Teacher Choices in Action

RESOURCE BOOK

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This Resource Book forms part of The Teacher Choices in Action module. The module forms a part of the Teaching and Learning Development Capacity Improvement Programme (TLDCIP), which is implemented through a partnership between the Department of Higher Education and Training (DHET) and the European Union.

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Foreword

Good teachers are the backbone of any schooling system. They carry a huge weight of responsibility as they strive to contribute meaningfully to the holistic development of the next generation in their care.

The quality of their initial development is therefore of utmost importance, and has the potential to set them up to transition with more or less difficulty into their teaching careers.

The Teaching Practice component of initial teacher education programmes plays a vital role in this regard. It forms the context for engaging with theoretical learning and practical learning in spaces that allow the testing of ideas, refinement of approaches, and reflection on successes and failures.

It is thus expected that all initial teacher education students have meaningful opportunities to learn in practice and to learn from practice as they work to complete their initial teacher education programmes, with the overall goal of becoming thinking teachers, critically reflective teachers, teachers that are able to make appropriate pedagogical choices in moments of action in the classroom.

The COVID-19 Pandemic and the subsequent national lockdown has impacted severely on all levels of the education system. For teacher education the effects have been multiple, as universities, lecturers and students grapple with using alternative remote teaching and learning strategies as effectively as possible. It has also meant that physical placement of teacher education students in classrooms has been impossible. However, the disaster has also forced us to think and work in new ways.

The *Teacher Choices in Action* module emerges from this context and represents a highly creative and innovative approach to enabling learning from practice during this time when learning in practice is severely restricted. The module represents the collective engagement and contributions from academics across the university sector who have collaborated to develop it, and to support its delivery. It is anticipate that the module will provide an intensive, meaningful learning experience for the students that take it, and that it will easily fill part of the gap that the Pandemic has created regarding the learning that would have taken place through the physical presence of teacher education students in schools.

The *Department of Higher Education and Training* has been fully supportive of the development and delivery of the module and anticipates that students that complete it successfully will become the strong teachers our country needs.

Dr Whitfield Green
Chief Director: Department of Higher Education and Training
13 August 2020

Message from SACE

As a custodian of the teaching profession, the South African Council for Educators (SACE) welcomes the cutting-edge *Teacher Choices in Action* Module, which is a result of a collaborative process. This module recognises an immense role played by the teaching practice in a journey of becoming a professional teacher, despite the challenges presented by the unprecedented COVID 19. Thus, the content of this module, as an alternative approach to the traditional teaching practice, will continue to satisfy the requirements of the practice-based learning for the student teachers.

More importantly, the Module's six units are generally based, amongst others, on SACE's Professional Teaching Standards. They acknowledge that teachers build communities, and they enable learning too. More specifically, this Module also draws from Professional Teaching Standard number 7 that recognises that teachers "*make thoughtful choices about their teaching that lead to meaningful learning for all learners*". Consistent with this standard, SACE wishes all the participants in this module, a productive and valuable learning journey in reflecting on their processes of becoming professional teachers who will be able to make choices: *that enable learning in different contexts; for working with knowledge; that promote cumulative learning; for making learning inclusive; and for managing environments.*

We are looking forward to welcoming esteemed prospective teachers of your calibre into the teaching profession.

Ms Ella Mokgalane
Chief Education Officer
South African Council for Educators (SACE)
13 August 2020

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A project of this complexity, scope and time urgency would not have been possible without the steadfast support of several institutions, organisations and individuals. Without them, the *Teacher Choices in Action* project would not have seen light of day, and certainly not in its current quality, form or scale.

- The *Teacher Choices in Action* module forms part of the *Teaching and Learning Development Capacity Improvement Programme* (TLDCIP), which is implemented through a partnership between the Department of Higher Education and Training (DHET) and the European Union.

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  - Praesa
  - Strengthening Foundation Phase Teacher Education: European Union Policy Support Programme
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  - Prof Karl Maton, Director: LCT Centre for Knowledge-Building, University of Sydney, Australia
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  - Prof Maureen Robinson, Stellenbosch University
  - Dr Elizabeth Walton, University of Nottingham, United Kingdom

- The team at Conda Technology cc who have worked tirelessly to develop the learning platform and converted the course materials to online distance learning.

Meet the Team

Lee Rusznyak has led the conceptualisation of the module, the design of the course materials and the research attached to the *Teacher Choices in Action* Project. She is an Associate Professor and Deputy Head at the School of Education, University of the Witwatersrand. She has taught at all levels of the educational system, with several years of classroom experience in an under-resourced primary school. Her scholarship focuses on the development of professional practice through pre-service teacher education. She has published widely on pre-service teacher education curriculum design, assessment and work-integrated learning. She has led research on national projects, including the Initial Teacher Education Research Project (ITERP) and the Knowledge & Practice Standards for Inclusive Teaching in SA (PTEFITP). She contributed to developing the SACE Professional Teaching Standards. She is on the International Advisory Board of the LCT Centre for Knowledge-Building (University of Sydney, Australia), and a forum member of the UNESCO Chair in Teacher Education for Diversity and Development.

Tanya Bekker is a lecturer in Inclusive Education at the University of the Witwatersrand. She coordinates the PGCE programme and leads modules in inclusive pedagogies at both undergraduate and postgraduate level. Her particular research focus is on inclusive pedagogical choices made by teachers to enable epistemological access for diverse learners.

Carol Bertram is an associate professor in the School of Education, on the Pietermaritzburg campus of the University of KwaZulu-Natal. Her research focuses on how teachers respond to curriculum reforms, as well as in the area of teacher knowledge and professional learning. She teaches Honours, Masters and PhD education students. She is interested in how to connect abstract principles and concepts to practices, and to other principles, in order to facilitate learning.

Jacqui Dornbrack is an independent literacy consultant. She has worked in education for the past 30 years as a teacher, teacher educator and teacher mentor. Her primary work is supporting teachers to become highly skilled at teaching reading and writing from early grades to matric.

Jacques du Plessis is a lecturer in mathematics education at the University of the Witwatersrand. He broadcasts mathematics support to FET learners on television and on the big screen. His scholarship is in algebraic reasoning and structural thinking and he is passionate about teaching mathematics and developing innovative ways to do so. He has authored various mathematics classroom manuals and is developing digital support videos that supplement classroom teaching.

Zaheera Jina Asvat holds a PhD in mathematics education. She is the editor of three books (Tween Tales, Saffron and Riding the Samoosa Express) and the author of Surprise! and the StimuMath programme. Zaheera has a passion for literacy and diversity programmes in the Lenasia community. She also manages the Jozi's Books and Blogs Festival and has founded Yiz House Publishing.

Dale Langsford has taught in intermediate phase classrooms, and worked in curriculum development spaces in the private higher education sector. Her doctoral study investigated the pedagogical reasoning of pre-service teachers. She has experience as a teacher educator who has a passion for empowering pre-service teachers to teach in transformative ways in their classrooms.

Moeniera Moosa has 15 years teaching experience in primary school education and was a school principal in Johannesburg. She lectures psychology and inclusive education to undergraduate and postgraduate education students. Her doctoral research, completed at the University of Johannesburg, studied bullying in schools. She now coordinates the BEd programme at the Wits School of Education and has been coordinating the Teaching Practice office for three years.

Ntombikayise Eva Mota is a founding member and Director of Ntokosi Skills Development. Ntombi is a teacher by profession with an MA degree from Wits and a BCom from UJ. She is currently a part time teacher of Zulu FAL for Grades 11 and 12. She is an author of IsiZulu FAL Workbooks for Grades 8 to 12 and

provides online support for IsiZulu FAL teachers. She is also an IEB cluster group convenor. Ntombi is passionate about empowering and upskilling people, in particular youth and women.

Carisma Nel is a research professor within the Faculty of Education at the North-West University. She in an Educational Linguist specialising in reading literacy from the foundation phase through to the higher education sector. Her research interests include reading literacy assessment and interventions, phonological awareness, phonics, fluency, vocabulary, reading comprehension, and pre- and in-service teacher training in reading literacy, specifically the core practices related to work integrated learning (teaching practice). She led the development of the practice standards of the PrimTED project.

Nadine Petersen is a Professor and Vice Dean: Teaching and Learning, in the Faculty of Education at the University of Johannesburg, South Africa. As a National Research Foundation C2 rated researcher, she leads research in teacher education for the primary school, and service learning in teacher education.

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With valuable input received from:

Karl Maton (Sydney), Francis Faller (Wits), Elizabeth Walton (Nottingham) Heloise Sathorar (NMMU), Hilda Israel and Andries Du Plessis (University of Mpumalanga), Mari van Wyk (UKZN), Georina Westraadt (TOGI), Lise Westaway (Rhodes), Maureen Robinson and Zelda Barends (SU)

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Introduction

Getting started …

Welcome to the *Teacher Choices in Action* module! Teaching is not as easy as it may seem. Telling a class a few facts is not the same as building learners' knowledge. Keeping learners busy is not the same as organising opportunities for them to develop their skills. To be a professional teacher, you need to know what to do, and why you are doing it in one way and not another. Some teachers have learnt over years of experience 'what works' but may find it difficult to explain why it works. Others may be able to give reasons for their actions, but we know that classrooms are busy, complex places. There is seldom time for teachers to stop and explain the reasons for their classroom actions to others. To really learn from teaching practice, you need to see both the visible and less visible parts of teaching. You also need to understand how things fit together to make learning happen. This module is called *Teacher Choices in Action* because it focuses on the thinking work that teachers do with learners and knowledge.

There are decisions that all teachers make in every lesson they teach, regardless of phase or subject specialisation (Hugo, 2014). Teachers make decisions about how they work with resources, space and time, with knowledge, with learners, and the opportunities and limitations found in the school context. During the module, you will learn why some choices are better than others depending on what is taught, who is being taught, and where the teaching is happening.

When you know about the basic choices that every teacher makes, they become more visible to you, and you can think about these choices much more intentionally in planning your own lessons.

Principles informing this module

This module is aligned with principles underpinning the SACE Professional Teaching Standards. There are four main principles underpinning the course:

1. *Teachers have a specialised knowledge base*

The choices that teachers make in their lessons are not just a matter of personal preference, or a collection of 'tips for teachers'. Teachers need strong content knowledge of the subjects they teach, well developed literacies, and they need to understand how to organise worthwhile learning opportunities. Teaching is considered a professional practice because teachers must act ethically and use knowledge to design lessons that enable all children to participate and learn.

2. *Making teaching choices requires pedagogical reasoning*

There is no 'correct' way of teaching that always works for all content, or for all learners across all contexts. Teachers who ask questions that matter can consider their options with more purpose. Teachers should be able to justify why they have made some choices but not others. Lee Shulman (1986) called this '*pedagogical reasoning*'. This module has been designed to teach you about pedagogical reasoning in action. The tasks give you opportunities to think about classroom practice in ways that matter and that develop your pedagogical reasoning.

3. *For teachers to talk about their reasons for choices, they need a shared set of concepts*

It is important that teachers, student teachers and teacher educators develop a language and a set of concepts that enable all of us to describe our teaching practices. When you do teaching practice in

a school, you have the opportunity to be mentored by a teacher who has learnt to use their professional knowledge and their reflections on experience, and to create learning opportunities for the children in the class. However, mentor teachers often do not have the time to explain the reasons for their choices to student teachers. In this module, we aim to make these choices explicit and to share a set of concepts that enable teachers to talk about their teaching practice with one another.

4. *Teaching must be contextually responsive*

Although there are choices every teacher needs to make in every lesson, what is appropriate will be different depending on the grade level of the learners as well as the subject that is taught. In this module, we have drawn examples from a range of different subject areas and grade levels because the students participating in this module are teaching at all the different phases and in different subjects. You will need to transfer what you learn from these examples to your own phase and subject specialisation.

Structure of the module

The *Teacher Choices in Action* module has a set of tutorial units that you are expected to work through. The module also requires you to undertake Lesson Observations and write up Lesson Observation Reports. Some students will be required to develop a set of three lessons in their subject/phase specialisation and write a Rationale for Lesson Design for the teacher choices they have made.

There are 6 units in the module, each one covering a different set of teacher choices. These introduce you to the main ideas, and give you concepts and ways of thinking about on how to analyse classroom practice. They are:

- *Unit 1: Choosing to be a teacher*
- *Unit 2: Teacher choices that enable learning in different contexts*
- *Unit 3: Teacher choices for working with knowledge*
- *Unit 4: Teacher choices that promote cumulative learning*
- *Unit 5: Teacher choices for making lessons inclusive*
- *Unit 6: Teacher choices for managing learning environments*

Before starting Unit 1, you will find a summary of the main concepts. Use this to track your progress through the module and check your understanding of the main ideas.

The *Teacher Choices in Action* module is not designed as a race to see who completes it the fastest. There are many important ideas, and you may need to revisit the units several times to get their full benefit. Once you have worked through a unit, you should go back and listen to the whole unit again - this time, from start to finish without stopping. You can revisit the completed units as often as you wish. The *Teacher Choices in Action* summary page provides you with a list of concepts to help you revise.

To earn a credit in the module, you will need to participate and complete all the required tasks. Most tutorial tasks will be marked automatically and you will get immediate feedback if your answers are partially correct and you need to try again. Some tasks will not let you proceed until you have correctly answered all questions.

You are also expected to engage with the resources that have been added at the end of each unit. Some units have downloadable resources. Others take you to websites that have outstanding resources that will extend your knowledge of the unit.

Tasks and Assessment

There are different kinds of tasks for you to do during the *Teacher Choices in Action* module:

- There are tasks that form part of the tutorials. These are done online. They reinforce course content and apply learning to classroom practice. You are not given a mark for these. You get instant feedback about whether you have done the task correctly or not. You may need to repeat the task until it is correct. Think carefully about the concepts you have been taught and how they apply in the resources you need to analyse.
- You will reflect on your own experience of schooling and/or teaching in relation to what the module offers, both privately and connecting with student teachers from around the country. Some tasks invite you to contribute to a conversation with other participating students on the discussion Forum.
- You will observe and analyse recorded lessons. Some of them are built into the tutorials, and some you will select yourself from a Lesson Library. You will need to write up and submit at least 5 full Lesson Observation Reports. It may be possible that you find lessons that match your subject/phase specialisation. If not, observe and analyse lessons from other phases and subjects. You will learn a lot about teaching through observing teaching from your own specialisation – and from seeing how teaching is similar or different across subjects/phases. You should also observe lessons in a variety of contexts and delivery modes.
- Your institution may require you to prepare a set of lessons, resource materials and assessment tasks. These tasks will be incorporated into the module. You will also be expected to write a full rationale for the teacher choices you have made in the design of the set of lessons. You should continue to use the institutional lesson planning guideline given to you by your lecturers. Requirements for the Rationale for Lesson Design will be given to you during the Teacher Choices in Action module.
- There will be an 'open book' test as a summative assessment on the content and the classroom analysis tasks you have worked on during the various units. If you concentrate well during the tutorials and work thoughtfully with the tasks, you should do very well in the summative assessment. The test will provide you with a mark that gives you a measure of how well you have done. For final year students, this mark may be used towards your final Teaching Practice mark, together with your Lesson Observation Reports, the Rationale for Lesson Design, and the set of lessons you develop.

Your responses to tasks will be recorded online. The Teaching Practice co-ordinator in your institution, and some of the lecturers, have access to the work you do. They will check that you are doing the tasks regularly and are progressing. Arrangements regarding assessment of your work will be communicated to you by the Teaching Practice co-ordinator at your institution.

Participation and satisfactory performance are essential. Completing all tasks of the *Teacher Choices in Action* module contributes towards the work-based learning required for the Bachelor of Education and Postgraduate Certificate in Education qualifications. The *Teacher Choices in Action* module carries a weight of 10 SAQA credits towards the work-based requirements of your qualification. This means that you are expected to devote 80-100 hours of learning time to doing this module. If for some reason, you are unable to complete the tutorials and the tasks in the time allowed, you will need to apply for a deferment through your normal institutional channels.

This module and links with your university coursework

The module enriches your teacher education programme. An important part of learning to be a teacher is learning in and from practice (MRTEQ, 2015). You will study teachers' practice through analysing lesson tasks and engaging with case studies and lesson observations.

Teacher education programmes are designed around modules that develop different types of knowledge for teaching. Sometimes the connections between the different courses are easy to see. But sometimes, seeing possible connections are very difficult. This course doesn't repeat what you learn in your teacher education programme. But it does make connections between different kinds of knowledge covered in your teacher education curriculum. You will need to look for the connections with studies in education, content knowledge, teaching pedagogies, situational and contextual learning and inclusive teaching. For senior students, this module should give you a chance to draw on many different concepts from the coursework you have already covered. For junior students, this course gives you a framework for thinking about practice. As you learn more during your teacher education programme, so you will see how the coursework gives you deeper theoretical foundations for what you will be learning from this module. For all participating students, we hope that the course helps you to develop a deeper understanding of teaching as a coherent, but complex and sometimes unpredictable, professional practice.

Using the online platform

The '*Teacher Choices in Action*' module is available online at www.teachingprac.co.za.

USERNAME: Your official student email address

The Work-integrated learning coordinator will provide the *password* to you on your first day of the course. There is an online user guide on the website's landing page. Read through the guideline that explains how the learning platform works.

Each UNIT tutorial is divided into PARTS. The end of a PART of the tutorial comes when there is a lesson to watch, or a written task to do. To navigate out of the tutorial, you need to press **OK** then **SUBMIT** then **EXIT ACTIVITY** (on the top left of the screen). It will take you to the next lesson or task. When you have completed viewing or have submitted the task, you will return to the outline of units. You need to go back to the UNIT and move yourself onto the next PART.

If there is a *technical issue* with the online system, email support@teachingprac.co.za. If the query is about the course content, assessment, or your initial teacher education programme, please contact the relevant person from your institution.

Online course materials will be available 24/7 for the duration of the module. You can work directly online, or you can prepare written tasks offline, and copy and paste your responses into the system once you are happy with your responses. You will work through each unit in your own time and at your own pace. You should manage your time and be sure to complete all work between the dates determined by your institution.

Researching the module

The *Teacher Choices in Action* module presents a unique opportunity to understand how South African student teachers benefit through the study of classroom teaching. An important national research project is attached to the module. The research team has received ethical clearance from the Human Research Ethics Committee (Non-medical) at the University of the Witwatersrand (*Clearance Certificate H19/09/47*). The findings of the research will be used by participating institutions to strengthen their teacher education programmes. The Department of Higher Education and Training expects that the findings will be useful to inform policy developments for work-based learning. The choice as to whether or not to participate in this research project is entirely up to you. A decision to participate or not will NOT advantage or disadvantage you in any way.

If you choose to be a part of this research:

- You will not have to do anything beyond what you are required to do for the module.
- Your identity and the name of your institution will be kept confidential at all times. You will not be identified in any reports or publications that come out of the research.
- The research team will not disclose to your lecturers and tutors whether or not you have agreed to participate in the research project.
- The research will only begin once you have completed the module and you have received your final outcome. It is impossible for your participation in the research project to affect your assessment in any way.

To accept the invitation to participate:
At the end of Unit 6, you will receive an invitation to participate in this exciting national research project. You will be asked to read the letter that has further information about the research. You will be asked to indicate whether or not you consent to participate and allow your responses to the tasks to be used to study how student teachers make sense of classroom practice.

Collaboration on the project

The COVID-19 pandemic necessitated alternative ways of thinking about how to do Teaching Practice safely but would still result in meaningful practice-based learning. For several years, teacher educators and the Department of Higher Education and Training have considered setting up a national Teaching Practice initiative. The pandemic meant it was time to put the thinking into action. No one university had the resources or capacity to put a module like this together on its own, and so a team convened to lead the project. This module has been produced as a result of ground-breaking nation and international collaboration. This is the first time in teacher education history that many different institutions have worked together to produce a single course available to all South African student teachers. The Project team has also worked closely with the LCT Centre for Knowledge-Building based at the University of Sydney, Australia.

The *Teacher Choices in Action* module forms part of the *Teaching and Learning Development Capacity Improvement Programme* (TLDCIP), which has been implemented through a partnership between the Department of Higher Education and Training (DHET) and the European Union. The module launched in August 2020 with 28 000 student teachers from 24 higher education institutions registering their participation. The pilot phase of the module shall continue during the COVID-19 pandemic and beyond.

We hope that you will enjoy doing the course as much as we have enjoyed designing it for you.

Teacher Choices in Action: A summary

Choosing to be a teacher

- Apprenticeship of Observation

Teacher choices that enable learning in different contexts

- Challenges and opportunities in school contexts
- Face-to-face, blended and distance modes of delivery
- Using digital technologies

Teacher choices when working with knowledge

- Selection and hierarchy of knowledge:
    - *Main idea*
    - *Important things to know*
    - *Interesting facts worth mentioning*
    - *Autonomy tours to integrate knowledge from outside lesson topics*
- Sequencing of lesson steps as semantic waves that move between:
    - *Complex concepts*
    - *Experience /examples*

Teacher choices that promote cumulative learning

- Focus of learning tasks:
    - Details of the object of study
    - Connections:
        - *Whole-part relationships*
        - *Similarities and differences*
        - *Processes and sequences*
    - Transfer to different situations
- Form and focus of classroom conversations
- Feedback:
    - *Personal: notice and encourage learners*
    - *Process: shapes knower gazes*
    - *Product: to get it right*

Teacher choices for making lessons inclusive

- Selection of resources:
    - *Promote conceptual understanding*
    - *Reflect diversity of learners*
- In multilingual classrooms:
    - *Communicating in LOLT and other languages*
- Participation and learning for all:
    - *Scaffolding for support*
    - *Differentiation*

Teacher choices for managing learning environments

- Managing time
- Managing space

UNIT 1: Choosing to **become a teacher**

Glossary of Important Terms

analogy	An analogy is a literary device that is used to compare two things that are not alike but have something/s in common.
apprenticeship of observation	The process of watching our own teachers and using them as role models for how we think teachers should be and what they should do.
practical theory of teaching	Beliefs about teaching that come from personal life and schooling experiences. They influence our practices and actions in a classroom.
Pedagogical Content Knowledge (PCK)	Professional teacher knowledge that enables teachers to make choices that help diverse learners understand complex concepts. Identified by Lee Shulman (1986)

Tasks in this unit are:

Name of the task	**Expected time on task:**
Task 1.1. Completing a Life Grid & life journey	1 hour
Task 1.2. An analogy for being a teacher	1 hour
Task 1.3. Being a teacher is like being a nurse	1 hour
Task 1.4. Analysing my analogy for being a teacher	1 hour
Reflection on the unit	30 minutes

Introduction

This unit invites you to examine how you understand teaching. At some point, you decided to become a teacher and enrol for a BEd degree or a PGCE. Maybe you always loved school and were inspired to teach by those who taught you. Maybe you didn't enjoy school very much but decided to be a teacher to make a difference. Maybe you are still not sure if teaching is right for you. Becoming a teacher is neither a competition nor a race. It's about you and your professional journey. To understand your own development as a prospective teacher, it is important to think about changes in how you felt about school, teachers and becoming a teacher.

