head Start Centre have many different responsibilities which impact on the time they spend in the classroom – they need to consult with parents, make administrative arrangements, and so on. This means that there are more interruptions during class time.

The way in which space is arranged and the way in which learners interact with this space also differ in the two schools. Although the available physical space is more or less the same size in both schools, teachers at the two schools have arranged the space very differently. In Harmony Preschool the space is an 'open' space. This means that there are no definite boundaries and that objects and resources in that space can be moved about fairly easily. The children can move about freely, making free choices as to where they want to play and what they want to do. In other words, they have a great deal of control over where they want to go (choice of movement in space) as well as how long they want to spend on an activity (choice over their use of time). The space in the Head Start Centre, on the other hand, is more fixed. Spaces are clearly defined by the location of different resources: the music area, the puzzle area, the art area, etc. Moreover, children here have less choice about where and when they want to do things. Having only 25 minutes allocated for 'free play', children at the Head Start Centre have most of their time and space planned for them by the teacher.

Another interesting difference is the difference of 'ownership' of space in the two schools. In Harmony Preschool, the classroom space is shared between teachers and learners – there is no defined teacher area. There is a sense of communal ownership and this leads to more informal interactions. Children call their teachers by their first name, and this gives rise to more open, free interactions between teachers and learners. At the Head Start Centre, on the other hand, the classroom has a clearly defined teachers' area which for the children is perceived as being 'out of bounds'. Children don't enter easily into this space because it is seen as being 'owned' by the teachers. Lubeck argues that this division of space also sets up a division of social

interaction – interaction between learners and teachers is much more formal, with an emphasis on authority. As we might expect in a school where there are fairly strong formal boundaries between the teachers' space and learners' space, the teachers are called by their surnames.

In summary, Lubeck argues that these different arrangements of time and space in the classroom are directly linked to the socio-economic context in which the school is located. The middle-class school (Harmony Preschool) encourages learners to be different, to exercise individual choice and develop autonomy, and to interact with adults in an informal, open way. In contrast to this, the working-class school (Head Start Centre) encourages group cohesion, deference for authority and repetitive modes of interaction that do not introduce change as a regular feature in the school day.

Stop. Think.

Think about whether these findings might have some bearing on the different socio-economic levels in South Africa. Does the arrangement of learning space and time in a working-class township school differ from the arrangement of learning space and time in, say, a school located in an affluent, middle-class suburb? If so, are the learners located in these different schools socialized into different ways of experiencing time and space and different ways of social interaction? Of course, this is a complex and contentious question – a question that this module cannot address, but one that you as a teacher in a changing South Africa need to think about. In all likelihood, if you are a high school teacher, you will be facing a class with learners from a variety of different socio-economically located primary schools and so with a variety of different experiences of space and time and social interactions.



Take some time to reflect on the issues raised here.

Novices and experts

An assumption teachers often make is that because they have a group of learners of more or less the same age, and in the same grade, that these learners all have more or less the same ability and are at the same conceptual level. This is a risky assumption. Most classes consist of learners of mixed ability – some that learn 'fast' and some that learn 'more slowly'. The very words in inverted commas should start to signal to you that there are implications for the way in which learning time is arranged. Giving a class a task to perform might mean that some learners finish quickly, and, while waiting for the others to finish, these learners can start becoming restless and distracting for the others. To put it in language with which you are starting to become familiar: although the same allotted time for the learning task is set for all, different learners will have different lengths of engaged time. The science teacher, for example, may set an experiment that some learners can cope with easily, whereas others struggle with it. This could lead to the situation that by the time the allotted time for the task is over, the learners who are struggling have not yet finished it – they would need more engaged time beyond the allotted time to come to grips with the work. Here the teacher has to deal with different rates of engaged time.

But, there are also learners who engage at a different *level*, not merely at a different *rate*. There are those learners who might find the task very easy, finish it quickly in such a way that they don't really engage with the task.