Task 1.1.: Completing a Life Grid

Complete the following Life Grid, remembering how you felt about schooling, your teachers and becoming a teacher at three key points in your life. If possible, provide reasons for each of your responses.

(Your responses will be used as data for learning and assessment tasks in other units.
Make sure you write full answers now so that you can complete those tasks later on.)

	Feelings about my school/s	Feelings about my teachers	Feelings on becoming a teacher
 Primary school	6-12 years	6-12 years	6-12 years
 Secondary school	13- 18 years	13 – 18 years	13- 18 years
 Teacher Education	NOW	NOW	NOW

Task 1.1 continued: My personal journey to teaching

The second part of Task 1.1 invites you to reflect on your journey into teacher education. What led you to enrol for teaching? Who or what influenced your decision? What are your hopes and fears about becoming a teacher?

The discussion forum connects you with other student teachers around the country. Read through the journeys that others have posted. If you feel comfortable, share yours too. If not, write it up in a reflection journal.

The 'Apprenticeship of Observation'

School classrooms are familiar places - most of us have spent 12 years or more as learners in a classroom environment. During our schooling, we watched teachers do their work. This is what Lortie (1975) calls an "apprenticeship of observation".

Most of us remember two types of teachers: those whose classes we thought were amazing and others whose classes we did not enjoy. We may not have liked teachers who were actually very good at explaining difficult concepts, or correcting misunderstandings, and who asked us to think deeply about the content. On the other hand, we may have loved being in the classes of other teachers even though some of their practices were not very effective in helping us learn.

We form important ideas about teaching during our apprenticeships of observation. However, many of these ideas are incomplete. This is because of the kind of specialist thinking that goes into teaching preparation is not always visible to learners. It's not always easy to see how this knowledge and thinking is enacted in classroom practice. Some of the best teachers make teaching seem effortless.

Our images of teaching

We need to spend time thinking about and analysing what we have already learnt about teaching through experience and observation. Otherwise there is a danger that we will teach in the way we were taught. An emotional connection to teachers that we liked or where we achieved good results could result in us wanting to copy their approaches to teaching. When this happens, we teach without thinking about our choices carefully.

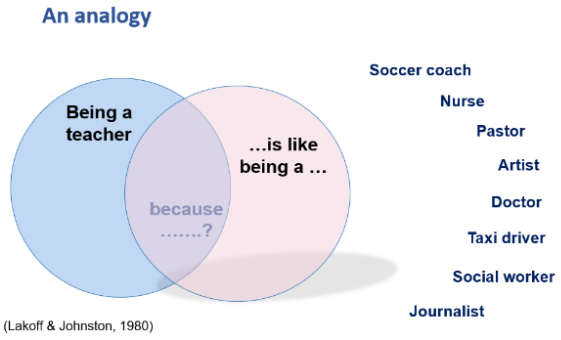
Our beliefs about teaching are important. Some beliefs give us a sense of purpose for the kind of teacher we seek to become. Other beliefs form the starting place for developing our teaching practices. Some of them influence our ideas about teaching. Because of our apprenticeships of observation, we may have beliefs about teaching that are not realistic. Some parts of teaching might not be as important as we think they are. Some parts that we think are unimportant might be the very thing we need to be more effective as teachers. It is important that we examine our taken-for-granted ideas about teaching.

Analogies can reveal the ideas about teaching that we have learnt about through experience and observation. An analogy makes a comparison between two objects that have some things in common. The reasons for the comparison that you make need to be carefully explained.

The following task asks you to compare teaching to another occupation or role, and to give a detailed explanation for your analogy. This task will also introduce you to some of the concepts that you will work with in other units in this module.

Task 1.2 An analogy for being a teacher

Choose any occupation or profession that you feel most resembles a teacher's work and explain what is similar between them and why. Can you think of how the work of a teacher is similar to being a brain surgeon? A taxi driver? A social worker? A president or even the pilot of an aeroplane? You can choose from this list or use another occupation that you think is a useful comparison to the work that teachers do.

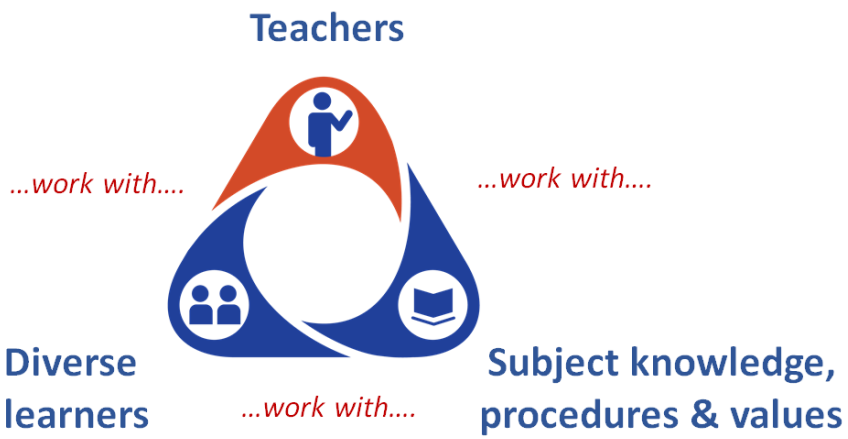


Describe the work of the occupation you have chosen, and how this is similar to what teachers do. Be sure to explain the reasons for your comparison.
The recommended length of your response is 250-350 words. You will need your analogy for a later task, so make sure you put thought and care into your response.

Start like this:
Being a teacher is like being a ……. (insert the occupation or role you have chosen here) because …… (describe the nature of that job, and why you think the work of a teacher is similar to this other job).

Teachers work with diverse learners and knowledge

Beliefs about teaching can be identified by looking at three important elements of teaching, and how these elements interact: the teacher, the learners and the knowledge to be learned. These three elements and the relationships between them is represented by this triangle:



Teachers are shown at the top. Learners are represented at the bottom left of the triangle. The subject knowledge that we teach (with its concepts, skills, literacies, attitudes and ways of thinking) is represented by the icon of a book at the bottom right of the triangle.

During lessons, teachers work with diverse learners. They also work to select, assemble and teach subject knowledge. When they do this successfully, their lessons create opportunities for all learners to learn important ideas and develop new skills.

We will use this triangle of the relationships between teachers, learners and knowledge as a way of analysing our chosen analogies. The part/s of the triangle our analogies emphasise reveal what we value most about teachers' work.

This is the first step towards unpacking what you see as the core work of teachers.

Use the following questions to analyse the analogies that follow:

- What *special qualities* does the analogy suggest that teachers should have?
- How does the analogy suggest that teachers *work with learner/s*?
- What does the analogy reveal about the way teachers *work with the knowledge*?
- What does the analogy reveal about the *thinking* that teachers need to do in their work?
- Which part/s of the triangle (above) does the analogy emphasise? Which part/s does it mention briefly? Which part/s does it ignore?

Analogies of being a teacher: Soccer coach

We start with an analogy comparing teachers' work to that of a soccer coach. We will analyse this analogy altogether.

> *Being a teacher is like being a soccer coach because a coach needs to have a passion for soccer. This is like teachers, who need to be passionate about the subject they teach. Coaches also need to make sure all players understand the rules of soccer and strategies for playing well and playing fairly. In similar ways, teachers need to ensure that learners understand the subject knowledge and check their understanding. The role of the coach is to guide the soccer players to become better in the game. Coaches need to know each player's strengths and weaknesses and they then decide who is best for particular positions. A coach works with the whole team to help them develop the necessary skills to play the game effectively. A coach organises practice sessions to make sure players are fit and to develop their soccer skills. In a similar way, a teacher needs to plan lessons to give learners new knowledge and practice their skills.*

1. What special **qualities** should teachers have? Passion for a subject
2. How does the analogy suggest that teachers **work with the learner/s**? Work with a group; identify their strengths; keep them in shape
3. What does the analogy suggest about the way that teachers **work with the knowledge**? Ensures they know the rules; introduces new knowledge and skills, monitors learning
4. What does the analogy reveal about the **thinking** that teachers need to do in their work? Makes decisions about positions; plans lesson

The person who compared teachers' work to that of a soccer coach reveals some important beliefs about teaching.

- The analogy values passion as a quality that both soccer coaches and teachers should have. Passion comes from in-depth knowledge developed through years of study and experience in the sport or the subject.
- The analogy focuses on working with a group of players, as a teacher would work with the whole class. Working individually with one or two learners is briefly mentioned.
- The analogy also acknowledges that specialist knowledge and experience is important for teachers and soccer coaches. Parents or community members may be able to coach a team of young soccer players, perhaps because they played the sport or even simply because they love soccer. To coach at a more professional level requires in-depth knowledge.
- The analogy regards the practice sessions as lessons. Both teachers and soccer coaches need to think carefully about what they will do in each session and how to organise activities. They both assess what is happening during the session, and think about what they can learn from looking back over what has happened after the lesson.

In this next example, we will read the analogy together and then you will analyse it by selecting responses in a quiz.

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Being a teacher is like being a nurse because nurses need to know_about the human body, common illnesses as well as how to treat these. In a similar way, teachers need to understand about children and how they grow and develop. They are part of a team of health professionals (other nurses, the doctors, physiotherapists, and radiographers) that look after patients. Similarly, a teacher needs to work with parents and social workers to make sure that the learners are healthy and happy at school. Nurses are caring towards patients. They must be responsible and give patients their medication at set times, helping them eat and bathe if needed. They need to explain how patients must care for themselves once they are discharged. Teachers care for learners by noticing when they do not understand, or are upset, and by encouraging them to try their best. Nurses may specialise in caring for patients with different needs, such as cancer patients (oncology nurses), those having surgery (surgical nurses), and new mothers who are having babies (midwifery nurses). In the same way, teachers specialise in a particular phase and learn how to work with young children or teenage learners.

Task 1.3 *Being a teacher* is like being a *nurse*

Select the appropriate answers from the options provided:

1. What **special qualities** does the analogy with nursing suggest that teachers should have?
    - Passion
    - Caring
    - Commitment
    - Curiosity and a love of learning
    - Entertaining
    - Responsibility
2. How does the analogy suggest that teachers **work with learner**/s?
    - It focuses on their emotional needs and wellness
    - It focuses on the intellectual development
    - It focuses on their motivation
3. What does the analogy reveal about the way teachers **work with the knowledge**?
    - The analogy focuses on understanding children
    - The analogy focuses on the importance of their subject knowledge
4. Which part/s of the *Teacher Choices in Action* triangle does the analogy emphasise?
    - It focuses on the way teachers work with subject knowledge
    - It focuses on the way teachers work with learners
    - It focuses on the way that teachers enable learning

The analogy between being a teacher and a nurse showed that the person who wrote it thought that being caring, committed and responsible are valued qualities of teachers.

The analogy between the teacher and nurse focuses on how both meet the emotional needs of individuals and motivate and encourage them. The comparison emphasises the team of people who work with the teacher to make sure that the child is well cared for and healthy.

There is only a brief mention of the knowledge that nurses need to give patients. The teachers' work with knowledge is largely ignored in the analogy.

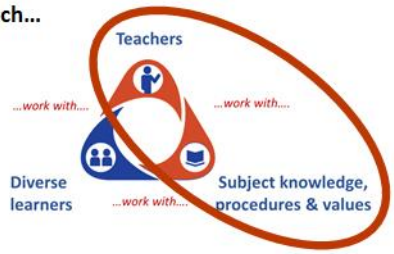
How analogies may reveal our beliefs about teaching

It is important to identify the hidden beliefs we have about teaching. These hidden beliefs affect what we notice in the lessons we observe as student teachers. We may notice some parts of teachers' work but ignore other equally important parts.

Identifying our beliefs about teaching helps us:

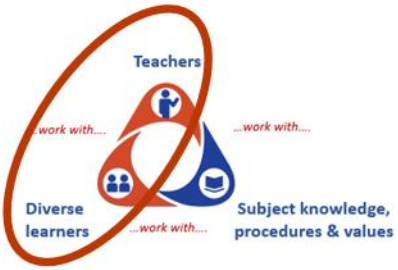
- Become aware of what has influenced our ideas about teachers' core tasks, and identify gaps in our thinking.
- Understand how our beliefs and experiences shape what we think is important in the lessons we observe and how we connect this with our teacher education materials.
- Become aware of the thinking behind the choices teachers make, and why these are important for preparing quality lessons.

Being a teacher is like being a soccer coach...



Analogy emphasises how teachers work with subject knowledge and skills

Being a teacher is like being a nurse...



Analogy emphasises how teachers work with caring for learners

- In the analogy that compared a teacher with being a soccer coach, we saw that the emphasis was on how teachers work to develop subject skills. Not much was mentioned about working with diverse learners.
- In the analogy that compared a teacher to being a nurse, the focus was on a caring relationship between a teacher and a learner. Not much was mentioned about working to develop learners' subject knowledge.

These analogies both show us something important about the work of teachers. But the analogies, however, also ignored other very important parts of teachers' work.

Task 1.4 Analysing my analogy for being a teacher

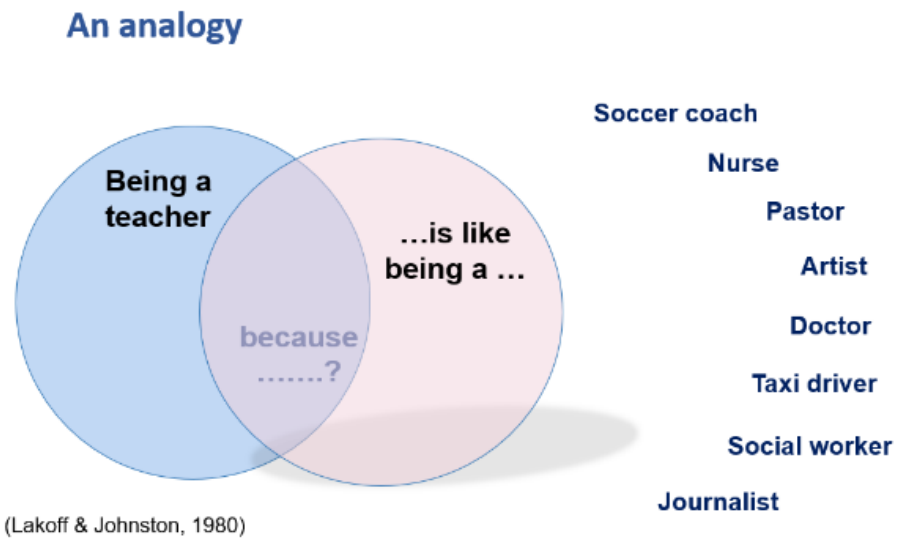
Review the analogy you wrote in Task 1.2.

Write an analysis of what your analogy reveals about what you most value in the work teachers do.

Use the following prompts to guide your answer:

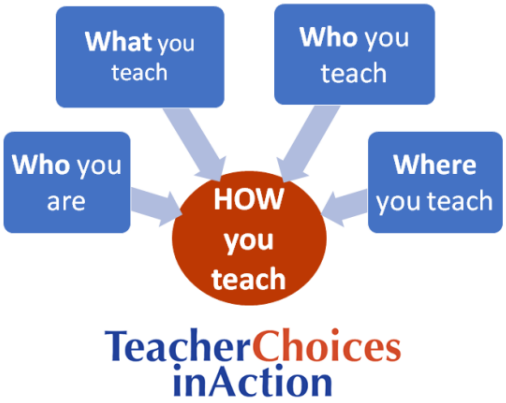
- What **special qualities** does *your analogy* state that teachers should have?
- How does *your analogy* suggest that teachers **work with learner**/s?
- What does *your analogy* reveal about the way you think teachers **work with the knowledge**?
- What does *your analogy* reveal about the **thinking** that teachers need to do in their work?
- Which part/s of the triangle does your analogy emphasise? Which part/s does it mention briefly? Which part/s does it ignore?
- What does this reveal to you about *your beliefs about teachers' work*?

Suggested length: 300-600 words



Teachers' special knowledge and ways of thinking

Our initial beliefs are challenged and deepened through the knowledge we learn in our teacher education programme and through our experiences in specific classrooms. Over time, teachers develop specialist ways of thinking from reading research, understanding education theory and subject knowledge, through experience and through thoughtful reflection. All these things help to shape a 'knower gaze' that enables teachers to focus their attention and energies on the things that matter in classroom practices (Maton, 2014). The choices teachers make in teaching should not be random. Some choices enable learning better than others. Some choices include all learners, whereas others can exclude some. Some choices are more appropriate in some contexts than in others. The choices teachers make matter because they affect the effectiveness of their lessons and the value of the learning opportunities they organise for learners. Specialised teacher thinking in practice brings together who we are, what we teach, who we teach, where we teach and how we teach.



All these things shape the decisions we make about how to teach a particular concept to a group of learners in a particular schooling context. Lee Shulman (1986) called this special teacher thinking "pedagogical reasoning in action". It uses a special kind of teacher knowledge that is called Pedagogical Content Knowledge (PCK). PCK is the knowledge teachers use to make a complex concept understandable to a group of diverse learners.

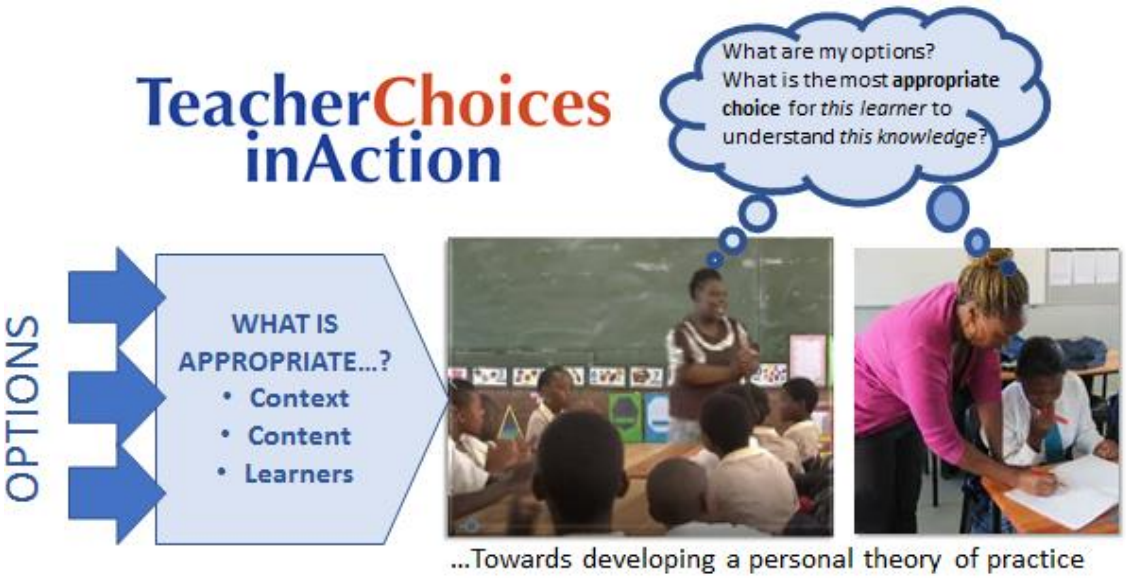
Developing a practical theory of teaching

Perhaps some of your previous ideas about teaching have already been challenged and/or extended by what you have learnt through your university coursework and through observing teachers, and talking to them about their work. When you prepare and teach lessons, a lot of specialised thought goes into setting up a learning pathway. Reflecting on the quality of the learning, teachers think more about what worked and why. Whether you are aware of it or not, as a teacher education student you are already developing specialist ways of understanding classroom interactions and thinking about teaching.

When teachers teach a subject in a particular school context, they begin to develop a personal understanding of their own teaching practices and what works in their context. Your understanding of teaching will be revised and refined many times over during the course of your teaching career. You will revise and refine as you research your classroom practices, learn more theory and gain experience with diverse learners and in different contexts. Our practical theories of teaching are always developing and deepening.

Making Choices in Action

When teachers think carefully about the options available to them, they become deliberate, thoughtful teachers who are able to explain why they make particular decisions in their teaching.



Through this module, you will explore the choices teachers make when executing their professional tasks.

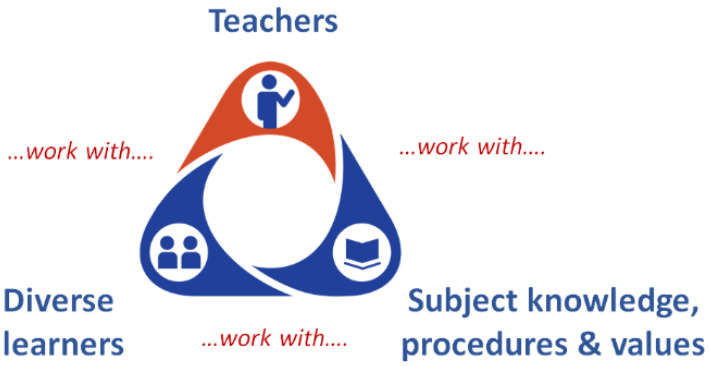
There are choices that teachers make when they:

- *work with knowledge* (such as what concepts to include in lessons, and how to arrange knowledge into learning pathways)
- *work with learners* (such as responding to learner diversity and barriers to learning)
- *manage learning and the learning environment* (managing time and space, setting tasks and giving feedback)

The triangle of teachers, learners and knowledge will form the basis of the various units in this course. Each unit focuses attention of a different part of the ways that teachers work with learners, and with knowledge to create learning opportunities.

Recap of Unit 1: Choosing to become a teacher

This module considers the options that teachers have about how to teach, and the reasons for the choices they make in their classroom practices. Appropriate choices are more closely related to what is best in a specific school context; what is best for the knowledge to be taught; what options are responsive to the diverse needs of learners rather than to the teacher's personal preferences. It is a study of teachers' PCK and their thinking in action. It looks at how teachers and materials designers represent knowledge to make complex ideas easier to understand.



This module covers many of the SACE Professional Teaching Standards. It is particularly focused on Number 7. Being aware of the choices that teachers make in their classroom practices will help you meet the SACE Professional Teaching Standard 7 that requires that teachers "make thoughtful choices about their teaching that lead to meaningful learning for all learners".

To read the full set of SACE Professional Standards, see www.sace.org.za

South African Council for Educators Professional Teaching Standards

1. Teaching is based on an ethical commitment to the learning and wellbeing of all learners.
2. Teachers collaborate with others to support teaching, learning and their professional development.
3. Teachers support social justice and the redress of inequalities within their educational institutions and society more broadly.
4. Teaching requires that well-managed and safe learning environments are created and maintained.
5. Teachers understand that language plays an important role in teaching and learning.
6. Teaching is fundamentally connected to teachers' understanding of the subject/s they teach.
7. **Teachers make thoughtful choices about their teaching that lead to learning gains for all learners.**
8. Teachers are able to plan coherent sequences of learning experiences.
9. Teachers understand how their subjects are taught and learnt effectively.
10. Teaching involves monitoring and assessing learning.

Reflection on Unit 1: Choosing to become a teacher

Please answer these two questions about your learning in this unit.

1. What links did you notice between this unit and coursework you have studied thus far?

2. What links did you notice between this unit and your previous experiences being in a classroom?

Additional resources and reading

To find out more about becoming a teacher, metaphors of teaching, knower gazes and developing a practical theory of teaching:

- Batchelor, J. & Petersen, N. (2019) Preservice student views of teacher judgement and practice in the age of artificial intelligence. *Southern African Review of Education*, 25(1): 70-88.
- Conley, L., de Beer, J., Dunbar-Krige, H., Du Plessis, E., Gravett, S., Lomofsky, L., Merckel, V., November, I., Osman, R., Petersen, N., Robinson, M. & van der Merwe, M. (2010). *Becoming a Teacher*. Cape Town: Heinemann
- Dorovolomo, J. (2004) Teachers' Practical Theory: Personal articulation and implications for teachers and teacher education in the Pacific. *Pacific Curriculum Network*, 13 (1&2): 10-16.
- Lakoff, G., & Johnson, M. (2008) *Metaphors we live by*. University of Chicago press.
- Lortie, D. C. (1975) *Schoolteacher: A sociological study*. Chicago: University of Chicago Press
- Maton, K. (2014) *Knowledge and knowers: Towards a realist sociology of education*. Abingdon: Routledge.
- SACE (2018) *Draft Professional Teaching Standards*:

  https://www.sace.org.za/assets/documents/uploads/sace_36738-2019-03-06-SACE%20Draft%20PTS%20for%20Gazette%2028082018%20(00000003).pdf
- Rusznyak, L. & Walton, E. (2014) Using metaphors to gain insight into South African student teachers' initial and developing conceptions of 'Being a teacher'. *Education as Change*. 18(2): 1-21.

Lesson Observation Reports

Task: Lesson Observation Report

The Teacher Choices module earns you credits for the work-based learning component of your teacher education qualification.

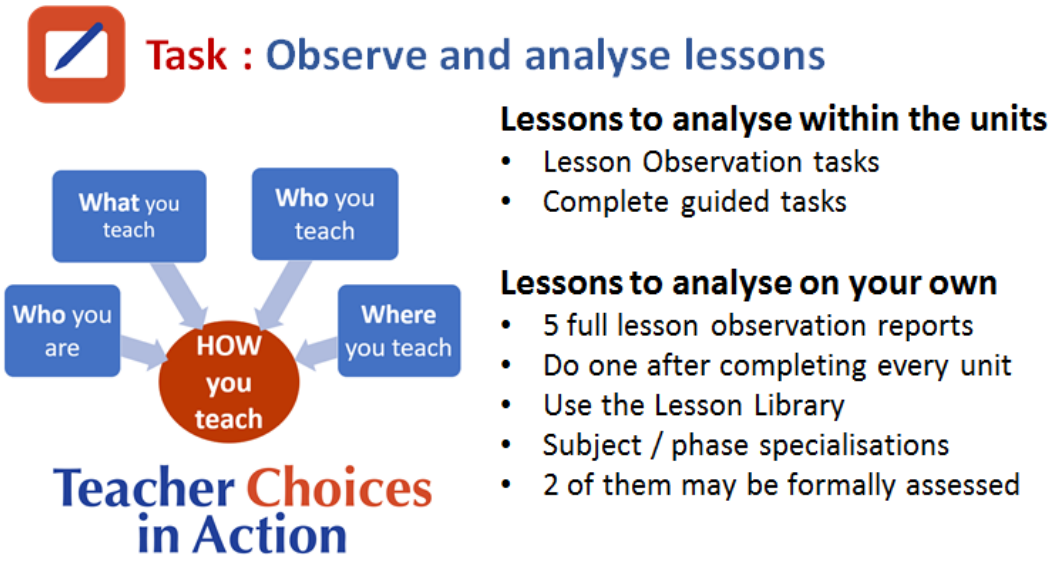
In order to earn the credits, you need to work through all tasks required by the module. In each unit, you will be analysing lessons, interviews with teachers, assessment tasks and reflecting on your own journey towards becoming a teacher. You will also need to observe and analyse lessons on your own.

On the www.teachingprac.co.za website, there is a Lesson Library of recorded lessons available from which to choose lessons. Where possible select lessons for Lesson Observation Reports that are as close to your phase and subject specialisations as possible, although you will learn a lot about observing lessons over a range of subjects, contexts and phases. You may view as many lessons as possible. There is no limit.

Select five of these for full Lesson Observation Reports.

Name of the task	**Expected time on task:**
Task : Five Lesson Observation Reports Lesson Observation Report (1 of 5)	5 x 2 hours = 10 hours (2 of 10 hours)

Guidelines for Writing a Lesson Observation Report



During the *Teacher Choices in Action* module, you will need to write up 5 reports. Each Lesson Observation Report must have three parts.

- PART 1: Write a description of the lesson.
  This section should be about 200 – 400 words.

- PART 2: Think about the reasons why the teacher has designed and taught the lesson the way she has. You need to answer the question: "How does this teacher promote learning in this lesson?" In your answer, think about how the context, the content, and the needs of the learners influence the teacher's choices. Put more simply, consider HOW the teaching is influenced by where she teaches, what she teaches and who she teaches.
  This section should be 400 – 600 words.

- PART 3: Give your own thoughts and comments on the lesson.
  This section should be 200 – 400 words.

This lesson will be the first of five lesson observation reports that you must write over the course of the module. You will need to do another 4 on your own. You will need to do one after every unit.

Task: Lesson Observation Report (1 of 5)

This lesson will be the focus of the first of your five Lesson Observation Reports.

Watch the Grade 7 lessons on Peer Pressure. The teacher uses 'Reading to Learn' teaching strategies.

Use the Lesson Observation Guidelines to write a full description and analysis of this lesson.

Reading to Learn South Africa

Assessment of Lesson Observation Reports

Lesson Observation Reports may be evaluated by your Institution. They shall use the rubric that follows to determine your score.

First and second year students will be marked out of 15, using Achievement Levels 1-3. Senior students will be marked out of 20 using Achievement Levels 1-4.

Assessment Rubric: Lesson Observation Report

STUDENT NUMBER	LEVEL 1: NOT YET ACHIEVED	LEVEL 2: BASIC ACHIEVEMENT	LEVEL 3: COMPREHENSIVE & COMPETENT ACHIEVEMENT	LEVEL 4: COMPLEX INSIGHTS & ADVANCED ACHIEVEMENT
Description of lesson *(100-400 words)*	A list of steps that could apply to any lesson. Details about specific learning processes in this lesson largely missing. Focuses on teacher routines without linking them to a learning process. **1 2**	General account of what happened in the lesson. Some specific detail about teacher actions and teacher/learner interactions. Some attention to how teacher set up learning opportunities. **3**	Detailed description of teacher actions and interactions to organise meaningful learning opportunities. Comments on incidents or aspects of lesson that interested student about teaching and learning in that phase/ subject/context. **4**	Detailed description of the teaching/learning processes involved. Nuanced description of incidents that reveal important insights about teaching, learning, schooling in that phase, subject or context; or that raise important questions or dilemmas. **5**
How the teacher promotes learning in the lesson *(200-600 words)*	A very brief and superficial description of learners, context and content. These factors are listed and disconnected from one another and from the teacher choices in the lesson. **1 2 3**	Response makes basic observations of the lesson and the needs of learners, content, contexts. Connections between these factors and teaching choices are briefly mentioned but not fully explained. **4 5**	Response connects teacher choices (structure, resources, learning activities) with classroom action. How lesson is taught is explained in relation to context, learner needs and content of lesson. Connections are thoroughly explained. **6 7**	Response connects main teaching decisions to needs of learners, content, and opportunities in context. Deep understanding of the reasons for important teacher choices are linked to principles of practice, concepts about effective teaching, meaningful learning and inclusive and fair practices. **8 9 10**
Own response *(100-400 words)*	Personal response to lesson that focuses on aspects other than teaching/learning. Where comments are given, no reasons given for comment(s). **1 2**	Opinion about what the student liked or didn't like about the lesson is provided. Briefly attempts to give some reasons/explanations for their opinion. **3**	Thorough and well considered response to the lesson. States what was particularly interesting about lesson, and provides coherent and compelling reasons for their response. **4**	Insightful response that theorises what made/could make this lesson a more, or less, successful learning opportunity for all learners. Concepts/ideas from university coursework or the TCiA module are used to inform and enrich student's reflections or appraisal. **5**

TeacherChoices inAction

1st – 2nd Year BEd students

Use Achievement **LEVELS 1 - 3**

MARK:___ out of 15

TeacherChoices inAction

3rd – 4th Year BEd & PGCE students

Use Achievement **LEVELS 1 - 4**

MARK: ____out of 20

UNIT 2: Teacher choices that enable learning in **different school contexts**

Glossary of Important Terms

asynchronous	When the recorded or online material can be viewed at any time that is convenient for the learner.
blended learning	Combination of online instruction for parts of the course and face-to- face support for others.
context	The environment in which the learning takes place. It can be a physical space or a virtual space. It includes the physical, social, economic, historical, political and religious conditions under which learning happens.
design principles	Ideas to think about when designing an online lesson or course.
epistemological access	Means that learners can learn the knowledge and skills from lessons they attend without any barriers.
face-to-face learning	When teachers and learners are present in a venue at the same time.
formal access	Learners are enrolled in an educational institution and physically attend lessons.
hybrid learning	Teaching a class where some children are face-to-face and others online simultaneously.
online learning	When all or most of the learning happens through technological connections.
synchronous	When teachers and learners are attending online lessons at the same time.

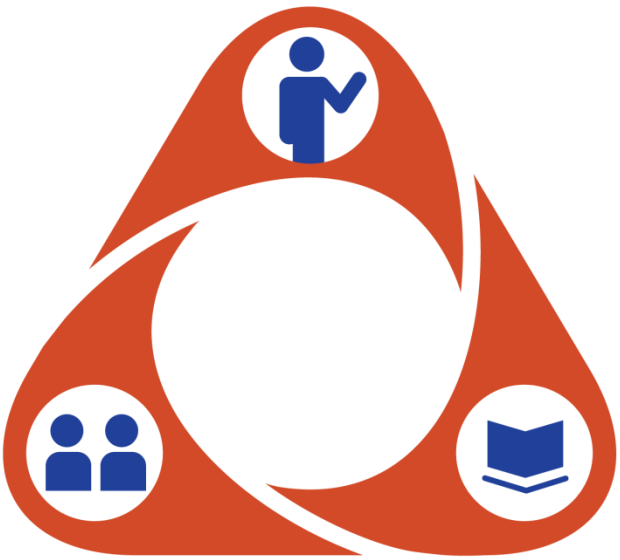
Tasks in this unit are:

Name of the task	**Expected time on task:**
Task 2.1. Teaching and learning in my community *(on the Teacher Choices in Action Chat Forum)*	1 hour
Task 2.2. A face-to-face lesson and its online version	1 hour
Task 2.3: Learning together….and apart	1 hour
Reflection on the unit	30 minutes

Introduction

This unit explores the context of teaching. The national curriculum requires that South African learners gain access to the same knowledge and skills. However, schooling happens under very different and unequal conditions. Although there has been huge investment in building and upgrading of many schools, there are still many South African schools that have inadequate infrastructure and facilities. It is the responsibility of the State to ensure that all schools are adequately resourced. It is the teacher's responsibility to provide effective teaching using the opportunities and resources available.

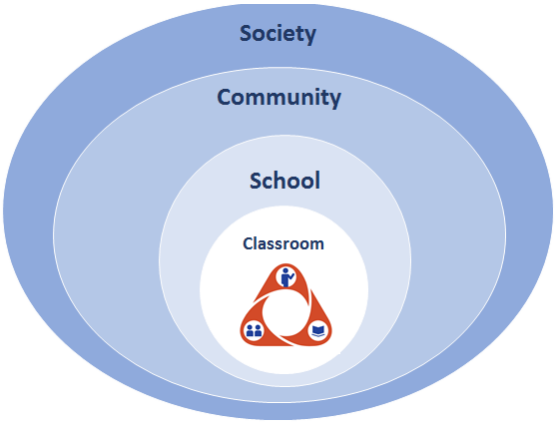
In this unit, we discuss how contextual factors affect teaching practices and possibilities. The way a teacher works with learners and with knowledge happens within the possibilities and challenges of the context. The unit focuses on the way teacher choices must be responsive to the context in which schooling happens. The unit starts with face-to-face teaching and how teachers work with the challenges and opportunities in a range of contexts. We then consider how different schools continued to teach when face-to-face teaching became impossible or more difficult during the Covid-19 pandemic.



Schools and their contexts

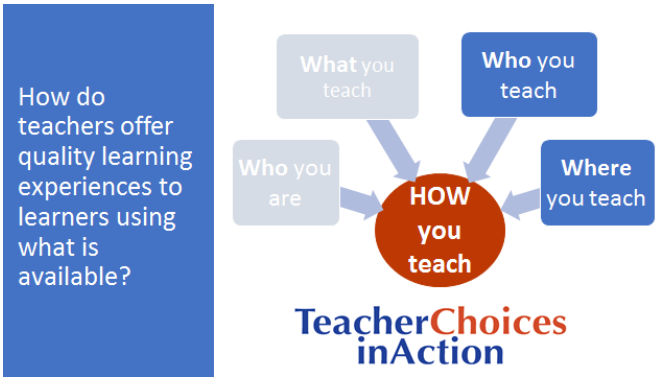
Schools are part of society and are situated within communities that have particular histories, challenges and opportunities. Each community offers teachers and learners a fund of cultural wealth and local knowledge. Teachers can draw on these funds, bringing them into the classroom to make learning relevant. The challenges in society also affect the school community. In addition, context affects schools' infrastructure and resources, and also how teachers need to consider and respond to the needs and life experiences of learners.

Schools in South Africa are vastly different - even those within the same community. A challenge is to learn how to teach in classrooms that are both familiar and different from what you experienced during your own schooling. During this course, you will be observing lessons taught in a range of South African classrooms. Teachers can make learning happen using whatever resources they have: a chalkboard, paper, poster, mobile devices, online learning platforms and more. All these teachers work with the resources available to them in order to offer quality lessons to learners.



As much as schools must be properly resourced, Morrow (2007) argues that is not realistic for teachers to expect a perfect environment in which to teach. He takes the view that teachers are professional thinkers who make choices that are responsive to the context and the needs of learners. The choices must also work with the infrastructure, technology and resources that teachers and learners have available to them.

Across schools, all learners need access to powerful knowledge and skills. The *what* of teaching – the knowledge in the curriculum - remains the same regardless of school context. Teachers need to make choices about how best to teach this knowledge in ways that are appropriate within the context of their own school and community**.**



Formal access and epistemological access

Morrow's ideas show that there are important differences between *formal access to schooling* and *epistemological access to the knowledge* that schooling offers. Formal access to schooling means that learners are enrolled and attend school. But being present in a classroom doesn't always mean that the learner is learning.

Epistemological access means that learners can learn the knowledge and skills from lessons they attend without any barriers. In Unit 3 and Unit 4, you will learn about how teachers can work with knowledge to enable epistemological access in their lessons. In Unit 5, you will also learn about the choices teachers make to overcome or remove barriers to learning that might lead to the 'silent exclusion' of learners – when they are present in the class, but unable to get access to the knowledge and skills.

In this unit, we ask different questions about giving learners formal access and epistemological access.

- How do teachers make quality learning happen in challenging school contexts?
- When schooling can't happen in face-to-face modes of delivery, how do teachers in under-resourced contexts keep teaching?
- How do teachers from different school contexts use the available technology to offer learners worthwhile learning opportunities?

Contexts provide both challenges and opportunities

There are many urgent problems in South African schooling, two of them being overcrowding and inadequate infrastructure and resources. This includes access to the internet. While society needs to keep insisting that schools have adequate infrastructure and resources, it is essential that teachers do not fail the learners who are seated in front of them in a school classroom.

A lot can be learnt from teachers who deliver excellent education to learners in very challenging contexts. Ms Mhlaba is one such a teacher. She has worked at a school in Khayelitsha for over 10 years.

Ms Mhlaba teaches at a school of 1280 learners. Class sizes range from between 60-75 learners in a class. In an interview, Ms Mhlaba said that the context does matter and teachers need to adjust their methods and strategies when working in large classes. Later in the interview Ms Mhlaba said she sometimes makes time to work separately with learners who need support. She makes sure that her classroom is a safe space and that the learners trust her and one other.

Read the transcript of the interview with Ms Mhalaba. Identify the challenges she faces and underline the teaching choices she makes to address those challenges in her school context.

How Ms Mhlaba teaches in her context

"Context does matter. And you have to adjust your methods and strategies in order to make sure that you reach bigger classes when you're teaching. For me, one of the activities that I do before they come to class is that already on the board, I project exercises from my computer onto the board. There will always be an exercise and this is meant to engage the students. It's an activity, so as soon as they come into class they are compelled to focus on the subject. And they know for a fact, that once you come through the door, you keep quiet. Take out your pen, then complete the exercise.

When it comes to giving instructions, it is very important that you are clear and direct and the simple instructions are very simple. Not all of them can understand English in as much as they are in that grade. So, the level of understanding is very limited, so all in all what I try and do is I try and create a safe space for them. Now, how do I do this? Sometimes through, you know, icebreakers and in as much as one may say "Ag", they are adults, simple the exercises like, She Sells Sea Shells on the Sea Shore; you say it quick and then you ask to follow and that kind of thing. For most of them it's something new, it's fun. But at the same time, you're breaking the ice and you're making them feel more confident about themselves. Even if they make errors, you just stop in the middle of the lesson (she clicks her fingers), then you continue. That on its own makes sure they do play along.

Learners are not used to being included in conversations of an educator, so what I do is, if it's literature for instance, one of the texts we were reading was *The Last Breath* (a short story) and somebody donating the eyes, the cornea to someone else. Now for them, in society it's taboo to donate organs and so forth. So, that on its own, they talk about it and they end up being able to relate because it's a different time and a different culture now. And they've got to embrace change as we go along.

The lessons that I conduct, I ensure that they are interactive. I talk to them and they talk as well. I always say to them, your opinion does matter. Yes, we live in a diverse society and I may not do things the way you do them at home but at the end of the day, everybody's opinion does matter.

I always motivate them because sometimes you find that all of them or some of them are feeling down. As an educator, you've got to know your class. You've got to try and figure out where they are at. Just let them know that you are there for them. If they struggle, make sure you tell them that "After school I'm there for you and you can come". That way it builds their self-confidence. More than that, the mere fact that they know they can come to you does help create a space for them to feel they are at home and that someone does care.

Technology for me is interesting. When it comes to adverts, I play some music and they are excited. You play some music (videos) and it's visual and they can relate. And apart from that I find the more you play sometimes music for the orals, they listen to music instead of me reading when I play music (songs). That goes a long way."

Task 2.1: Teaching and learning in my community

Identify what Ms Mhlaba does to engage the learners and 'draw them in'.

- Read how she explains the benefit of what she calls "board work".
- Read what she says about being a role model for the learners.
- Read what Ms Mhlaba says about motivation and support.

Think about schools in your own community:
What are some of the challenges and opportunities you think teachers and learners face in your community?

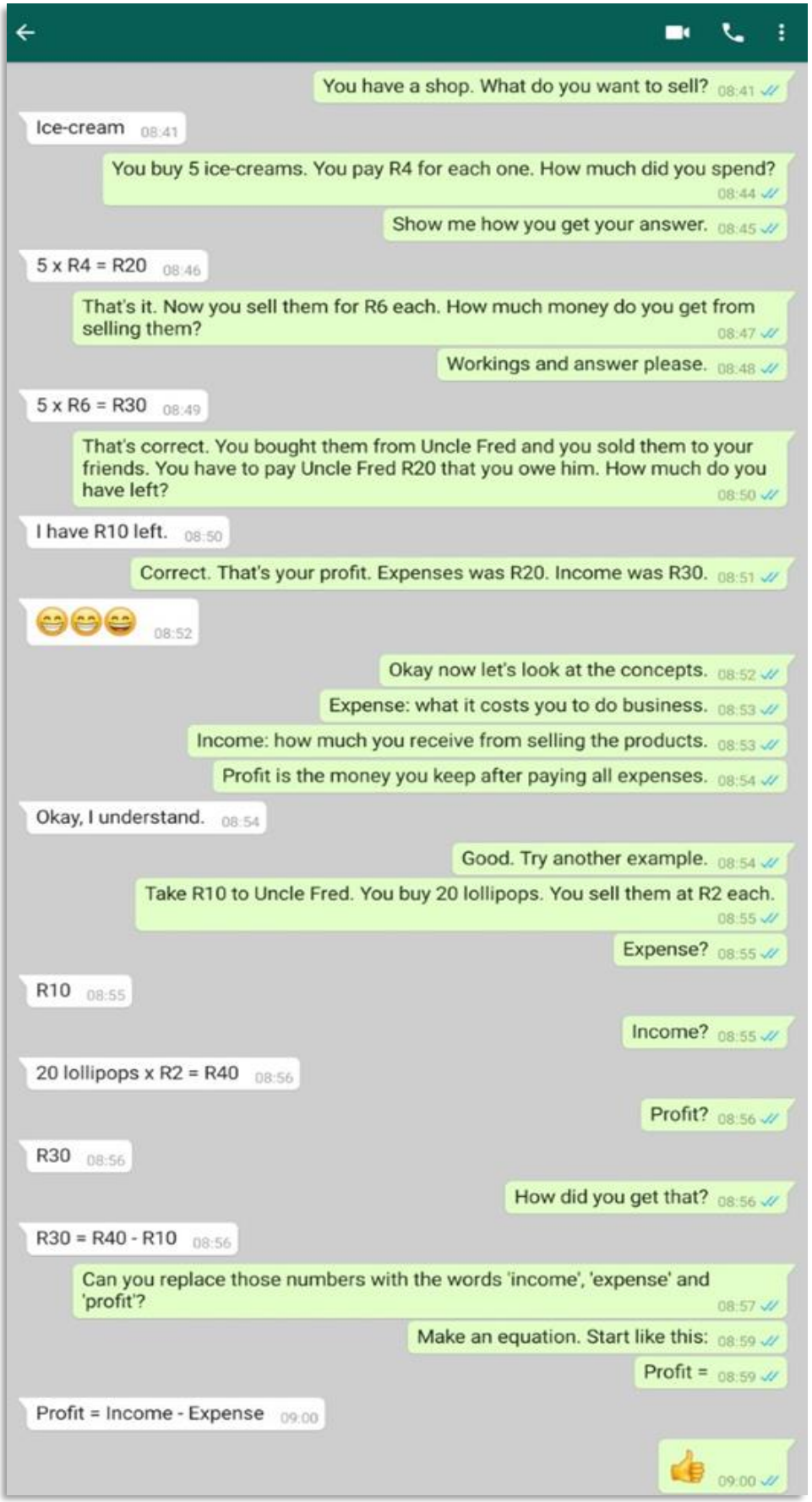
Connecting using mobile phone technology

During the Covid-19 lockdown, some teachers found innovative ways to teach using whatever means they had. For many teachers, their mobile phones have become their only means of contact with learners. Ms Flanagan teaches Mathematics in a secondary school in Soweto. Many learners do not have internet access at home. She has found ways to use her mobile phone to continue with Mathematics teaching when schools shut down.