For example, the maths teacher might set a geometry problem which a 'quick' learner might dash off and then sit back and do other things. The level of engagement of this 'quick' learner might, however, be very superficial – she might merely have noted down the correct answer. Another 'slow' learner perhaps struggles



Week 13 begins.

much more with the problem. She might try a variety of different ways of solving it, drawing on a number of different skills in trying out different approaches, and, in the very struggle, be intensely and deeply engaged in the problem. For a teacher, such a learner is seen to be using her time productively, whereas the 'quick' learner is not.

How can you begin to arrange time and space in such a way that accommodates these different rates and levels of engagement? Much of this knowledge is gained as a result of your experience as a teacher, your sensitivity to the context of your learners, and your flexibility in teaching at various levels. But you may find these suggestions helpful:

- You can set open-ended tasks that allow different learners to engage with the task in a variety of different ways and on a variety of different levels. So, for example, a History teacher might set an assignment in which he asks learners to construct a story they imagine a grandfather will tell his grandchildren about his experiences in the Border Wars of the Eastern Cape in the early 1800s. Some learners might remain on a level of recounting events and dates, whereas other learners might develop a more reflective and critical perspective on the developments of that time.
- For those learners who do not finish the task within the allotted time, you as a teacher might want to set a task for homework that will guide the learners systematically through the work. (the following section will deal in more detail with homework.) What you would be doing is to extend the learner's engaged time with the work beyond the allotted time of the classroom.
- You might consider grouping 'slow' and 'quick' learners together. By grouping those learners together who normally struggle with say geometry, the maths teacher is then able to spend more time in this particular space where they are grouped and deal with queries and questions that most of those learners all struggle with. In this way, the teacher's intervention is spatially less disruptive for the other learners in the class, in that the teacher doesn't move around from desk to desk, answering the same questions in a number of different locations.
- However, you might also want to group learners in such a way that a group will have a 'quick' learner who is able to peer-tutor the others. So, with the maths example, the learner who finishes the problem quickly may try to explain how to do it to her friend who is struggling. In this way both the learner finishing quickly as well as the learner who is taking longer are accommodated.

Learners with special educational needs

A dramatic change in policy for South African schools is the move towards 'inclusive education' and 'mainstreaming'. The debates for and against this move are extensive and we shan't be picking up on them. But what is of significance here is that you as a teacher are likely to have a class that has in it learners with physical handicaps and learners with learning disabilities. This has implications for your arrangement of teaching space and time. Traditionally, learners with physical handicaps were located in different schools. It is argued that 'setting these learners aside' in separate physical spaces has led to encouraged discrimination against these learners. The argument is that incorporating learners with special needs into the same physical space and time as 'mainstream' learners will encourage equitable treatment of all learners. Whether this is in fact so is something that we cannot address here, but what we will look at is how you as a teacher can arrange the teaching time and space in such a way as to organize systematic learning for all.

Including learners with special educational needs into mainstream schools can be done in a number of different ways. One way would be for the school management to decide to put aside a special class for learners with special needs (whether this defeats one of the key motivations for inclusive education is, of course, an issue). Alternatively, the school management might decide to incorporate the learners

with special needs into a regular class. We'll look specifically at this second option in more detail. On a practical level, if the learner is in a wheelchair, easy access to the space needs to be arranged – for example, classrooms need to be on the ground floor, or there should be no stairs to negotiate, etc. Within the classroom an accessible area will have to be cleared. Physically handicapped learners might take longer to manoeuvre into their space. If space within the classroom is rearranged because of, say, a shift to group discussion or role-play, it might take a little longer for such learners to get into place. Physical spatial considerations also arise in the case where learners have hearing or visual handicaps. It would not be fruitful to put a learner with hearing deficiency at the back of the class, or amongst a group of noisy learners, or at the window where the interference of outside noise might be highest. Similarly, a learner with a visual handicap needs to sit in a place that doesn't increase the handicap – for example, a place that isn't obstructed by other objects like an overhead screen, or a place that isn't in an overly bright or dark spot in the classroom.