Watch how she uses a handful of beans to teach learners how to find a fraction of a whole number. She sent learners this clip as a WhatsApp video.

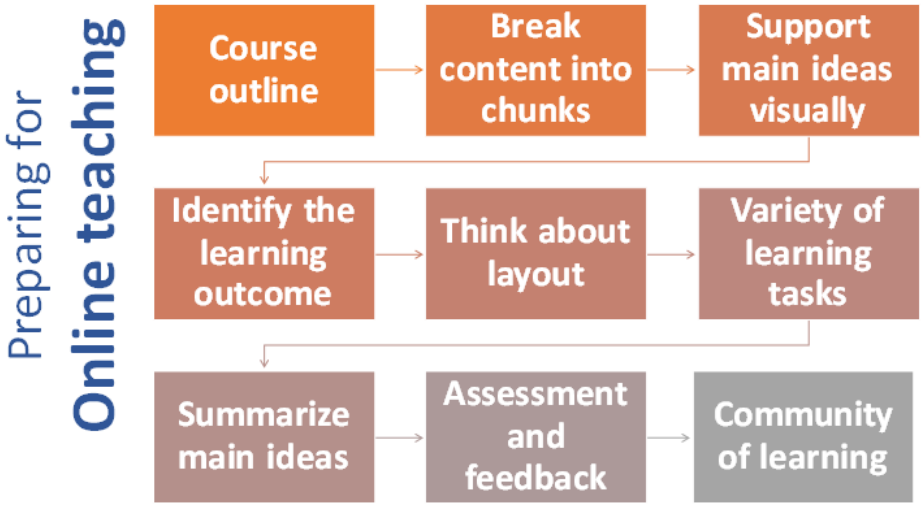
Ms Flanagan also uses WhatsApp conversations to check on learners' work. Noticing that one of the Grade 8 learners didn't understand a Mathematics problem, she has a WhatsApp conversation to build a learning pathway for him.

Read how Ms Flanagan helps him come to understand the concepts of profit, income and expense.


You have a shop. What do you want to sell? 08:41
Ice-cream 08:41
You buy 5 ice-creams. You pay R4 for each one. How much did you spend? 08:44
Show me how you get your answer. 08:45
5 x R4 = R20 08:46
That's it. Now you sell them for R6 each. How much money do you get from selling them? 08:47
Workings and answer please. 08:48
5 x R6 = R30 08:49
That's correct. You bought them from Uncle Fred and you sold them to your friends. You have to pay Uncle Fred R20 that you owe him. How much do you have left? 08:50
I have R10 left. 08:50
Correct. That's your profit. Expenses was R20. Income was R30. 08:51
😄😄😄 08:52
Okay now let's look at the concepts. 08:52
Expense: what it costs you to do business. 08:53
Income: how much you receive from selling the products. 08:53
Profit is the money you keep after paying all expenses. 08:54
Okay, I understand. 08:54
Good. Try another example. 08:54
Take R10 to Uncle Fred. You buy 20 lollipops. You sell them at R2 each. 08:55
Expense? 08:55
R10 08:55
Income? 08:55
20 lollipops x R2 = R40 08:56
Profit? 08:56
R30 08:56
How did you get that? 08:56
R30 = R40 - R10 08:56
Can you replace those numbers with the words 'income', 'expense' and 'profit'? 08:57
Make an equation. Start like this: 08:59
Profit = 08:59
Profit = Income - Expense 09:00
👍 09:00

Preparing for Online teaching

Designing a worthwhile lesson takes knowledge of the subject, knowledge of the options and thoughtful decision-making. There are important things to think about when designing online learning. As always, it is important to know your purpose, the lesson topic and what assessment will show understanding. Here is a flow diagram that summarises the decisions that the teacher needs to make when planning for online teaching.



- The flow of the content and an overview of the course should be given to learners in the first lesson.
- Next it is important to *chunk* the content into bite-size bits of information. Provide reasonable time limits for the learners to complete the lesson. This means that you must identify the main ideas and decide how to present them clearly. The general rule of thumb is there must be no more than 3 key ideas for any one lesson. Each lesson should have an introduction where the topic is explained and connections to previous learning are established.
- This should be supported by visuals, graphs, icons and key information.
- The outcomes of the lesson must be explained as well as activities and assessment tasks.
- Be consistent in each lesson by following the same or similar outline and flow of information as described in the pictorial representation above.
- The body of the lesson should focus on a main idea.
- One challenge of teaching via online learning is that it is more difficult to check that learners are actively involved. The online material needs learning tasks integrated into the lesson.
- A teacher needs to check on learner progress and find a way to provide regular feedback on each learner's work. It often takes a different form to that of face-to-face teaching. The teacher also needs to find ways for learners to ask questions and get answers. They also need to understand the importance of regular feedback and what form it will take. The teacher can't just say "That's right" as the learner speaks! Online feedback mechanisms require careful thinking and planning.
- Lastly, try and create a community of learning by having collaborative meetings online through mobile chat groups or online chat rooms.

Task 2.2: A face-to-face lesson and its online version

You have to read the lesson transcripts (found in the Resources at the end of this unit) on the same section of a film study of The Great Gatsby (Eng. HL). Decide which of the statements apply to the face-to-face lesson, which apply to the online lesson, and which ones apply to both of them.

Face-to-face lesson Online lesson

Think about: How are these lessons similar...
.... and how are they different?

	Face-to-face	Online
Teacher asked the learners questions and built on their responses.		
Learners contributed their own examples to the classroom conversation.		
Learners taken through reading passages in the novel.		
Teacher notices learner work and responses, and praises them.		
Learners and teachers are present at the same time.		
Learners have the opportunity to ask questions.		
The teacher checks for learner understanding during the lesson.		

A comparison: face-to-face and online teaching

Face-to-face teaching refers to teachers and learners being together in space and time. The advantages of this mode of lesson delivery is that the teacher and the learners can ask questions and have discussions as issues arise. In face-to-face lessons, both learners and teachers use contextual and nonverbal cues to support meaning. The teacher can, for example, see from learners' facial expressions if they are struggling and the teacher can immediately rephrase or re-explain something. The teacher can also work with individuals and adjust the pace and language to suit the immediate needs of the learners. However face-to-face teaching is difficult to manage in very large classes.

Online teaching and learning is not always time bound and the learners can access everything in their own time and space. Formal access to online teaching varies. It requires a stable electricity supply and reliable internet access. It requires that learners also have access to smart devices. Once these are in place, lessons can reach more learners and their progress can be tracked and recorded. However learning online can be lonely, and learners can easily become demotivated by a lack of

personal contact. Online teaching and learning, if well designed, can build some sense of community between learners and teacher.

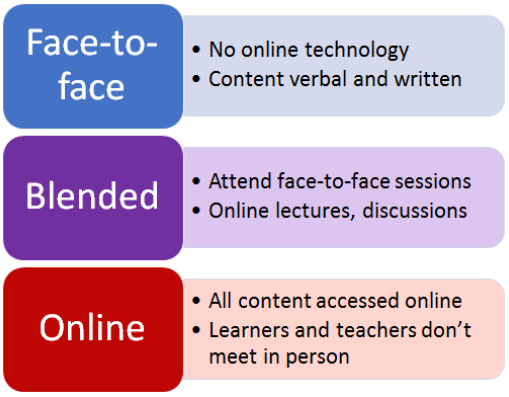
Blended, or hybrid teaching and learning is a combination of face-to-face and online teaching. Face-to-face contacts can be arranged at particular times while the rest of the learning takes place online in each learner's own space and time. In hybrid teaching, the teacher has both face-to-face and distance learners doing the same lessons. It is essential that student teachers learn about blended learning and be prepared to teach in different and changing school contexts (Shand & Glassett, 2018).

Face-to-Face	Online Learning
Contact in real time and space.	Different kind of contact which requires technology & the internet. Connection can take place anywhere and anytime.
Community and connection easier.	Minimal contact & lack of community. Can be isolating for teachers and learners.
Knowledge accumulation and building easier to monitor.	Knowledge needs to be chunked and smaller learning tasks need to be built in.
Collaborative tasks require good classroom management.	Collaboration is more difficult.

Blended learning

Blended learning refers to courses that combine face-to-face classroom instruction with online instruction. The main aim of blended learning is to join the best features of in-class teaching with the best features of online learning to promote active independent learning and reduce class time. Research shows that there is a very high dropout rate of people starting online courses. Courses that use a blended approach have better completion rates than fully online courses.

Hybrid learning has both contact and distance learners together in a classroom.



Here are three ways that three South African teachers manage hybrid learning during the COVID-19 pandemic. The teachers have different approaches to teaching learners in a classroom and at home at the same time. Watch the clip and see how they manage the combination of face-to-face and online teaching differently.

Task 2.3: Learning face-to-face and apart, together

	A	B	C
Teacher focuses on the learners in the face-to-face class.			
Teacher communicates with both the contact and the online learners.			
The face-to-face and online learners are together in the lesson at the same time.			
The online learners have the lesson at a different time to those in the face-to-face class.			
Learners who are in the face-to-face class actively contribute to the lesson.			
Learners who are in the online class actively contribute in the lesson.			

Recap of Unit 2: Teachers' choices that enable access

In this module you explored the importance of connecting with your learners in order to make knowledge accessible to them. This connection always takes place in a context and can be face-to-face or online. Contexts provide challenges and possibilities. Teachers need to be creative, flexible and innovative in adapting their lesson to suit the context without compromising on the quality of learning.

- **Context** provides both challenges and opportunities for teachers.
- **Contact** with learners can happen face-to-face, through technology, or a combination of both – blended or hybrid.
- **Connecting** learners with knowledge needs careful thought about delivery choices.

Contact and engagement is usually easier in face-to-face settings. However certain face-to-face settings require innovative methods to connect with large numbers of learners. The use of technology (including smart phones) can support learning in these contexts. If using online or blended teaching, it is important for the learners to have contact with each other and the teacher. This can be designed into the lesson with chat functions or question and answer sessions.

Blended learning is a useful way to achieve the best of both face-to-face and online learning. All lessons need to be carefully designed to ensure that all learners have both formal as well as epistemological access.

Reflection on Unit 2: Teachers' choices in different school contexts

Please answer these two questions about your learning in this unit.

1. What links did you notice between this unit and coursework you have studied thus far?

2. What links did you notice between this unit and your previous experiences in the classroom (either as a learner or on Teaching Practice as a student teacher)?

Additional resources on promoting access

- Gormley, C. (2014) Teaching the Principles of Effective Online Course Design: What Works? *Irish Journal of Academic Practice*, 3(1.3). doi:10.21427/D7JM8D
- Morrow, W. (2007) *Learning to teach in South Africa*. HSRC: Pretoria.
- https://www.shiftelearning.com/blog
- Shand, K. & Farrelly, S.G. (2018) The Art of Blending: Benefits and Challenges of a Blended Course for Preservice Teachers. *Journal of Educators Online*, 15(1).

Resources

Task 2.2

Mr Gatsby's House (based on a film study of The Great Gatsby): A face-to-face lesson

Teacher : Do you remember we talked about social geography. We said that F. Scott Fitzgerald was really interested in the idea of social geography, how people of different social classes live in different areas. We spoke of three major settings in the novel. The one is West Egg. Who lived in West Egg?
A learner : Gatsby
Teacher : Right, Gatsby and Nick Carraway. Nick Carraway lived beside Gatsby. And then East Egg. Who lived in East Egg?
A learner : The Buchanans
Teacher : Right, the Buchanans – Tom and Daisy Buchanan. You will recall that we spoke yesterday about how affluent these two areas are. Both wealthy, but what differentiates them?
A learner : Old money and new money
Teacher : Yes, 'old money' and 'new money'. So you have the nouveau riche, the people who have newly acquired wealth, many of whom were suspected to be' bootleggers', people who got their money through all sorts of illicit means. Then you have the 'old money' like the Buchanans, the American aristocrats, blue blood.
What is the third location that we have?

A learner : The Valley of Ashes
Teacher : Right, the Valley of Ashes. Who stays in the Valley of Ashes?
A learner : The Wilsons
Teacher : Right, Myrtle and George Wilson
We spoke about how this represents almost a wasteland of humanity. Just as the Valley of Ashes is literally a dumping ground for burnt out material, the ash that was used in the coal to fuel the power stations that drove New York City, so the people who live in the Valley of Ashes are people who have been cast aside by society, people of a lower social class who have no political and economic power.

Getting back to the East Egg and the West Egg, what is the one thing that F. Scott Fitzgerald uses most clearly to demonstrate the social differences?
A learner : The houses
Teacher : The houses, right! We are told that Gatsby lives in a house that is described as a factual replica of some Hotel de Ville in Normandy. I'd like you to turn to page 5.

(The teacher proceeds to read from the book:)

"My house was as …… only 50 yards….rented for 12 or 15 thousand per season. The one on my right was a colossal affair by any standard – it was a factual imitation of some Hotel de Ville in Normandy, with a tower on one side, spanking new under a thin beard of raw ivy, and a marble swimming pool and more than forty acres of lawn and garden. It was Gatsby's mansion or rather, since I didn't know Gatsby, it was a mansion inhabited by a gentleman of that name."

Teacher : What does that description of Gatsby's house reveal?
(The teacher pauses for a few seconds and then continues)
: It is described as brand "*spanking new*" and under a "*thin beard of ivy*"
A learner : Isn't it saying that it is 'new money' that he is trying to make look like 'old money'?
Teacher : Absolutely! It's 'new money', it is a newly acquired house, it's been newly built but he has trained ivy over it to make it look old to create the sense that he comes from 'old money', that he is also an aristocrat. What else can we tell from the description when it says "*... it is a factual imitation of some Hotel de Ville in Normandy"*.
A learner : Isn't it that you can't be 'factual' and' 'imitation'?
Teacher : Absolutely! Nice! It is almost a contradiction in terms. We could actually say that it's a

paradox. It's like sayings a fake imitation or a real imitation. So it's a contradiction which reveals some essential truth. What truth is hiding behind that? That Gatsby is not what he appears to be. It introduces that whole theme of appearance versus reality and the idea here of putting on certain appearances, that is affectation or deception. By contrast, what is the Buchanan's residence like?

A learner : A Georgian mansion
Teacher : Very nice! A Georgian mansion. It's described as authentic, that is the real thing. On page 6 F. Scott Fitzgerald writes *"their house is even more elaborate than I expected, the red and white Georgian colonial mansion overlooking the bay."*
The proper adjective 'Georgian', what does it come from? It comes from the era of King George. Georgian is an architectural period. So we're talking here of a classical period of architecture and this is the authentic thing. That relates back to what theme then in terms of our social classes?
A learner : Old money verses new money
Teacher : Right, old money verses new money. Here's a question for you. Think about how this would apply today about residential estates? Is there anyone here who lives in Ebotse?

(A learner raises her hand)

Teacher : Tell me about the architectural styles of houses in Ebotse?
A learner : It's very modern
Teacher : Because Ebotse is a new development, the architecture is very modern. Years ago there was a trend to build Tuscan style houses – that was very popular. So people who had money built houses on residential estates that looked like Tuscan villas. Why do you think that this Tuscan look had such appeal? It had old lived in appeal as well as a sense of old established wealth. Very, very interesting. And if you look at architectural styles in South Africa, many, many houses are designed around architectural styles that we borrowed from other countries. I would say that the house that I live in has a kind of plantation style design. It's got pillars and a balustrade and looks almost like the houses in the southern states of America. You get ranch style houses…

(The teacher points to a learner and asks:)

Teacher : What does your house look like? What is the architectural style?
A learner : Mine is fairly modern
Teacher : And what does a modern architectural style say about you and your family?
A learner : I don't know *(giggling)*
Teacher : Think about it. It's a very interesting question. Somebody else – Zoe?
Zoe : My house has a lot of pillars and lots of glass sliding doors
Teacher : Very interesting. And in any way do you think is says something about you and your family? Your culture? Your identity?
Zoe : My mom was an artist so at the time she put a lot into it
Teacher : Very interesting. A lot of your mom's personality and interest has gone into the décor and design.

(A learner points to the picture on the screen of Georgian architecture and indicates that it was similar to Greek architecture as it had friezes and pillars)

Teacher : Right! Georgian architecture also borrowed from Greek architecture and created a classical feel with friezes and pillars. It looks almost like the Acropolis – those ancient buildings.

(The teacher points to another picture of a house on the screen and asks the learners for their view on the architecture of that house)

Teacher : Don't you think there is lightly Gothic….?
A learner : Roman? Not Roman but French!
Teacher : French? Classical?

A learner : Afrikaans look!
Teacher : If you think about it, then what is the person living in that house trying to say then? What is he trying to say about his character? His tradition?
A Learner : Maybe he thinks highly of himself as he has all this money to own a place like this
Teacher : Very nice. And when you read this novel, there is a reason behind this. He has done all this for one reason alone.
Learner : For Daisy
Teacher : To try to catch Daisy
A learner : The house looks like a Disney castle
Teacher : Lovely. It's almost got a Disney castle effect. You are right and the point about that is that it is not really true, it's not authentic because Gatsby's life is actually very inauthentic . It is a fairy-tale or an illusion.
Learner : It's very look-at-me outish! He wants to be observed and seen
Teacher : Absolutely! Right! He is trying to draw attention to himself.
Let's go to chapter 2 because I want to draw some conclusions from this discussion. You will notice that Scott Fitzgerald has done something throughout this novel. He sets out contrasts between characters and settings. This technique is known as making use of Foils and in chapter 2 he does very much the same thing as with the architecture of the two houses but with the central characters of the novel.

Mr Gatsby's house (Based on a film study of The Great Gatsby): An online lesson

We get a sense of the social geography of Long Island. Long Island is a very prosperous area, a very, very wealthy area both East Egg and West Egg. But what divides East Egg and West Egg is clearly whether it is 'old money' or 'new money' that the inhabitants possess. The people of West Egg have 'new money'. There are people who have earned their fortune in the current generation. They are regarded as nouveau riche. Along with nouveau riche comes certain flashiness, a certain ostentation, a certain boastfulness in terms of your conspicuous consumption and this is seen in the houses in West Egg. An instance of that is Gatsby's house which it described as a factual replica of a Hotel De Ville in Normandy brand spanking new under a thin beard of ivy. So that suggests that Gatsby has made his money recently , he has bought this palatial home that looks like a town hall in Normandy in France but it's brand new and he has trained ivy up the walls to try and make it look old. So that introduces a theme of appearance versus reality and deception – how Gatsby is trying to, in a sense, mislead the observer into believing that he comes from some type of aristocratic old moneyed background.

And then that is contrasted with the Buchanan's home which is a Georgian colonial mansion, which is the real thing and authentic and Tom Buchanan, we discover, comes from a very wealthy family. They are 'old' established wealth which is also then typical of the people who live in East Egg. What Scott Fitzgerald, the author does, he sets up this contrast between East Egg and West Egg and the contrast is also seen between the Buchanans and Gatsby.

You will remember when you were studying the background to The Great Gatsby, the history of the 1920's America, that one of the things that you learnt was that there was massive social inequality despite the fact that the 1920's was a period of enormous economic prosperity and great wealth for many people. Also, at the same time there was a lot of poverty. In fact, 40% of Americans lived in poverty and so we are expanding our sense of the social geography of the area. We've spoken about West Egg and East Egg. Now you are going to learn about the Valley of Ashes.

This is Baz Luhrmann's depiction of the Valley of the Ashes.

It is a very significant location because this is where George Wilson and Myrtle Wilson stay. *(Pointing to the building on the right).* This is George Wilson's garage and it becomes the site of a terrible tragic accident towards the end of the novel but I don't want to give too much away now.

(*The teacher then reads the following:*

"*Halfway between West Egg and New York City sprawls, a desolate industrial wasteland, a grey valley where New York's ashes are dumped".* Fitzgerald describes the scene as follows: *"This is a Valley of Ashes – a fantastic farm where ashes grow like wheat into ridges and hills and grotesque gardens; where ashes take the forms of houses and chimneys and rising smoke and finally, with a transcendent effort, of men who move dimly and already crumbling through the powdery air."* So the Valley of Ashes is clearly a place where people are discarded, where lives are thrown away. This is a society which treats human beings like disposable objects and the Valley of Ashes is like a dump for these disposable people.

UNIT 3: Teacher choices that **work with knowledge**

Glossary of Important Terms

abstract	An idea that represents common features that apply over many different examples or situations.
autonomy tour	Fetching knowledge from outside a lesson's topic and using it to support the lesson purpose.
complex	Has lots of detail, parts and is connected to other ideas.
concept	An abstract idea that puts things that have something similar into a group (e.g. vegetables, colours, shapes, industry, pollution). The concept shows the connections between the different objects, ideas or examples.
cumulative learning	Connecting ideas into more complex knowledge that has relevance beyond particular examples or situations.
familiar	Something you already know about and understand.
select	To choose what to put in and what to leave out.
semantic	The meaning attached to words, ideas, objects or symbols.
semantic wave	A learning pathway over time that shifts between general concepts and specific examples/experiences.
sequence	Putting into an order that makes sense.
unfamiliar	Something that you have not come across before.

Tasks in this unit are:

Name of the task	**Expected time on task:**
Task 3.1.: Not all information is equally important	30 minutes
Task 3.2.: Selecting and ordering knowledge in Mrs Moloi's lesson	2 hours
Task 3.3.: Semantic waves in action	2 hours
Reflection on your learning in this unit	30 minutes

Introduction

In this unit, we will learn how teachers work with knowledge in the lessons they teach.

This unit addresses the following key questions:

- How do teachers select knowledge for their lessons?
- How do teachers sequence their lesson steps?

This unit contributes to developing competence in three SACE Professional Teaching Standards:

- Teaching is fundamentally connected to teachers' understanding of the subject/s they teach.
- Teachers make thoughtful choices about their teaching that lead to learning for all learners.
- Teachers plan coherent sequences of learning experiences.

3.1. Selecting knowledge

When friends and family members speak together, they share personal experiences, and talk about the things around them. Conversation moves easily from one topic to another. Through these conversations, people build relationships and learn a lot about living in their communities. In their professional practices, experts have learnt to use specialist ideas called 'concepts' to talk to one another about the work they do. Their conversations are very focused and use technical words that they all understand. Classrooms are the place where these two kinds of conversations come together. During their lessons, teachers help learners to have conversations about complex concepts and about real-world experiences and examples.

Teachers can make these conversations happen more intentionally if they understand how to work with subject knowledge, learners' experiences, and real-world examples. This unit is important because it gives you a way to think about how knowledge works in classroom spaces.

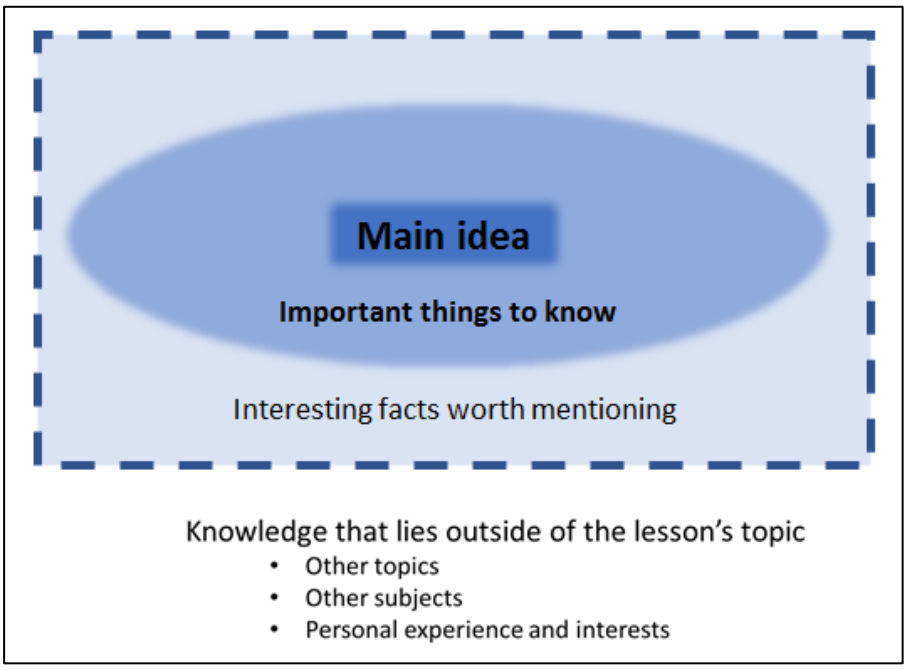
Some ideas organise others

Teachers need to give learners something worthwhile to learn and something worthwhile to do in their lessons. Lessons have concepts, facts and examples that vary in their importance.

Teachers need to distinguish between:

- Knowledge that lies inside the lesson topic:
  - A main idea that connects all other information together
  - Important things to know
  - Interesting facts worth mentioning briefly
- Knowledge that lies beyond the lesson's topic, e.g. from another subject, another topic or from learners' personal experience

When teachers focus their lesson on a main idea, lots of different information connects in a meaningful way. It is more important for learners to understand one main idea than it is for them to learn many disconnected facts. These main ideas are powerful because they set a foundation for learning more advanced knowledge later.



Teachers need to clearly signal the main ideas to learners. They do this by drawing attention to these ideas during classroom talk, how they set out their notes and resources, and what concepts learners have to work with in assessment tasks. A main idea makes a connection between all the objects, facts and other ideas. The knowledge becomes a web of ideas. Learners can use this web of ideas to explain something they could not explain before.

If the main idea is not clear, learners may instead focus on an interesting fact or a memorable example that is not crucial. They might ignore concepts that help them to make sense of more complex knowledge that may come later.

Read this text. The topic is *Joints*. The text provides details about the structure of joints and the kinds of joints in our bodies.

What are joints?
Joints are places where bones meet. Bones are hard and rigid, so they cannot bend. Joints connect the bones so the body can bend.

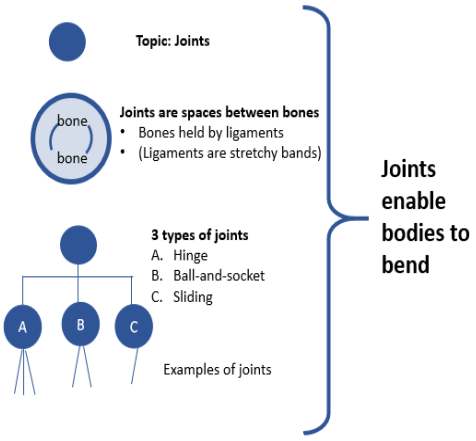
The bones at a joint are held in place by stretchy bands called ligaments. These hold the bones tightly but allow them to move as well.

How many different joints are there?
There are three main types of joints:

- There are *hinge joints* at your knees, elbows and in your fingers and toes. These joints are like the hinge on a door because they only bend in one direction.
- There are *ball-and-socket joints* at the shoulders and hips. Ball-and-socket joints allow movement in all directions.
- *Sliding joints* exist where two flat bones meet. There are sliding joints between the bones that make up the spine.

Joints allow our bodies to bend when we move, work and play. The bending of knees is very important when riding a bicycle.

Extract from:
Spilsbury, L. 2011. *Head-to-Toe Body Questions*. Crabtree Connections.



Task 3.1: Not all information is equally important

Use the text on joints to identify which information is:

A. a main idea
B. an important thing to know
C. an interesting fact
D. knowledge that is outside the topic

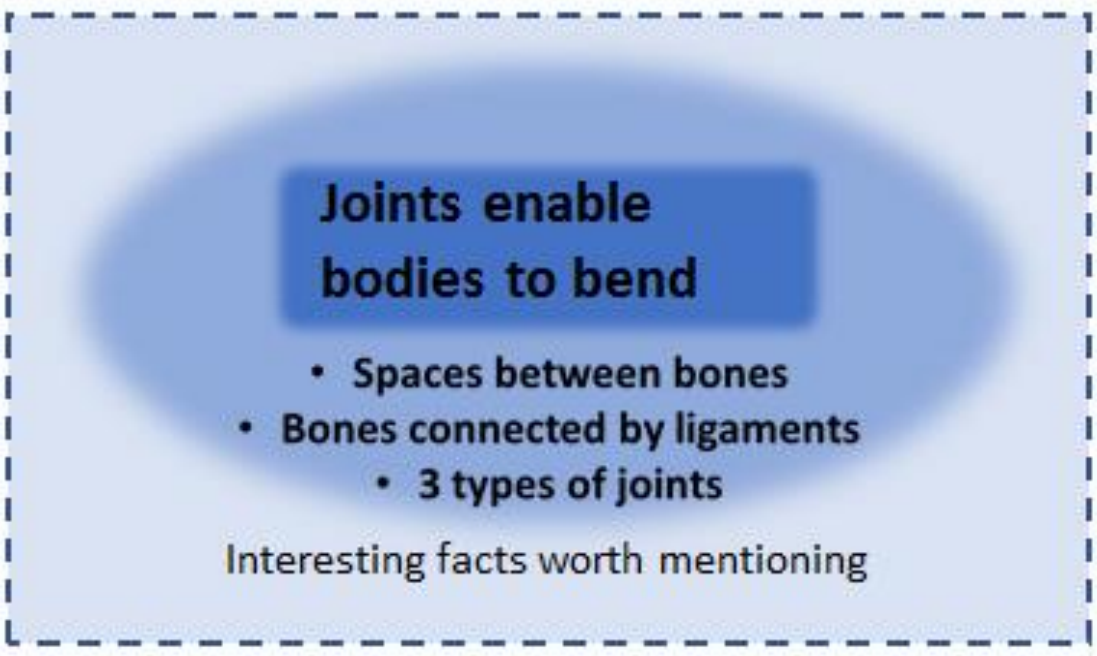
1. Joints are spaces between bones.
2. Ligaments connect one bone to another.
3. Ligaments are bands that can stretch.
4. There are three kinds of joints.
5. Joints enable the body to bend.
6. The knee is an example of a hinge joint.
7. Doors move in one direction only.
8. Our bodies bend as we move, work and play.

Not all information in a lesson is equally important

- The *main idea* focuses learners' attention on the idea that joints *enable the body to bend*. All the other information can be connected to this idea. It is also the idea that has relevance in the real-world. For example, learners can think about how joints allow athletes to bend their body in different activities, like running or jumping over hurdles.

- It is *important to know* that joints are spaces between two bones. An added detail is that bones are connected by ligaments. It is also *important to know* there are three categories of joints that allow our bodies to bend in different ways. These details are useful in explaining how our bodies bend and where our bodies bend.

- It is *worth mentioning briefly* that ligaments can stretch. It is an interesting fact but is not developed further in this text. It may become very important if a learner is injured on the sports field.



When teachers understand the content knowledge of their subject well, the more easily they can distinguish between the main idea and other supporting details of the knowledge. That is why it is so important for teachers to go through and understand the content of the topic themselves before teaching that content.

Fetching knowledge from beyond the lesson's topic

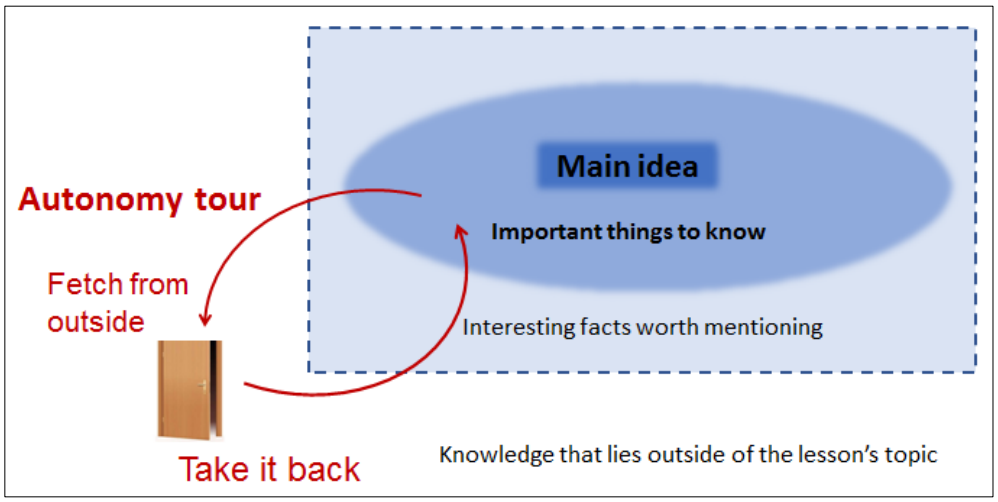
When introducing learners to unfamiliar ideas, teachers sometimes fetch knowledge from outside the lesson's topic. Familiar examples or analogies linked to learners' lives may help them understand unfamiliar concepts. The teacher may also fetch knowledge from another subject or what learners have learnt previously about a different topic. The knowledge is brought into the lesson to help learners understand something that is new to them.

There are two things about which teachers need to be careful of when fetching knowledge from outside the lesson topic:

- First, teachers must make sure they bring the outside knowledge back to the lesson's content and purpose. The knowledge from outside should help learners to understand the main idea better, and not distract them from the lesson topic. Using knowledge from elsewhere (including learners' lives, another lesson topic or another subject) to help understand the main idea is one kind of 'autonomy tour' that teachers make when they bring together knowledge from different places (Maton & Howard, 2018).

- Second, although it is useful to use analogies to help learners understand familiar concepts, teachers must know the limitations of these analogies. They never capture the full complexity of concepts. If they are used badly or for too long, they could lead to misunderstandings that can be difficult to correct.

How a door opens and shuts is not part of the lesson's topic. But a door is familiar to learners. Comparing the opening of a door to the movement of a hinge joint (like a knee or an elbow) gives learners a familiar way to imagine an unfamiliar idea.



A main idea and an autonomy tour in Mrs Moloi's lesson

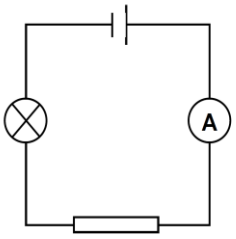
Mrs Moloi teaches a Natural Science lesson to Grade 9 learners on electric circuits. Later in the lesson, learners will do an experiment to see whether the resistance of resistors in a circuit affect how brightly a light bulb shines.

Read the transcript of Mrs Moloi's lesson in the Appendix. You may watch it on YouTube https://www.youtube.com/watch?v=toyiANiTla4&t=573s (Acknowledgement to: www.angelastott.co.za)

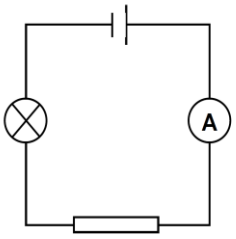
Identify the main idea of her lesson and the important things to know. Also look out for the autonomy tour she takes when learners are finding it difficult to access the main idea.

She starts her lesson by showing two very simple electric circuits. They both have a cell (for energy), an ammeter (flowing), a light bulb and a resistor. The only difference bet the resistance is higher, and in the other circuit it is lower.

Circuit A



Circuit B



She starts her lesson asking learners to think about how the different resistors make it easier or more difficult for electric current to flow in the circuits. She asks learners to predict how brightly the light bulb will shine in each circuit.

The learners struggle to understand the concept. Mrs Moloi tries several times to explain how the thickness[1] of a resistor affects how much electric current will flow in the circuit. The learners still do not understand the concept. Eventually, Mrs Moloi decides to take an 'autonomy tour'. She fetches an object that is irrelevant to the lesson topic, but familiar to learners. She uses it to help the learners predict which circuit light bulb will shine brighter.

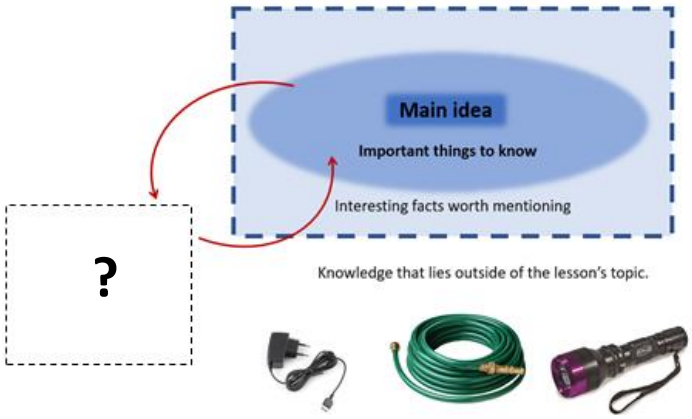
[1] Mrs Moloi will need to teach her learners that thickness of a wire is not the only variable that affects the resistance of a wire, but in this lesson, that's the variable on which she focuses.

Task 3.2: Selecting knowledge in Mrs Moloi's lesson

1. Which of the statements given in the block is the *main idea* of Mrs Moloi's lesson?
2. Which ones are *important things to know*?

- Circuit A and B are made up of a cell, ammeter, light bulb and a resistor joined by a wire.
- The brightness of a light bulb depends on how much current flows in an electric circuit.
- In a series circuit, electric current follows a single path.
- Electric current flows easier through resistors that have thicker wires.

3. Which object did Mrs Moloi use in an autonomy tour to help learners understand the main idea?



Recap

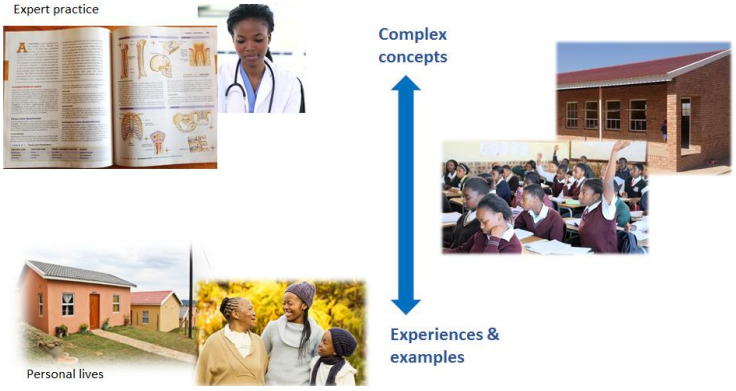
School gives learners access to complex concepts so they can understand and explain parts of the world, and even change it. But complex concepts are difficult to teach and difficult to learn. Remembering a list of facts is not the same as understanding a concept. Teachers give learners access to complex concepts when they focus their lesson on main ideas. They sometimes need to bring in knowledge from elsewhere to help learners understand the main idea of a lesson.

Teachers sometimes take 'autonomy tours'. They fetch examples or objects from beyond the lesson topic and bring them into the lesson. It's one way of making unfamiliar ideas more understandable for learners. It is important for teachers to get learners' attention back to the main idea of the lesson.

3.2 Sequencing lessons

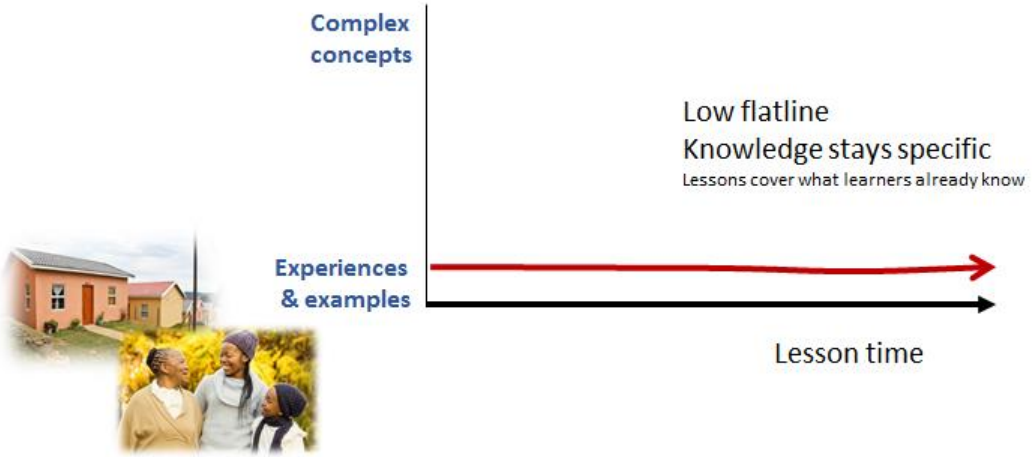
Keeping learners busy during lessons does not mean that what they are learning is always worthwhile. A learning pathway should give learners access to more complex knowledge over time. Learners need opportunities to think about complex concepts. They also need to see how complex concepts can help them understand what is going on in the real world around them and beyond.

It is possible to have lessons where teaching is happening but not much learning is taking place.

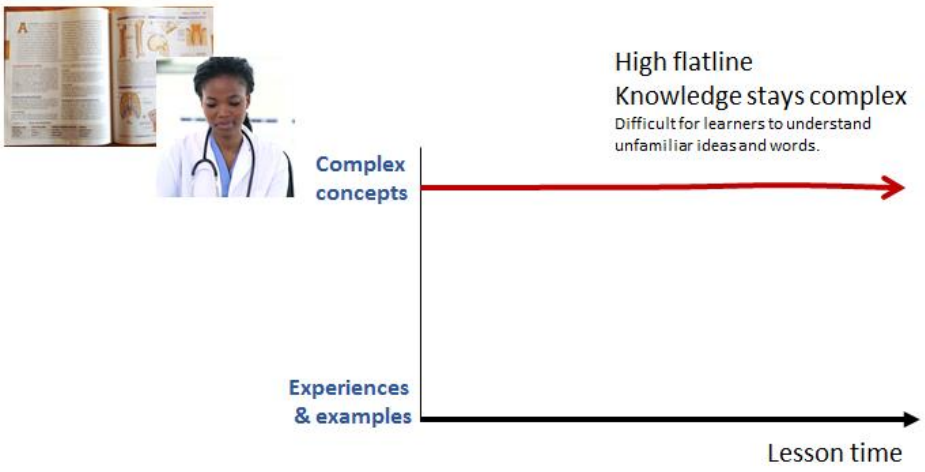


Here are two ways in which teaching may not result in much new learning:

- If lessons always focus only on experiences and examples, learners do not get access to complex concepts. Complex concepts give them new ways of thinking about their experience and the world around them. When lessons cover what learners already know, instead of a semantic wave, the learning pathway can be represented as a low flatline over time.



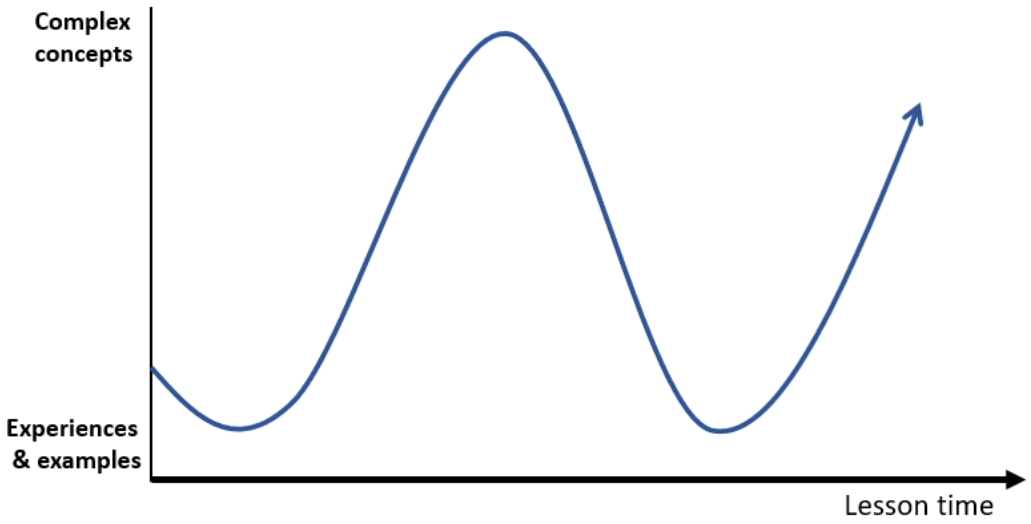
- If teachers use only complex concepts in their lessons, learning is disconnected from examples and experience. It is more difficult for learners to understand new ideas. Instead of a semantic wave, the learning path of the lesson can be shown as a high flatline over time.



Teachers need to work at helping learners have conversations that bring together complex concepts and real-world experiences/examples. Lessons that have only low flatlines or only high flatlines can do this successfully.

Learning pathways have semantic waves

It is useful to think of lesson steps as '*semantic waves*'. Semantic waves represent how the learning pathway moves between *complex concepts* (shown at the top), as well as *experience and examples* (shown at the bottom) and back again (Maton, 2014).

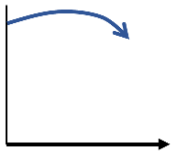
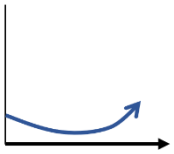
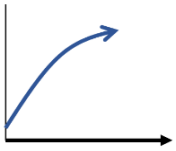
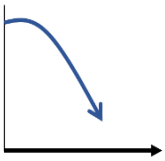


Parts of semantic waves

Semantic waves are made up by combining four parts:

- *High*: where the conversation is about complex, abstract concepts
- *Low*: where the conversation focuses on real-world examples and personal experiences
- *Upward*: where the conversation becomes more complex
- *Downward*: where a complex concept is explained in ways that are easier to understand

Here is a summary table showing the shapes and characteristics of the parts of a semantic wave:

High		Focus on theory, concepts and procedures. General ideas that apply over many different situations.
Low		Focus on experience and examples. Specific cases that are tied to particular situations.
Upward		Adds more detail or theoretical understanding to increase complexity. Looks for patterns or a rule from studying different examples or experiences.
Downward		Explains concepts in more understandable ways, using simpler words, ideas. A move from theoretical ideas towards real-world examples.

Semantic waves are made when these four parts are put together. They help teachers think about how to ensure that their lessons have conversations that move between complex concepts and examples/experience.

Semantic waves are also important because they can assist teachers in thinking about the best order or *sequence* for their lesson steps.

The next section will look at semantic waves that have different starting points.

- First, we will look at a lesson where the conversation starts with a complex concept. The semantic wave starts high, and needs to go low and move back high again.
- Second, we will look at a lesson where the conversation starts with examples or experiences. The semantic wave starts low. The semantic wave needs to move high and back down again.