These are fairly easy temporal and spatial arrangements to make, but what about the learner who, for example, has Attention Deficit Syndrome, a learner who cannot concentrate for long periods and easily becomes restless and fidgety? There are no simple answers to these questions, but there are perhaps some guidelines that might help teachers find ways of coping with such a situation:

- Perhaps you can monitor such a learner's learning time much more closely than the learning time of other learners through setting a constant variety of different learning activities. Of course, doing this in a class that has a large number of learners is a difficult task.
- Perhaps you could place such a learner in a space that is close to the space predominantly occupied by the teacher, thus making intervention immediate and less obtrusive for the other learners.
- If such a learner tends to be fidgety, it would be an idea to place the learner in a space that is not disruptive of the other learners' activities.

Other kinds of learners

Learners can be distinguished in a variety of ways. We won't discuss them all here, but it is important that you become aware of the kinds of distinctions that are made and which may perhaps operate in your classroom.

Lewis makes a case for boys and girls experiencing time and space differently. She



Can you think of other kinds of learners that might experience time and space differently?

This is from Lewis 'Time and space in schools' in *Children in Time and Space* (Yamamoto, K. (Ed) Teachers College Press, 1979), p. 151.



Pause to think about some of the questions raised here.

claims that boys have less desire for clearly defined space, routines and times, and order; whereas girls are supposed to be more orderly and want routines, orders, timetables, clearly defined spaces and times. But, she cautions us, this may not necessarily be because of some biological difference - it may be because society has consciously or unconsciously assigned these characteristics to boys and girls respectively. Even so, do you think this really is the case? Do you think that Lewis, writing in 1979, is writing at a time before the generally accepted insights promoted by feminist theory and gender studies? Do you think that there might be girls in an all-girls school who do not desire clearly defined space, order and routine? Do you think this traditional distinction between girl and boy learners still has significance in the ways in which we organize systematic learning?

What about learners from different cultures – do you think that they experience time and space differently? Do you think that someone from a city in Francophone Africa, for example Senegal, would experience time differently from say an Afrikaans-speaking person from a farming community in the Free State? If so, how would you deal with this as a teacher? Would it be especially important in a case of a culturally diverse class to get communal agreement about the regulative rules of the classroom? Would the way in which to organize systematic learning be dependent on learners from diverse cultural backgrounds having a very clear understanding of what is allowed where and when in the classroom and the reasons for such rules? Think, for example, of the regulative rule of being punctual. Would it be important for learners to agree to the rule of being punctual for the class? How do you think this would encourage systematic learning to take place?

How teachers shape classroom time and space to maximize learning time

4.7

We've looked at the tension that sometimes arises between allotted time and engaged time. In a classroom the teacher is allotted a certain amount of time for her lesson, say 40 minutes. Within this period, she plans to allot different amounts of time to different parts of the lesson, say ten minutes to introduce the topic, 20 minutes for discussion, five minutes for feedback and five minutes for consolidation. But what we have noted is that the way in which these allocations are made is dependent on the different types of learning activities she wants to promote as well as on the different types of learners she may have in her classroom. Given these different purposes and different learners: how can teachers maximize learning time or engaged time in order to promote systematic learning?

We have touched on this question already in our guidelines for engaging different learners within the same allotted time. In this section we shall focus on the question of *what* is appropriate *when*, and *who* can best make decisions about the arrangement of time and space internal to the practice.

Appropriateness and efficiency of time and space

When is it appropriate to do what? Is there a set way of doing things? Is what is appropriate in one setting or subject or lesson appropriate in another setting or subject or lesson? For example, we may sense that the way factories motivate their workers by offering a bonus of 'days off' would be inappropriate in a classroom setting that wants to encourage learners to be engaged with the work. We may also feel that the way a physical education teacher motivates his class to become engaged with the game by having a prize for the winning side would not be appropriate for the English teacher who is encouraging her learners to become engaged with a poem about love. And then even within the same subject, it would be appropriate to engage learners in one way at one time, and then in another way at another time. For example, a teacher of Sesotho may engage her learners in a vocabulary enriching exercise by getting them to play word games, pairing words that might sound similar but have different meanings and getting her learners to make funny stories by interchanging the similar sounding words. But that same Sesotho teacher with her same class might adopt a very different strategy later when she tries to engage her learners in a lesson about grammatical rules for tenses. Before we look in more detail at how teachers can create conditions that encourage engaged time by doing what is appropriate for that time, that purpose and those learners, read the following extract:

A company president who ran an accountancy business was given a ticket for a performance of Schubert's Unfinished Symphony, one of the great classical pieces of music. Since she was unable to go, she passed the invitation to one of her accountants, a person who advised others on how to manage their time and space efficiently in ways that would save costs. The next morning the president asked the accountant how he enjoyed the concert, and he handed her the following report:

1 For a considerable period, the oboe players had nothing to do. Their number should be reduced and their work spread over the whole orchestra, thus avoiding periods of inactivity.

- 2 *All twelve violins were playing identical notes. This seems unnecessary duplication, and the staff of the section should be drastically cut. If a larger volume of sound is really required, this should be obtained through the use of an amplifier.*
- 3 *Much effort was involved in playing sixteenth notes. This seems an excessive refinement, and it is recommended that all notes be rounded up to the nearest eight notes. If this were done, it would be possible to use paraprofessionals instead of experienced musicians.*
- 4 *No useful purpose is served by repeating with horns the passage that has already been handled by the strings. If all such redundant passages were eliminated, the concert could be reduced from two hours to 20 minutes.*
- 5 *This symphony has two movements. If Schubert didn't achieve his musical goals by the end of the first movement, then he should have stopped there. The second movement is unnecessary and should be cut.*

One can only conclude that had Schubert given attention to these matters, he would have had time to finish his symphony.

This is a humorous example of a review of someone who has tried to apply principles of efficient use of time and space to a musical work. In cutting out duplication of notes and themes, and numbers of musicians, and eliminating fine nuances, he thinks that he has 'improved' the piece of music. What he has done is to distort the music altogether – he has not understood the purpose of the music or known how to interpret it. By applying the principle of efficient use of time and space, he has in fact destroyed the music. The same kind of 'false efficiency' would arise if someone who did not understand choral music and choir singing would say that the one-hundred person choir should be reduced to only four people since there are only four voice parts: soprano, alto, tenor, and bass. Such a person's suggestion to eliminate repeated verses and cut out all repeated notes would be a 'false efficiency'- in fact, it would not be the same piece of music at all. It would be like saying that an artist painting a picture should not use a specific colour more than once, should not paint subtle shades, should cut out all detail and preferably paint on a very small canvas. We would laugh at someone who seriously suggested this approach to painting and say that this person doesn't understand the point of art.

Why is this a 'false efficiency'? Time and space, and no doubt costs could be saved by eliminating all repeated verses of a song, reducing the choir to four people only, but we would say, I think, that something essential has been 'lost'. Why would we say so? Think back to the distinction made in Section 2.2, the distinction about the arrangement of time and space external to the project and the arrangement of time and space internal to the project. You may also recall the argument in Section Two that showed that the practitioners (that is, those who understand the practice best) are the people best able to make decisions about how time and space are arranged internal to the practice. So, musicians are best able to make decisions about how best to arrange the notes, intervals between notes, repeated notes and sections in a piece of music. The substantive purpose of the choir concert is to bring out the full musical richness of a song, and that means subtle nuances between notes, volume of many voices, repetitions, and so on. The substantive purpose of a choir concert is not to make it as short and cheap as possible! To put it in language that you are familiar with by now: the constitutive rule of choir singing is different from the constitutive rule of accountancy. So, the regulative rules that enable the practice must be rules that are appropriate to the constitutive rule that is tied to the formal purpose of that practice.