3.2.1. When semantic waves start high….

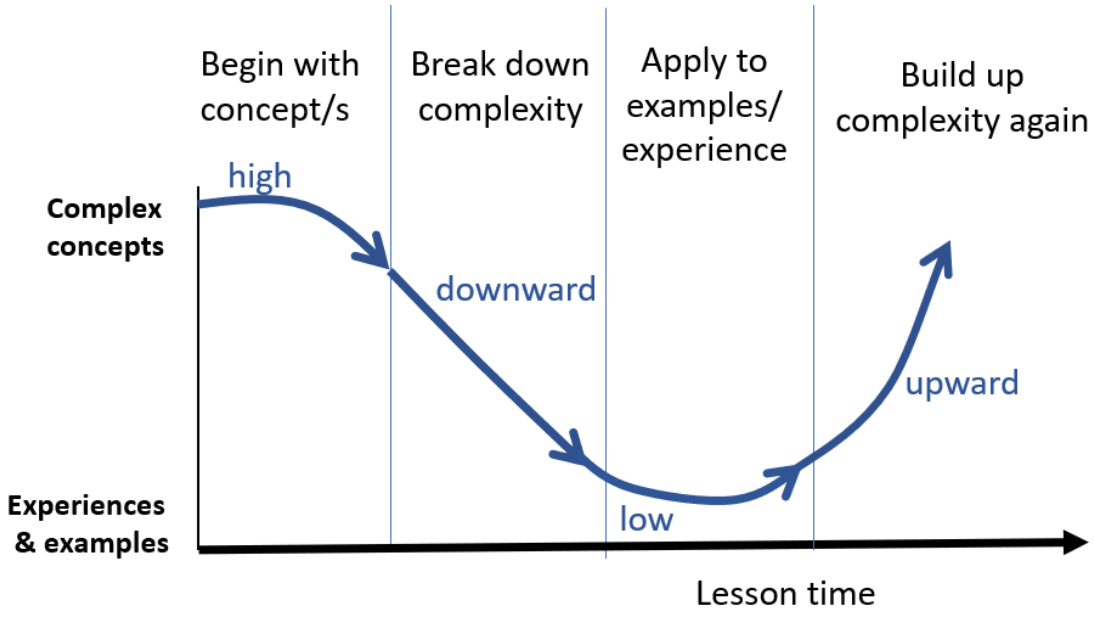
A lesson that starts with a teacher introducing a complex concept has a semantic wave that begins *high.* The teacher may say something like, "Today we are going to learn about …." or "Who knows what is meant by ……?" They introduce a concept that is the topic of the lesson. There might be a few learners who know what that concept means but many would not.

In lessons like this, teachers then move to a *downward* part of the semantic wave. They may ask learners to explain their understanding in their own words. Those who know could try, but those who do not know would not be able to participate in giving a response. The teacher then works with learners to break down the complexity of the concept into simpler form. To do this, they may use easier words, or they may break the concept down into simpler parts.

The main idea of the lesson is made even more understandable by linking with examples or experience. The semantic wave is at its *low* part.

It is important for learners to have an opportunity to turn their new knowledge back into a more complex form. The semantic wave must shift upward again. Learning tasks are not just a way of keeping learners busy during school time. They are one important way for teachers to ensure that learners have opportunities to put the simpler ideas into more complex forms of knowledge. The semantic wave needs to end at a high part with learners looking for connections between ideas, or with the teachers recapping the main idea of their lesson.

This diagram shows that when lessons start with a complex concept, its semantic wave starts *high*, and needs to move *downward*, spend some time in a *low* part, and then shift *upward* again:



Something to do: In the Lesson Library (www.teachingprac.co.za), observe the Grade 12 Physical Science lesson on Acids and Bases. Watch how the teacher starts the lesson by explaining several complex concepts. Afterwards, he then works with examples.

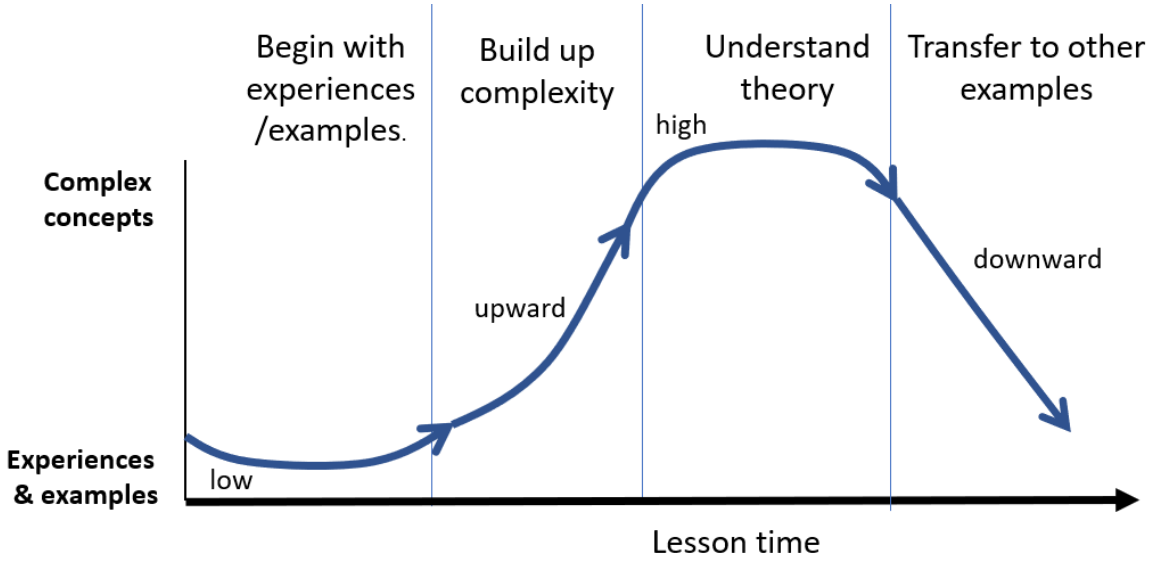
3.2.2 When semantic waves start low….

When semantic waves start *low,* lessons start with teachers inviting learners to share their experiences on a particular topic. Or, they may introduce learners to a story, an example or a resource to which they can relate. In these cases, the semantic wave of the lesson starts *low*, with real-world experiences or examples. For cumulative learning to happen, the lesson needs to build learners' experiences and examples into more complex knowledge.

The teacher may use a range of carefully selected examples and guide learners to find a pattern. In the process of recognising a pattern from studying different examples, the semantic wave moves *upwards* towards more complex knowledge.

At the *high* part, the teacher spends time introducing a pattern, a rule or a concept, sometimes with specialist terminology. The learners are introduced to more detail about the concept. When the concept is well understood, the semantic wave moves *downwards.* The concept is then applied to a different situation, problem or another example.

Semantic waves that start low need to move upward, spend some time in a high part, and then shift downward again.



You may notice semantic waves in stories, conversations, song lyrics, newspaper reports - in fact anywhere where knowledge shifts between abstract concepts and real-world examples. Semantic waves are also used to help university students write better academic and reflective essays (for example, see https://www.youtube.com/watch?v=P-NPNeNtr_8).

Now that we know that semantic waves have four parts that can be arranged in different sequences, it is time to identify semantic waves in different learning materials. First, we will look at the semantic wave in a reading text. Second, we will look at a semantic wave in a WhatsApp conversation. Third, you will have the opportunity to find a semantic wave in a recorded lesson.

A semantic wave in a reading text

Learning pathways can be understood as semantic waves that move up and down between *complex concepts* and *experiences/examples* over time. Semantic waves can be seen in the texts used in classrooms. Meaning shifts between complex concepts and experience/examples in university and school texts. They can also be seen in very simple reading texts used with young learners.

We return to the reading text on joints:

What are joints?
Joints are places where bones meet. Bones are hard and rigid, so they cannot bend. Joints connect the bones so the body can bend.

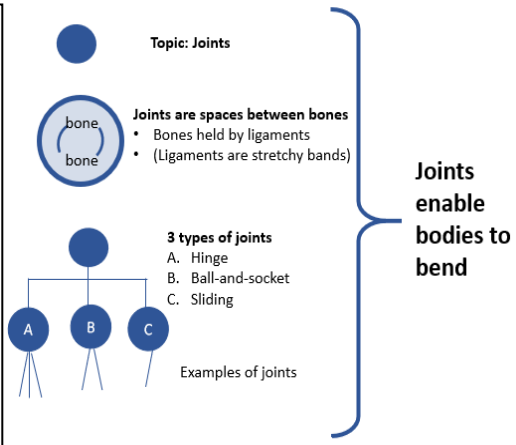
The bones at a joint are held in place by stretchy bands called ligaments. These hold the bones tightly but allow them to move as well.

How many different joints are there?
There are three main types of joints:

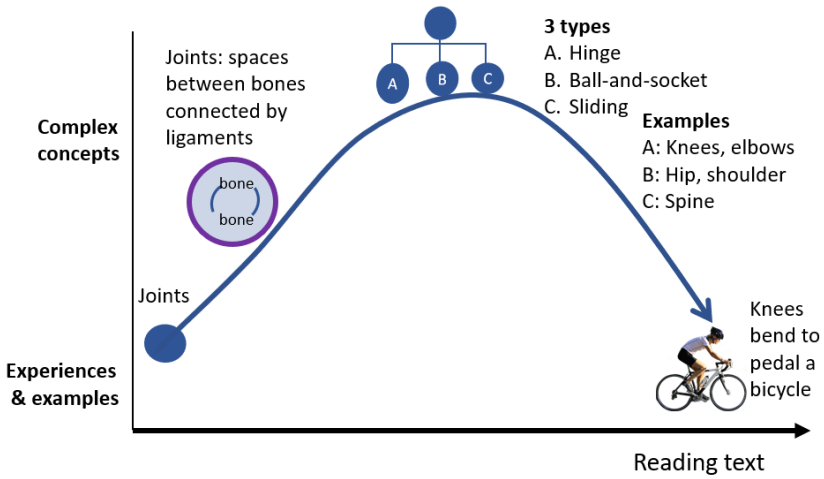
- There are *hinge joints* at your knees, elbows and in your fingers and toes. These joints are like the hinge on a door because they only bend in one direction.
- There are *ball-and-socket joints* at the shoulders and hips. Ball-and-socket joints allow movement in all directions.
- *Sliding joints* exist where two flat bones meet. There are sliding joints between the bones that make up the spine.

Joints allow our bodies to bend when we move, work and play. The bending of knees is very important when riding a bicycle.

Extract from:
Spilsbury, L. 2011. *Head-to-Toe Body Questions*. Crabtree Connections.



The reading text on joints seems simple yet it is building knowledge in interesting ways. It takes a topic (joints), and gives more details. It introduces parts and explains how these parts are connected together. This builds more complex knowledge. It introduces the reader to a classification system, with different of types of joints. It gives examples of each one. The text then introduces a real-world situation, in which joints have relevance.



A semantic wave in a WhatsApp conversation

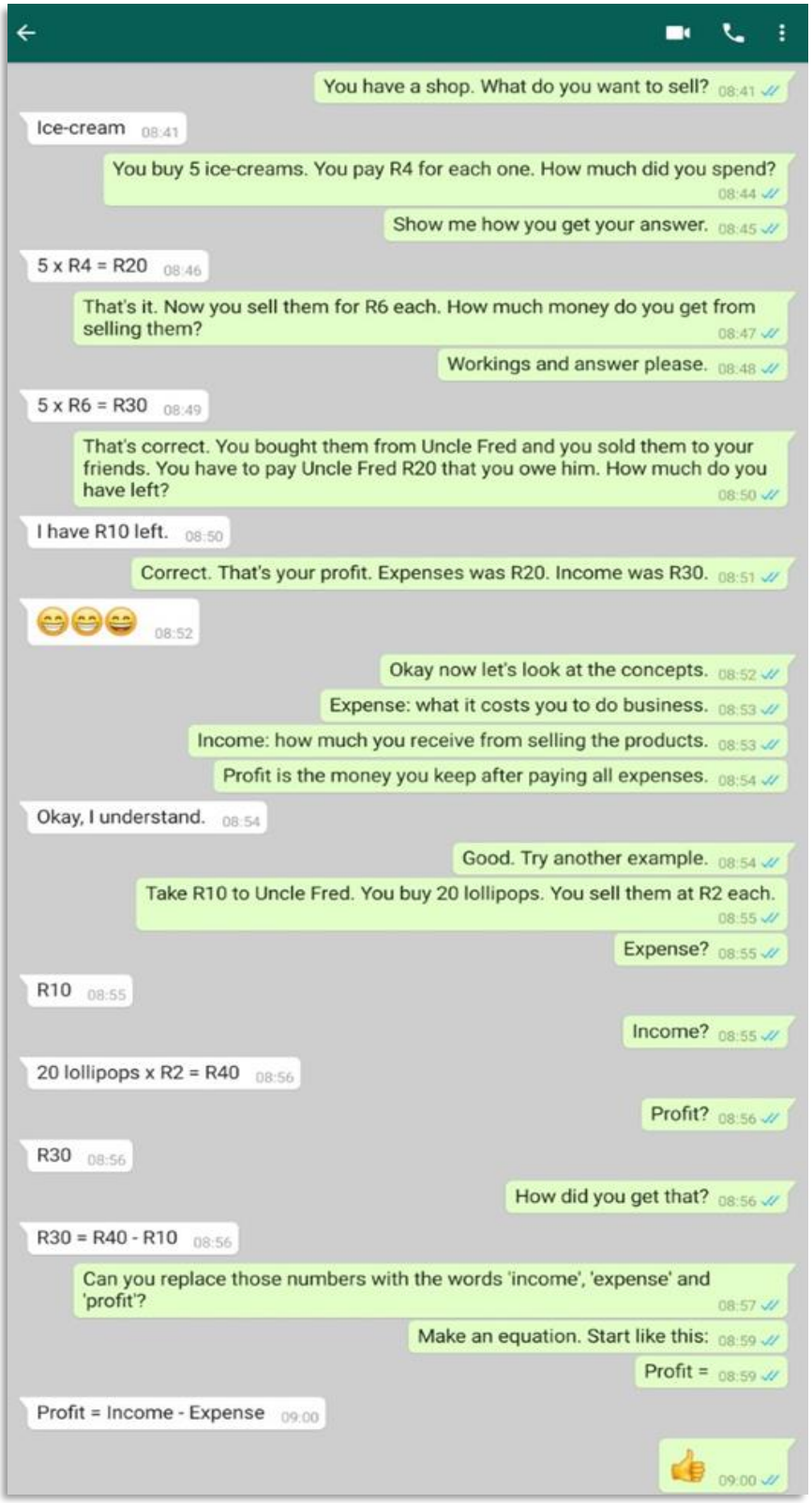
Read Ms Flanagan's WhatsApp conversation with a Grade 8 learner again.

The learner had struggled with a Mathematics problem because he didn't understand the concepts of income, expenses and profit.

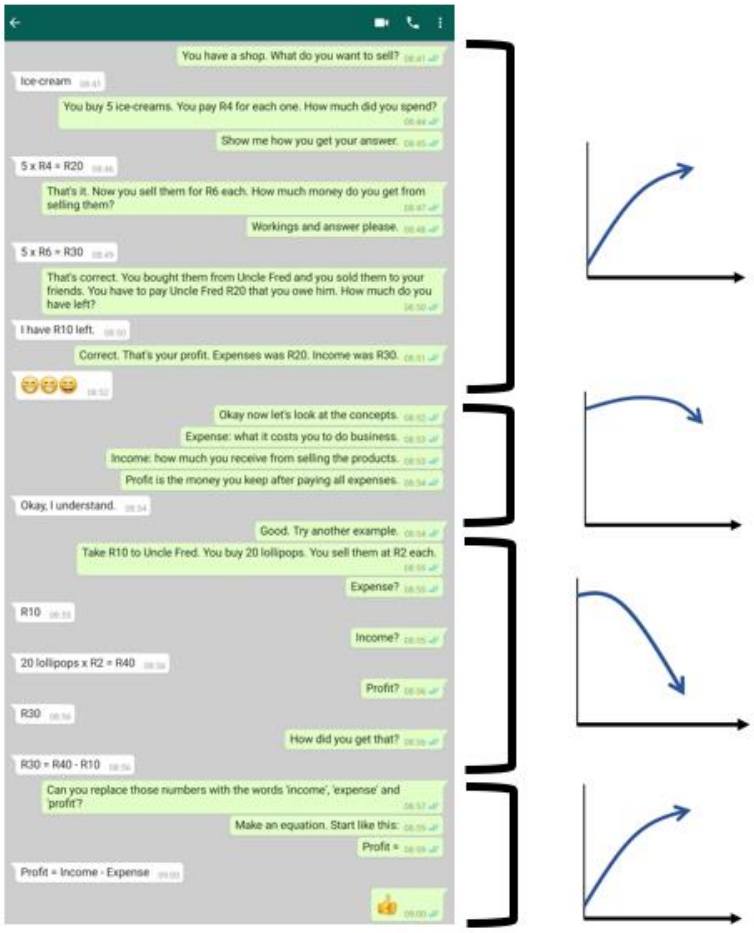
Ms. Flanagan uses a semantic wave that starts low to build his knowledge.

Can you identify the low, upward, high and downward parts of the semantic wave in this text?

Putting the low, high, upward, downward parts together shows how the learning process in the WhatsApp messages forms a semantic wave with four distinct parts



Semantic waves help to identify the learning moves in this conversation.

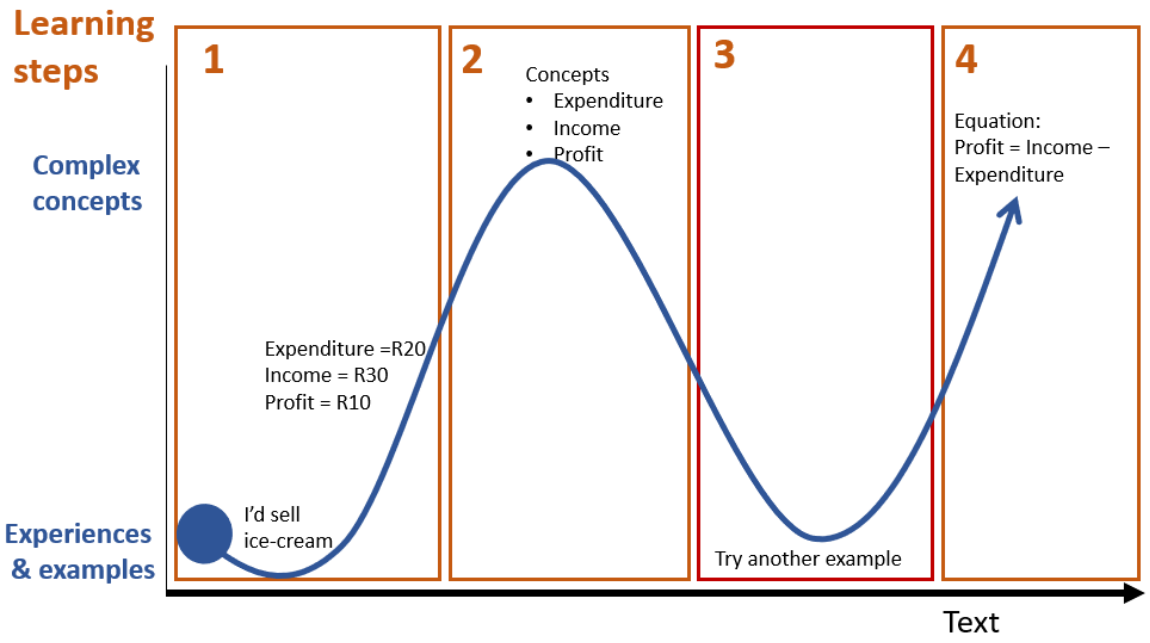


STEP 1: The teacher first uses an example to introduce the concept. Her teaching takes an *upward* shift towards the concepts she wishes to explain.

STEP 2: The teacher reaches the *high* part of the wave when she introduces the concepts and what they mean.

STEP 3: Ms Flanagan checks if the learner can use the concepts in a different example. The semantic wave shifts *downwards*.

STEP 4: The next step of the learning pathway is to check if the learner can use his understanding to connect the three concepts in a more complex mathematics formula.

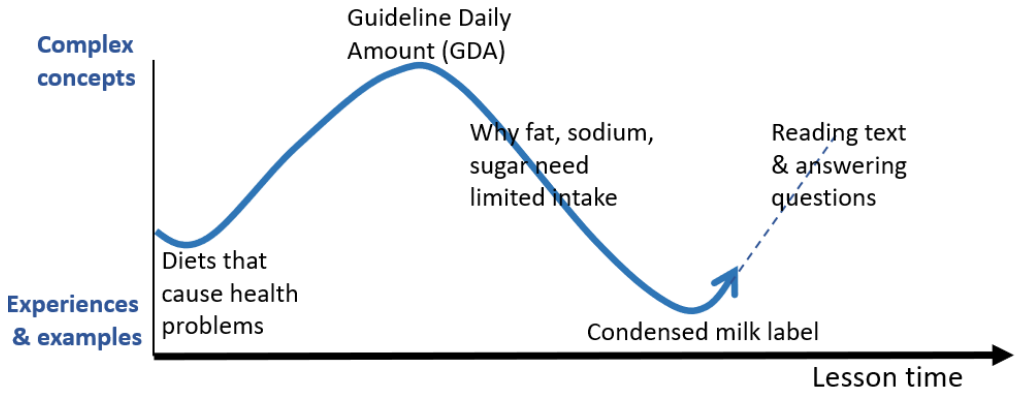


Semantic waves in lessons

Read the transcript (at the end of this unit) of a Grade 11 Consumer Studies lesson on nutritional information on food labels.

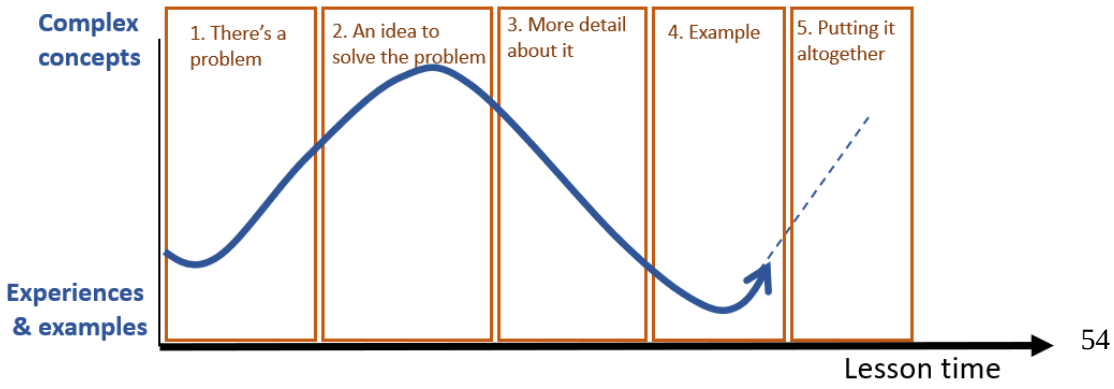
Notice how the teacher shifts knowledge from examples to the concept of Guided Daily Amount (GDA) and back to examples.