Now what about education? Is a teacher somewhat like a conductor of a music concert or an artist? Is there something in the very nature of education and teaching that would be distorted if we were to apply the principles of efficiency of time and

space without really understanding what the purpose of education is? Think about what happened in the example of the music concert. Here the regulative rule that enables good accountancy to take place has been inappropriately applied as a regulative rule for a symphony concert. Now think of the regulative rule that teachers may have in their class that says that learners shouldn't talk. Is this an appropriate regulative rule that will encourage systematic learning? Is this a rule that can be applied to all teaching situations? Or can such a regulative rule be judged appropriate or not only if it relates to the purpose of the learning activity that it is supposed to promote? So, the regulative rule that says 'no talking' might be perfectly appropriate if the purpose of the learning activity is to reflect quietly about something. However, the same regulative rule about 'no talking' would be inappropriate if the purpose of the lesson is to stimulate debate, raise different arguments, or consider different points of view. Then the regulative rule of not talking would *hinder* the purpose of the lesson.

Defining limits in the classroom

Several of the arguments and examples in Section Three showed that orderliness is crucial if schools are to fulfil their institutional function of supporting teaching and systematic learning. Section Three looks at the need for clear institutional arrangements of timetables and classroom allocations and shows that if these arrangements are not clearly in place, chaos will most probably result. In such a situation of chaos, organizing systematic learning becomes almost impossible. Think back to Elizabeth de Villiers' vivid description of the frustrations of trying to teach in such a chaotic situation. Just as a school needs regulative rules to enable teaching to take place, so a classroom needs to have regulative rules that will encourage maximum learner engaged time.

ACTIVITY 27

Refer again to the article by Lewis in the reader for this module and reread the section with the heading 'Defining limits'. Make some brief notes for yourself.

Drawing on Jackson's research, Lewis uses the phrase 'classroom constitution' to describe what we in this module would call the 'regulative rules of the classroom'. Jackson's research reveals that, in North American classrooms, the rules of the classroom are not usually discussed or debated by the learners with the teacher. This may be because of all sorts of reasons. It may be because teachers don't think that these rules are open for discussion; or that teachers find it more efficient to define the rules themselves; or that there is no push for change in the rules, so the rules remain the same from year to year. Also, in some instances it may be appropriate for the rules to be set by an authority. In the last case, for example, in a science laboratory where learners deal with dangerous chemicals, there may be very strict and non-negotiable rules about the time when these chemicals can be used and the space in which they need to be stored.

However, as Lewis notes, there are many instances where it might be very fruitful to involve learners in a discussion about the rules of the classroom.

Such rules shape the use of time and space and learners' behaviour by setting limits of what is acceptable and not acceptable – for example, when may learners talk, and when not; when may they move about and to where and when not; when it is time to be quiet. It may be an idea at the beginning of each teaching year develop a set of commonly agreed and understood rules that govern the use of time and space in the classroom. This way you may go some way towards establishing order and so create conditions that encourage engaged learner time.



You will need about 20 minutes to complete this activity.

Pacing and timing – organizing classroom time and space in order to maximize learning time

Have you ever heard two different people tell the same joke or read the same story? The one may manage to capture the listeners' attention fully, whereas the other cannot sustain their interest. Why do you think this may be so? Of course, there are all sorts of things that influence how a person tells a joke or reads a story – some may have to do with body language, the tone of the person's voice, the person's facial expressions. But there are also some that have to do with timing – a good joke teller or story reader knows when to pause for dramatic effect, when to accelerate or slow down at the appropriate place in order to convey a certain mood. It may be an idea for you to experiment yourself with telling the same joke to different people, pausing at different places, perhaps not pausing at all, keeping the same tempo to your voice, or perhaps slowing down or speeding up in different places. In this way you can start to find out for yourself what works effectively in capturing and sustaining the interest of your listeners. Just as the successful joke teller or story reader relies on timing (pauses, slowing down, speeding up), so too the successful teacher.