From studying the lesson, we see that there are five parts of the semantic wave.



- In the first step the teacher discusses a problem with the learners.
- Next, she introduces the way that government and health professionals think the problem could be solved.
- In the third step, learners work to consider which nutrients should be consumed in limited amounts and have a listed GDA.
- In the fourth step, the teacher looks at a real-world example.
- In the fifth step, she finishes the lesson off by giving the learners a reading task that enables them to put all their new knowledge together.

These five steps make up the conceptual moves of the learning process in her lesson, as shown in this diagram:

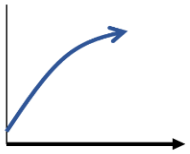
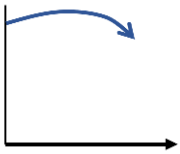
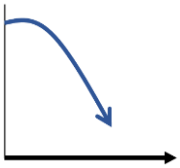
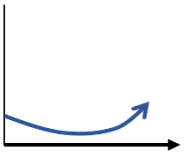
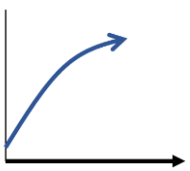


Task 3.3: Lesson steps as the parts of semantic waves

On the Transcript of the Grade 11 lesson on Nutrition labels, identify where the teacher:

- Focuses on patterns from a number of examples
- Introduces and explains a new concept
- Asks learners to break the concept down and examine its parts
- Applies the concept to a real-world example

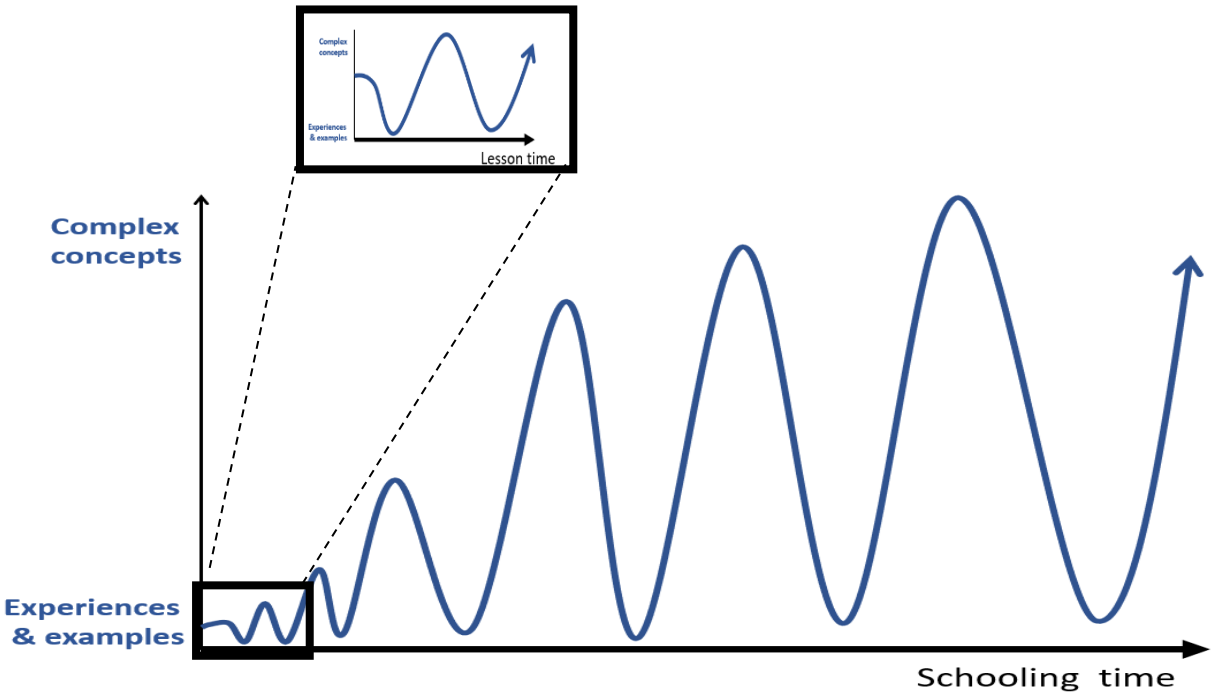
Use the summary table below to identify the part of the semantic wave.

Lesson step	Part of the semantic wave	Working with knowledge	Knowledge focus
1	Upward 	There's a problem!	Too much fat, sugar and salt in diet causes many health problems
2	High 	An idea to solve the problem	Put GDA (Guideline Daily Amount) on food labels
3	Downward 	More detail about it	Why fat, sodium, sugar are needed in the diet but in limited amounts
4	Low 	Example	GDA on the label of condensed milk tin
5	Upward 	Putting knowledge altogether	Reading text & answering questions

Semantic waves over time

Lesson steps can be understood as parts of semantic waves that move between complex concepts and experiences/examples. Using semantic waves to plan lesson steps, helps teachers connect complex ideas with learners' experiences and real-world examples. They can also make sure that the knowledge is understandable for learners, and that learners do not spend all their class time busy with what they already know.

Over longer periods of time, semantic waves combine with one another over a set of lessons. Semantic waves get larger as learners progress through grade levels at school. Although the semantic waves in Foundation Phase classrooms might work with basic concepts and learners' personal experiences, in the higher grades, the waves reach higher levels of complexity and use case studies. Concepts introduced at the lower grades should become more complex as learners progress through their schooling.



Recap of Unit 3:

Teachers' choices that work with knowledge

This unit has focused on how teachers work with knowledge in their lessons.

Filling lesson time with different activities may keep learners busy, but it does not guarantee a pathway for learning. Working with knowledge is not about telling children bits of information. Memorising a collection of facts does not lead to learning that gets more complex over time. Giving learners access to complex knowledge is one way in which teachers empower learners. To do this they need to offer knowledge-rich lessons with learning-focused activities.

This unit's most important ideas:

- Making appropriate choices for selecting knowledge and sequencing lesson steps requires the teacher to have good subject knowledge.
- Teachers need to make sure the lesson focuses on the main ideas and does not become simply lists of unimportant details.
- Teachers sometimes use one kind of *autonomy tour* to make difficult concepts more understandable and engaging: they fetch examples from outside the lesson topic, another subject or topic and bring it back to the main idea.
- Lesson steps can be understood as the high, low, upward and downward parts of semantic waves.
- Semantic waves of lessons should become higher as learners move through a series of lessons, and as they progress through the schooling system.

Reflection on Unit 3:

Teachers' choices that work with knowledge

Please answer these two questions about your learning in this unit

1. What links did you notice between this unit and coursework you have studied thus far?

2. What links did you notice between this unit and your previous experiences in the classroom?

Additional resources and reading

To learn more about working with knowledge, you are urged to become familiar with the following:

- Moll, I., Bradbury, J., Winkler, G., Tshule, M., van Voore, M. & Slonimsky, L. Learners and Learning. SAIDE. (Free to download from https://www.oerafrica.org/system/files/8803/learners-and-learning-guide_0.pdf?file=1&type=node&id=8803&force=1)

- Hugo, W. (2014) Cracking the code to educational analysis. Pearson: Cape Town.

  Prof Hugo's Cracking the Code videos and examples https://www.oerafrica.org/resource/cracking-code-educational-analysis-22-video-series-freely-available-youtube

- Webpage on semantic waves, includes blogs by teachers: http://legitimationcodetheory.com/practice-and-impact/semantic-waves/

- Maton, K. (2020) Chapter 3 Semantic waves: Context, complexity and academic discourse. *Accessing Academic Discourse: SFL and LCT*. Routledge.

- Maton, K. & Howard, S. K. (2018) Taking autonomy tours: A key to integrative knowledge-building, *LCT Centre Occasional Paper* 1: 1–35.

- http://legitimationcodetheory.com/publications/lct-centre-occasional-papers/

Resources

Grade 11 Consumer studies: Guidelines for Daily Allowance

(The lesson begins with the teacher having written the heading 'Micro Nutrients' on the left side of the whiteboard and 'Macro Nutrients' on the right side.)

Teacher : I'm not sure if you remember but last lesson we were talking about RDA.

(The teacher writes RDA under Micro Nutrients)

Teacher : Can anyone remember what an RDA is in terms of Micro Nutrients? Let's go back and say what are Micro Nutrients? They are your minerals and vitamins so they're all your vitamins and all your minerals. Why do we need vitamins and minerals in our diet?

(The teacher interacts with the class and repeats what individual learners say while writing on the whiteboard as she speaks. She writes the following on the board

- *Release energy*
- *Build bones and teeth*
- *Immune system*

Teacher: Some of them do release energy particularly vitamin B complex and they build bones and teeth. What else do they do? What is very important right now?

A learner: The immune system

Teacher: They make sure that we have a strong immune system. Where do we get these micro nutrients from?

A learner: Food!

Teacher: Food! Not all food has them so we need to eat a variety of food so that we have a balanced diet. Now can you work out what the RDA acronym means?

Learners & Teacher:
R – Recommended
D – Dietary
A – Allowance

Teacher: They recommend that we have various vitamins and minerals in our diet and we eat a variety of foods so that we can have energy. The Department of Health decided that the RDA is very important and then they realised, after putting out these tables in doctors' rooms and at health practitioners and dieticians, that people were still getting sick. What else makes people sick? Not like Covid19 sick but rather sick that develops over time caused by themselves. What kinds of diseases are caused by bad lifestyle?

A learner: Diabetes!

(Teacher writes the word 'Diabetes' on the whiteboard with an arrow pointing to the cause sugar)

Teacher: Diabetes! Do you know what diabetes means?

A learner: You can't convert the sugar into glucose

Teacher: Yes, you can't convert the sugar into glucose. Why do you need to convert sugar into glucose?

A learner: Because that's the simplest form that releases energy

Teacher: Where is it released? Where does sugar get converted into glucose? In your body. The pancreas releases insulin which allows the sugar to be broken down and absorbed. If I have too much sugar or if my pancreas is not working, I can get diabetes. I can get it in two ways - either I have the gene and there is nothing I can

do about it, as it is not caused by anything that I have done wrong, or I eat badly and get diabetes. More and more people are getting diabetes and it is becoming a big problem. Yes, that is one bad disease that we can cause ourselves to get. What other diseases do we cause ourselves to get?

A learner: Obesity!

(The teacher writes 'Obesity' on the whiteboard)

Teacher: What does obesity mean? It's not just fat. What classifies one as being obese?

A learner: When your BMI (Body Mass Index) is over 34 point something?

Teacher: Yes, when your BMI is about 34, then you are classified as being obese. And that's bad. Why?

A learner: You get cardiovascular diseases

Teacher: Yes, cardio is to do with the heart. What kind of diseases do we get of the heart?

A learner: Heart attack

(Teacher writes Cardio and heart attack on the board under obesity)

Teacher: What causes a heart attack?

A learner: When the arteries aren't able to give blood to your heart

Teacher: Why wouldn't your arteries be able to give blood to your heart? Because you would have a clot and have cholesterol. And what causes our cholesterol levels to go up?

A learner: Saturated fats!

Teacher: Ah! You said fats and they have to be saturated fats. What does saturated mean? It means it is full of hydrogen. What else, where does it come from? Something to do with clotting of the arteries. What does saturated fat do to our cholesterol levels? If you eat too many saturated fats, your LDH which is supposed to stay low, gets raised and that is not good. And then what do the LDL's do?

A learner: The LDLs like to group

Teacher: The LDLs love to stick together and when they stick together, they block your arteries and then the blood can't get through and you have heart attacks. What else causes heart attacks? You could have a stroke which means that you have a clot that goes to your brain. But you can have heart attacks from something else. It could be low weight because you do not have enough energy for your heart to work but there is another thing that we do to our bodies that causes our arteries to get floppy and the floppier they get, the bigger they get and the harder the heart has to work to get the blood through. What causes floppy arteries? A nutrient or food that we eat too much of? It's not sugar or starch. It's a mineral which is going to affect the heart. We eat a lot of it because we love it.

A learner: Sodium!

Teacher: Too much sodium also causes heart attacks. Sodium is in most foods and when we have too much sodium, it makes our bodies retain water and we have a lot of blood and our arteries get weak and floppy and your heart has to work really hard to get that blood through and then you can have a heart attack and a stroke as well. So what the Health Department did was think of how else they could encourage people to be healthier and they decided that, if we have guidelines of daily amounts of certain nutrients and food, we could possibly make a difference.

(Teacher writes GDA on the whiteboard

G – uidelines of

D - aily
A – llowances)

Teacher: They decided to choose five foods or nutrients that were going to be given to people with warnings not to go over. Can you guess what foods or nutrients they chose to put on food labels? They said that we need fats but not too many. What else do you think they said?

A learner: Salt

(Teacher writes Fats and Salt on the whiteboard)

A learner: Sugar!

(Teacher adds Sugar to the list on the whiteboard)

A learner: What about calcium?

Teacher: They didn't worry about calcium

Teacher: Which is the bad fat?

A learner: Saturated Fat

(The teacher adds 'Saturates' to the whiteboard)

Teacher: What do fats and sugar together give you? When we eat them what is their main purpose? Why do we eat carbohydrates and fats?

A learner: For energy!

Teacher: For energy. So they said that we need a certain amount of energy. And energy is measured in?

(The teacher adds 'energy' to the list under 'saturates')

A learner: Kilojoules!

(The teacher writes the work Kilojoules next to 'Energy' on the whiteboard)

Teacher: So I want you to think about these five things and I want you to think why we need each one of them. I'm going to give you a piece of paper and just write down those five things – Fats, Salt, Sugar, Saturates and Energy. You are going to discuss why you think that they are important and why do you think we have to restrict them?

(The teacher splits the small class in two groups to work together)

A learner: Do we have to say why they are good and bad?

Teacher: Yes!

A learner: Must we say the long-term risks?

Teacher: Yes, you could!

(The learners have completed their group task and the teacher goes over the five foods/nutrients and begins with fats)

Teacher: Let's look at fats. We need them, why?

A learner: They carry fat soluble vitamins

Teacher: They carry fat soluble vitamins. Why else do we need them?
A learner: For energy
Teacher: Definitely for energy. Why are they such an important factor for energy? Can you remember how many kilojoules there are in a gram of fat?
A learner: 37
Teacher: 37 kilojoules, is that a lot or not so much?
A learner: A lot!
Teacher: It is a lot in comparison to carbohydrates and proteins. Can you remember how many they give you?
A learner: 30
Teacher: Actually 17 but well done! What is bad about fats? You can't use all the energy that they give you. Why do you like to eat so many fats in your diet? Because it makes the food taste good and it fills us up and gives us satiety levels. Now is there anything good about saturates?
A learner: They can give you energy
Teacher: They can possibly give you energy. What's the very bad thing about saturates?
A learner: They raise your cholesterol levels
Teacher: Any why is that bad?
A learner: Do they raise the LDL or the HDL? Which one is bad?
Teacher: They raise the LDL – the one that has to be low and they make the happy (HDL) ones have to work harder. So they raise your LDL level and what is wrong about that?
A learner: They are supposed to be low
Teacher: And if they get high then what happens?
A learner: Your arteries have problems and then you have a heart attack or a stroke
Teacher: What's wrong with salt? What's good about salt?
A learner: It challenges your water balance
Teacher: And why do you need your water in your body and in all your cells to be balanced?
A learner: So it can be transported
Teacher: So it can be transported and we don't dehydrate. It is not good to dehydrate – you can die.
A learner: It is also central for nerve and muscle function
Teacher: Yes. You know when they run Comrades and then they bomb out and have to go on drips, they get salt and sugar in the drips because they have dehydrated their bodies. If they don't have the drip, they are in danger of having a heart attack. Their bodies can't function because there is not enough water in their bodies. What's wrong with salt?
A learner: It can increase your blood pressure
Teacher: It can increase your blood pressure and we noted in South Africa that our blood pressure levels are very, very high and once you have high blood pressure there is nothing you can do about it. You've got it for the rest of your life and you have to take medicine every day for the rest of your life. What's the problem there with having to take medicine every day for the rest of your life? What is it bad for? Your pocket! You have to go to the doctor and you have to pay for it. You could have a heart attack without the medicine. Then they looked at sugar. Why do we need sugar in our diet?
A learner: It gives you energy
Teacher: It gives you energy. What is sugar actually classified as - as a nutrient?
A learner: As a carbohydrate
Teacher: As a carbohydrate. So we know that carbohydrates give us energy. What's the problem with sugar?

A learner: You can get diabetes
Teacher: You can get diabetes. What makes sugar a baddie?
A learner: It releases energy too quickly
Teacher: It releases energy too quickly and when we talk about sugar it is either a monosaccharide or a disaccharide. What does that mean?
A learner: They are simple sugars
Teacher: They are both simple sugars but what does that mean?
A learner: That the sugar is broken down very quickly
Teacher: Yes, very quickly and that's how our bodies use sugar. Then they looked at energy values. What does energy value mean? Why do we need energy?
A learner: To function
Teacher: Yes to function, to breathe, to sleep. Every time we need extra energy we need to ensure that we have it in our bodies. They know that these five things were rather problematic and they decided to put them on labels but not all manufacturers wanted these on their labels so some did and condensed milk was one of them.

(The teacher picks up a tin of condensed milk)

Teacher: I'm going to send you a GDA label on your phones

(The teacher sends the class a WhatsApp photo with the label of condensed milk to their cell-phones and then proceeds to read and discuss the label with the class emphasising the various food groups and discussing the nutritional value.)

Teacher: When you see these guidelines, you need to look very carefully to see how much you are supposed to eat. The Health Department kind of hoped that labelling would sort people out but it didn't. People are still obese, still have diabetes and they still have heart disease so people don't read the labels.

(The teacher then points out and reminds the class that the Guideline for Daily Allowances works on the 5 values, namely, Fats, Salt, Sugar, Saturates and Energy while the RDA works on micronutrients. She then tells the class that the worksheet is on Google class and hands out a sheet of paper for them to read before answering the worksheet.)

UNIT 4: Teacher choices that promote **cumulative learning**

Glossary of Important Terms

cumulative learning	New learning connects with what has been learnt before to form more complex bodies of knowledge over time. Gives access to knowledge and skills that can be transferred to other contexts.
Concept	An abstract idea that puts similar things in a group (e.g. vegetables) or lets us understand the connections between different objects, ideas, processes (such as the water cycle).
complex knowledge	Knowledge where objects and ideas are connected in ways that have significance and meaning.
gaze	A way of seeing what is important and thinking that develops over a long time of learning a subject. It is also called a 'knower' gaze.
high flatline	Knowledge stays complex and abstract over time. Concepts are not unpacked into ways that are easier for learners to understand, nor are links made to real life situations.
low flatline	Knowledge focuses on personal experience and real-world examples, and what learners already know and can do.
semantic wave	Meaning shifts repeatedly between complex concepts and examples/experiences.
subject	A body of knowledge where ideas are connected in unique ways. Specific methods are used to create and verify new knowledge.
thinking skills	The mind processes that develop when learners work with knowledge in complex ways.
transfer	Moving from one problem, example or situation to others.

Tasks in this unit are:

Name of the task	**Expected time on task:**
Task 4.1.: Tasks that promote cumulative learning: A summary	30 minutes
Task 4.2.: Tasks that enable cumulative learning	2 hours
Task 4.3.: How does Mr Potsane promote learning in his lesson?	1 hour
Task 4.4.: Feedback on Slam Poetry	2 hours
Reflection on learning in Unit 4	30 minutes

Introduction

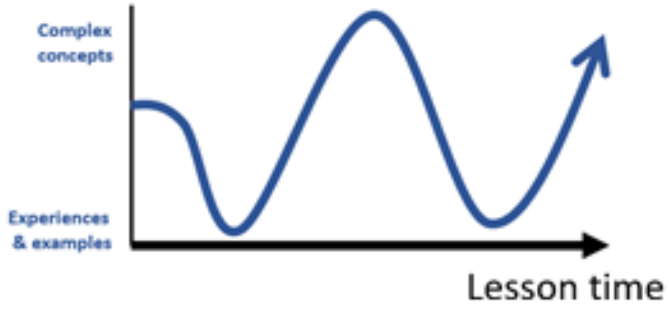
This unit considers how knowledgeable teachers can promote ***cumulative learning*** in their lessons.

For lessons to promote cumulative learning, lessons need to give learners something worthwhile to learn about and something worthwhile to do with that knowledge. Cumulative learning happens when lessons build on concepts and skills that have been learnt before. Knowledge becomes more complex over time as learners make connections between concepts. They also learn to transfer knowledge to real world situations.

Research shows that semantic waves are associated with lessons where cumulative learning happens (Maton, 2014). This module will show you the things that teachers do in their lessons to promote cumulative learning. Cumulative learning is important because it develops powerful ways of using knowledge to understand ourselves, each other and the world in which we live.

Promoting cumulative learning

- Lessons connect ideas to build up a systematic body of knowledge that is relevant in the real world.
- Learning moves between complex concepts and experience & examples in semantic waves.
  - Focus on detail
  - Focus on connections
  - Focus on transfer



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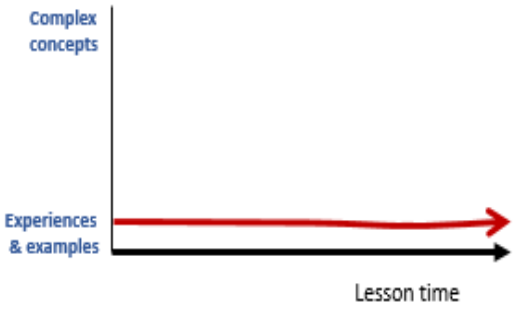
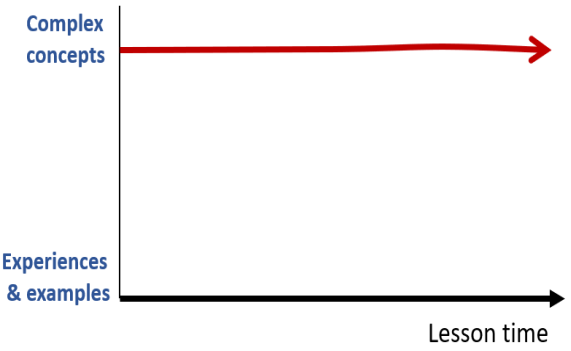
Preventing cumulative learning

There are three ways that lessons **prevent** cumulative learning.

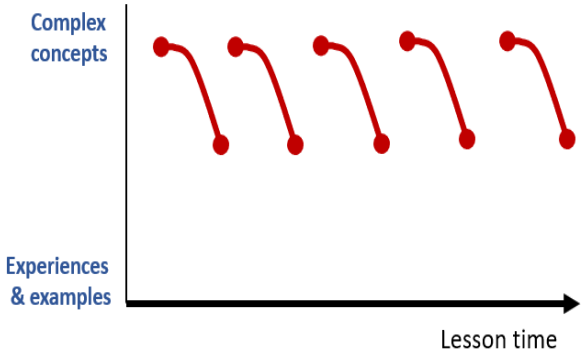
- The first is when conversation is always kept at a *low flatline*. In these lessons, learners only talk about the things they already know. These lessons keep learners busy with fun-filled activities that don't introduce them to unfamiliar knowledge, new skills or different ways of thinking about things.