A lesson has a number of different teaching and learning moments. Imagine a possible geography lesson that Emma (in Case study 1 on pages 47 to 49) could be planning. Perhaps she plans to introduce her lesson by asking learners about different areas they may have travelled through or visited in which most of the people were poor. She may plan to follow her introduction by getting learners to discuss with partners what agricultural resources they had noticed in these regions. As a further development of the lesson Emma may plan for the learners to interpret a map depicting levels of economic income and compare it with a map depicting the natural distribution of rich and poor soil types, and then to ask learners questions about possible overlaps. Finally, she might plan to bring the lesson to a close by asking learners to focus on a local area familiar to them that illustrates the link between poor soil types and low levels of economic income. But in order to develop this plan systematically, Emma needs to allocate a certain length of time to each phase – some may only need five minutes, others a more extended length of time in the lesson. So, how does Emma know how much time to allocate to each one? And how will she signal the transition from one phase to the next?

Again, think about the importance of purpose: the first phase may have the purpose of stimulating learners' interest, to connect with their own experiences. This won't need as much time as the second phase of the lesson where her purpose is for her learners to discuss and discover for themselves certain links between economic levels of income and availability of natural resources. The purpose of the third phase of her lesson is to support what learners may have discovered by drawing on maps and theories of social geography to substantiate the link between poverty and lack of natural resources and poor soil. This too will need more time in the lesson. The last phase, in which the purpose is to illustrate an actual and familiar example of this correlation, may need less time than the previous one. Therefore, by focusing on the purpose of each phase in her lesson, Emma can allocate the appropriate duration to each.

Whether Emma should signal the transition from one phase of her lesson to the next is something that she needs to decide about. She will most likely decide once she is able to gauge whether learners' attention is on the set task or not. She may not want to 'signal' the next phase if the learners are engaged with the specific purpose of that section of the lesson, but she may want to signal it if she senses that her learners are not focused on the phase. For example, after the discussion of the second phase, Emma might find that when she starts to compare the two maps, some pairs are still engaged in discussion. If so, she may say something like, 'Let's suspend the discussion for the next ten minutes, while we examine the maps to see whether there are overlaps.' In this way she signals a shift in the purpose of that part of the lesson. But, as you know from your own experience, things don't always go according to plan. Emma may have planned her lesson in this way, but found that when she got

to the classroom that the overhead projector for displaying the maps was not there. To make matters worse, her learners may have been late for class and many of them may not have understood her previous lesson about economic distribution and levels of income, all of which would have made it difficult for Emma to follow her lesson plan and its time allocations. Various options would be open to Emma to deal with this: one is to rush through her lesson, to cut the time for each section and so try to fit in the whole plan within the shortened period. From our own experiences as learners we know that this is not an appropriate option. Another option would be for Emma to be keenly aware of the level of attention of the learners - if they were becoming fidgety or distracted, these would be signals for Emma to change direction, change pace, or recap.

What have we learnt so far?

In Section Four we have argued that, within the context of the timetable and allocated teaching space, teachers are responsible for organizing *internal time and space*. This is one of the ways – a very important way - in which teachers exercise their *agency* as practitioners.

How a teacher does this depends on a number of different considerations. She needs to arrange clock-time within the lesson into different phases as well as arrange the physical space in ways that are suited to the intentions of the lesson. Different teaching *purposes* of different learning activities need different arrangements of time and space. But the arrangements of space and time also need to take account of the *learners*. Different learners need different arrangements of space and time.

Arranging learning space in a classroom is not only arranging the *physical* space but also creating *intellectual and affective (or emotional)* space for the learner. Similarly, arranging learning time in the classroom includes considerations about the available *allocated time* for different phases within the lesson as well as *engaged* time by the learner.