- The second way that lessons can prevent cumulative learning is when lessons stay at a *high flatline*. The concepts and terminology in these lessons stay very complicated, and the teacher does not explain the concepts in more understandable ways. The concepts are never linked with experiences or examples in the real world. The teacher expects learners to figure it out for themselves and when they cannot, they are left behind.



- The third way that lessons can prevent cumulative learning is represented by disconnected *downshifts*. In these lessons, the teacher introduces a concept and explains it. She moves on to the next concept and explains it. And another. And another. Instead of being powerful bodies of connected knowledge, lessons give learners a list of definitions or examples to learn off by heart. In time, learners have a collection of facts, but these are not connected to each other nor with real world examples.

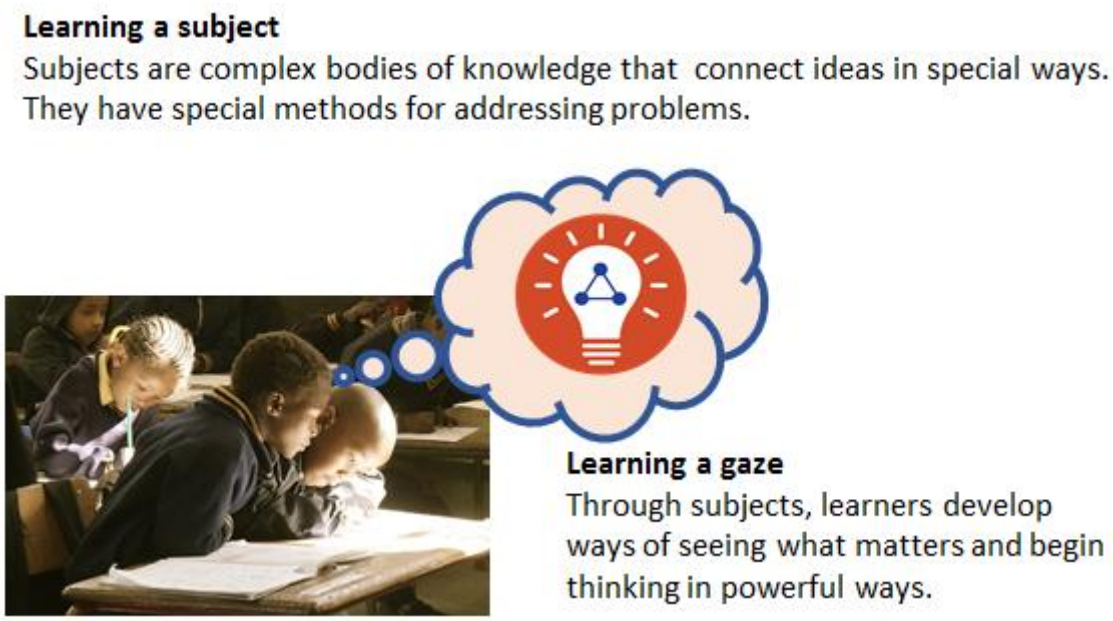


Subject knowledge and knower gazes

Cumulative learning is important to ensure that lessons are not a set of stand-alone sessions where learners learn facts, one topic at a time. Subjects are bodies of connected knowledge that give us deeper understandings about parts of the world. Subjects help us to recognise what is important, explain what is happening, and predict what is likely to happen in the future.

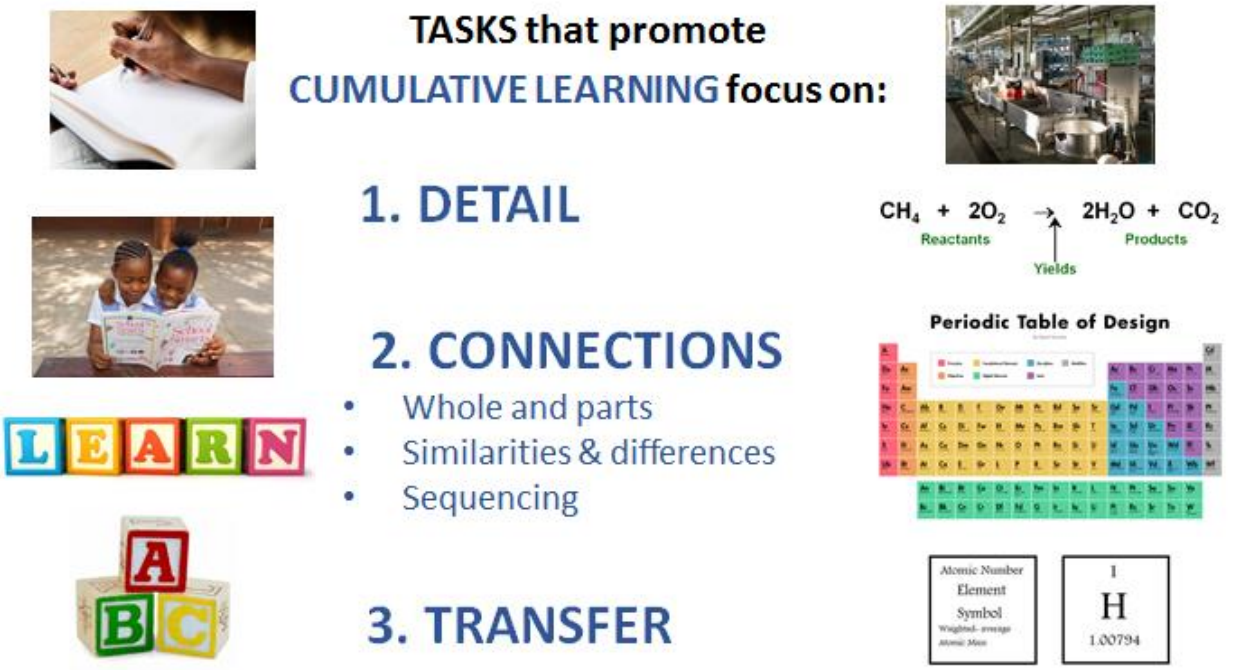
Subjects also teach learners a way of seeing the world and thinking about important issues. This is called a 'gaze'. Some subjects (like Natural Sciences) focus on understanding general laws that govern the universe. Learners are taught to make careful observations and recognise patterns from many experiments. Some subjects focus on mastering specialist procedures (like Accounting), where learners must learn to do things very precisely working step by step. In subjects like Visual Arts, Dramatic Arts and Literature studies, learners study many examples of great works and over time come to recognise why some creative works are so highly regarded. Subjects also give learners opportunities to find meaning and express themselves in specialist ways.

Cumulative learning matters because over time, learners come to know a connected body of knowledge, be it Physical Science, Literature studies, Dramatic Arts or History. Their gaze also teaches them how to think like a scientist, a writer, a performer or a historian.



4.1 Focus on learning tasks

The first section of this unit looks at tasks and how these create opportunities for cumulative learning. When planning a lesson, teachers need to think about the purpose of the learning task, the kind of knowledge with which they want learners to engage, and what they want learners to do with that knowledge. Tasks should also help learners to work with new knowledge so that it becomes more familiar to them. Through learning tasks teachers can find out what learners have understood and what they have not yet understood.



Across subjects, basic building blocks of knowledge are put together in increasingly complex ways. In literacy, letters are the basic building blocks. They combine into words. Words combine into sentences. Sentences are put together to form texts that convey meaning. Recognising letters and reading enables learners to read the ideas written by others. Increased complexity in literacy gives learners the ability to express their views in writing for others to read.

Similarly, elements form the building blocks of knowledge in the field of Chemistry. Chemical elements are arranged into patterns in the Periodic Table. The position of each element gives information about how it reacts with other chemicals. This forms more complex knowledge that is used in manufacturing, mining, food processing and the production of medicines.

In both these cases, knowledge starts with basic building blocks. These connect into more complex knowledge systems that allow learners to use what they have learnt in meaningful ways.

Tasks that promote *cumulative learning* give learners opportunities to think with the knowledge they have learnt and to practice the skills they are developing.

This section will look at three of the ways that teachers can promote cumulative learning through their lessons:

- First, they can add more ***detail*** to what learners already know about a topic.
- Second, they can promote cumulative learning by focusing on the ***connections*** between objects, facts and concepts. This helps learners see that what they learn about is part of a larger body of connected knowledge.
- Thirdly, they can give learners opportunities to ***transfer*** their knowledge to other contexts. For example, they can ask learners to think about its relevance to their personal lives, their community and other real-world problems.

Tasks promote cumulative learning by introducing learners to objects and ideas, understanding how they are connected, and using concepts to take knowledge from one situation and transfer it into other situations.

1. FOCUS ON DETAIL

When learners work with knowledge in more and more complex ways, new learning builds on what has come before. We will use a bicycle as an example to consider how tasks can promote cumulative learning. To have more complex classroom conversations about bicycles later, learners first need to know what a bicycle is and know its basic parts. Complex conversations cannot take place without the relevant language.

Knowing important names, facts and definitions is the first step toward developing more complex knowledge later. No matter the subject, teachers often start a new topic by making sure that learners know the basic words and definitions. When asking learners to remember basic information, teachers need to be careful that they do not focus on memorable but unimportant details. Tasks should direct learners' attention to the details that will become important later.

EXAMPLES

Label these parts of a bicycle

What is a bicycle **gear** system?
Where are the cogwheels attached?

Cumulative learning might ask learners to focus on the bicycle gear system in more detail. It is made up of at least two cogwheels and a chain. Learners would learn that one cogwheel attaches to the pedals and the other to the back wheel. This information is more detailed and adds to the basic information.

Research in South African classrooms shows that teachers use a lot of their lesson time to help learners remember basic information. This basic information is important, but it's not enough for cumulative learning. Learners need to be introduced not only to the parts of the bicycle, but to ideas that lead to deeper understanding.

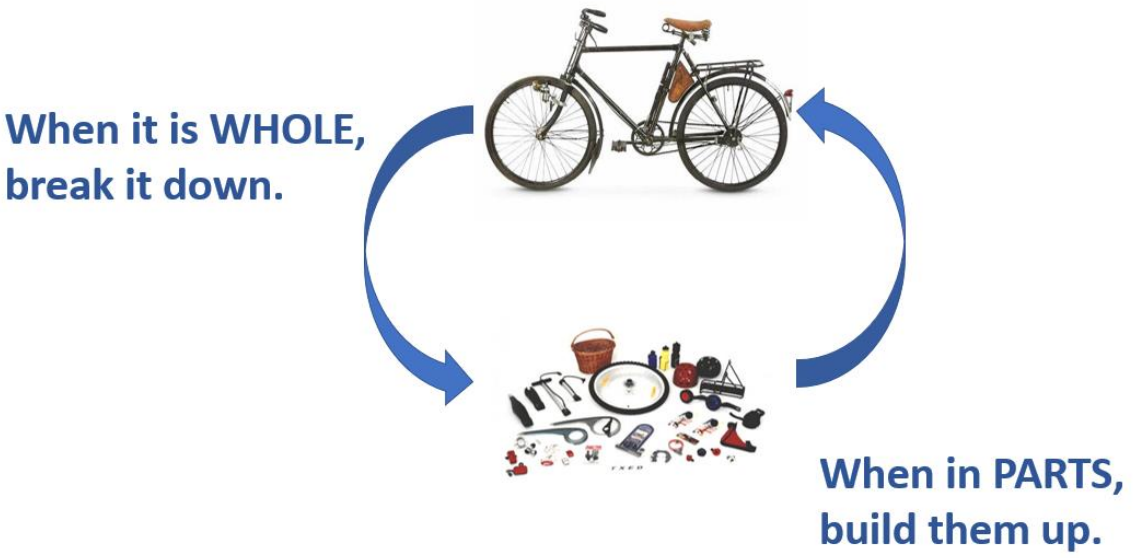
2. Focus on CONNECTIONS

This section considers three kinds of connections that learners can make when working with knowledge: connections between a whole and its parts; connections through classification systems, and connections between steps in a process.

i) Whole-part connections

Understanding the relationships between a whole and their parts means knowing how the parts make up the whole and why those parts are important.

In this example, the 'whole' is a bicycle. As much as a bicycle is a single object, it is also a complex machine made of many parts.



EXAMPLE:
Why do bicycles need gears?
Why is a pedal's cogwheel *bigger than* that of the wheel?

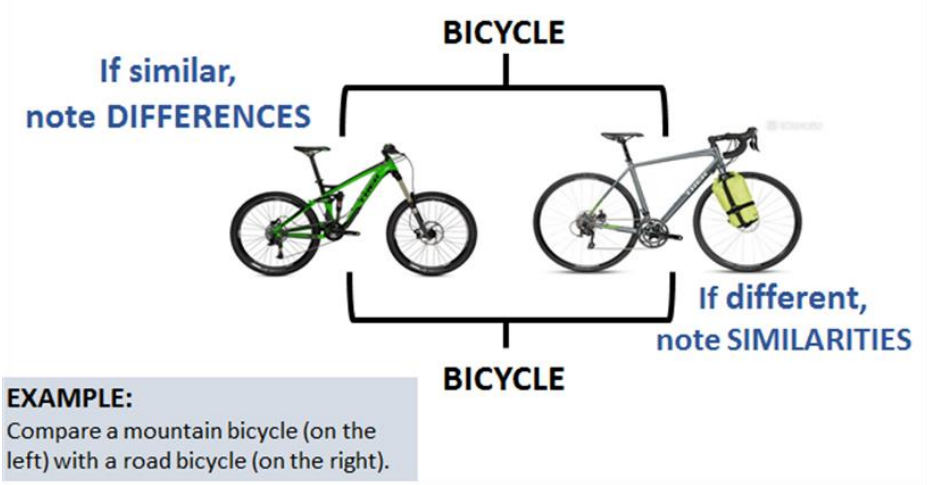
It is basic knowledge that a bicycle has two wheels and a gear system. More complex knowledge means thinking about how a gear system helps a bicycle to move. Would this machine still be a bicycle if it didn't have a gear system?

A 'whole' need not be a bicycle only. A whole could be a poem and its parts could be the words, poetic devices and images used to convey something of our human experiences. Another example of a 'whole' is the digestive system, with its parts being organs (such as the stomach and small intestine). A 'whole' could be a work of art, made up of lines, shapes, colours and positioning that come together to convey a message or portray a feeling or experience. Tasks which focus on connections will ask learners to consider how parts contribute to the meaning of the 'whole'.

Understanding connections means that parts are not just a collection of pieces, but together make something more complex and more meaningful. That is why looking at whole-part relationships promotes cumulative learning.

ii) Similarities and Differences

The second way that tasks can promote cumulative learning is by asking learners to see connections by comparing things. Comparing promotes cumulative knowledge because learners need to understand each object before looking for what is similar or different between them. Tasks encourage learners to notice differences between things that seem similar. They also ask them to notice similarities between things that seem different.



The example given here asks learners to think about the similarities and differences between two different types of bicycles. Tasks that promote cumulative learning through comparison can also be used to think about categories of animals in Life Sciences, or types of triangles in Mathematics.

Classification systems use categories to group objects. Putting things in categories is a way of showing that they have some important things in common with one another, but are also different in other ways. Think of a classification system that has important categories in the subjects you teach.

iii) Connections over time

The third kind of connection task that builds more complex knowledge are those that ask learners to think about connections over time. Sequences are important when the lesson topic is a process that has steps that must be followed in order. Important questions to ask about things where sequence matters is, *'what went before?'* and how does this affect *'what comes next?'* Tasks may ask learners to think why the order of the steps matters.

A bicycle converts the action of pedalling into forward motion. This happens through several mechanical steps. This question shows cumulative learning because learners need to bring a lot of different sets of information together. They need to know all about the components of a gear system and why the gears are important for the working of the bicycle.

- Events occur chronologically.
- Processes have steps that must be followed in the right order.
- Actions have consequences.

EXAMPLE:
How do bicycle gear systems change circular pedalling into forward motion?

In Geography and Natural Sciences there are many cycles, such as the water cycle and life cycles of various animals. Learners need to understand how one event causes another event to occur. In Technology, learners need to understand manufacturing processes. Mathematical procedures, like how to calculate percentages or measure length need to be followed in order. The breakdown and digestion of food follows a sequence. Understanding cause-and-effect is an important part of forces and motion in the study of Physics. Understanding of choices, actions and their consequences is essential in subjects like Life Orientation, Dramatic Arts and History.

Think of important processes from your own subjects.

3. Focus on TRANSFER

You have learnt so far that cumulative learning happens when knowledge becomes more detailed and more connected. Another kind of task that supports cumulative learning is one that requires the transfer of knowledge to a different situation. In lessons, learners' attention is often drawn to a case study or an example, like a flash flood occurrence in a Geography lesson or a poem in an English lesson. When a teacher makes links between an example and general principles, the example studied becomes part of a bigger body of knowledge. A case study or example may help learners understand how they fit in with a bigger body of general patterns and principles. Their learning becomes transferable.

Tasks might ask learners to think about how the main idea applies in their own life or in their local community. Some tasks ask learners to use what they have learnt in another context, like real-life situations. For example, if the topic is the principles of drawing up a business plan, learners could draw up their own business plan for a school Market Day. Or if they have learnt about river water quality in Geography, they could test the water quality in a local river. The transfer of knowledge can help them understand important events or debates in the news.

In our example, the turning of pedals and wheels is connected to the workings of a bicycle gear. Learners need to use their mathematics knowledge and their knowledge of technology, and then transfer this to a real-world example of professional cyclists. Thus, they can start to see how knowledge is transferred across different contexts.

Where is this knowledge useful?

- The lesson topic and learners' own experiences
- Application to other problems in real-life situations
- Transfer of concepts between different subjects

EXAMPLE
The wheels of a bicycle turn 2,75 times for every turn of its pedals. If a cyclist pedals 10 turns, how many times do its wheels turn?

Why does the gear ratio matter to cyclists who participate in races?

Task 4.1: Tasks that promote cumulative learning: A summary

FOCUS OF TASK	*Bicycle image*	*How do tasks promote cumulative learning?*
DETAIL		Tasks reinforce basic information and add detail.
CONNECTIONS		Complexity increases when tasks ask learners to: • break down wholes; build up parts • note similarities and differences • ask what went before and what's next?
TRANSFER		Think about relevance in personal life. Apply knowledge and skills to different situations, and across subjects.

A TEXT & a TASK

Read this text on joints. We shall now look at a set of questions that start to promote cumulative learning. In this example, notice how the questions ask learners to connect their knowledge in different ways.

Read through the teacher's questions (which are in black) and the answers she expects from learners (in *blue italics*).

Each question requires learners to work with their knowledge of joints differently.

What are joints?
Joints are places where bones meet. Bones are hard and rigid, so they cannot bend. Joints connect the bones so the body can bend.
The bones at a joint are held in place by stretchy bands called ligaments. These hold the bones tightly but allow them to move as well.

How many different joints are there?
There are three main types of joints:

- There are *hinge joints* at your knees, elbows and in your fingers and toes. These joints are like the hinges on a door because they only bend in one direction.
- There are *ball-and-socket joints* at the shoulders and hips. Ball-and-socket joints allow movement in all directions.
- *Sliding joints* exist where two flat bones meet. There are sliding joints between the bones that make up the spine.

Joints allow our bodies to bend when we move, work and play. The bending of knees is very important when riding a bicycle.

Extract from:
Spilsbury, L. 2011. *Head-to-Toe Body Questions*. Crabtree Connections.

1. Where are our body's joints found?
The spaces in between bones are called joints.

2. What is a ball-and-socket joint? Give 2 examples.
A bone with a ball-shaped end fits into a cup-shaped end of another bone, e.g. shoulder and hip.

3. Explain how joints enable our bodies to bend.
Bones are hard and cannot bend. Our bodies can bend in places between bones. Bones are held together by ligaments which stretch so the body can bend more easily.

4. Which joints are bent as this athlete jumps a hurdle?
Her elbows are bent; Her left knee is bent; Her right ankle is bent;
Her hips are tilted; Her neck is bent forward
One shoulder is bent forward, the other is bent backwards

- The first question asks the learners to focus on the basic information. Without understanding what joints are, and where they are found, they won't be able to have more complex conversations about joints later.
- The second question introduces a category of joints. The three types of joints are all found between bones and allow the body to bend. But there is something special about ball-and-socket joints that make it different from hinge or sliding joints. Its ball-and-cup shape allows hips and shoulders to move in many directions. This task promotes cumulative learning because learners notice similarities and differences between types.
- The third question asks learners to connect their knowledge about joints to the main idea of the lesson – how they enable bodies to bend.
- The last question asks learners to transfer their knowledge to a real example.

These questions make sure learners have a good understanding of the basic knowledge, and then focus attention on connections of knowledge by looking at how joints work in a real-world example.

Task 4.2: Tasks that enable cumulative learning

Read through the four tasks. Each one brings together objects, concepts, and skills to build more complex knowledge.

Your task is not to write answers to the learner activities – these answers are shown in blue italics. Your task is to read the questions and analyse them as a teacher would analyse a textbook or a worksheet.

For each of the four examples:

- Identify the lesson's main idea from the given options.
- Identify whether tasks focus on detail, connection and/or the transfer of knowledge. It might be that some tasks focus on one or two of them, while others focus on all three.

Number	Name of the Task	Subject
Example 1	A comparison of Arthropods: Arachnids & Insects	Natural Sciences
Example 2	Since Pamela moved away	Language & Literacy
Example 3	Eating a hamburger	Natural Sciences
Example 4	Did the TRC achieve its stated aims?	History

Task 4.2 Example 1: Arachnids & Insects

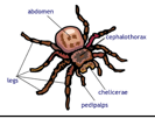
This is the first of four examples. The first task is one from Natural Sciences and gives learners a text to read and the outline of a table to complete. It has headings that tell learners to compare arachnids and insects. The table lists the different ways in which the two categories should be compared.

- The first task asks learners to refer to their class notes and complete the table.
- The second question asks learners to write a paragraph of comparison. In the paragraph they must compare arachnids and insects. They must not write all about spiders and then all about ants. To compare, they need to work with both spiders and ants, considering points of similarity or difference in an integrated way.

Read through the table of comparison and then answer the questions that follow.

Arachnids & Insects

1. First complete the table using the information discussed on arachnids and insects.
2. Write a paragraph comparing the two kinds of arthropods.

	Arachnids	Insects
Skeleton	exoskeleton	
Type of legs	arthropod: jointed legs	
Number of body segments	2	3
Name body parts	cephalothorax and abdomen	head, thorax and abdomen
Number of legs	8	6
Legs attach to	cephalothorax	thorax
Example	Spider: tarantula 	ant 

What is the main Idea?	
	Spiders have 8 legs that attach to a cephalothorax, but ants have 6 legs that attach to a thorax.
	The bodies of arachnids and insects both have segmented body parts, exoskeletons and jointed legs.
	Arachnids and insects are both arthropods, but they have differing numbers of body segments and legs.

Now, decide whether this knowledge helps learners to focus on detail, connections or transfer.

- body structure of a spider
- categories of invertebrate arthropods show similarities between ants and spiders
- tabulation skills
- categories of arachnids and insects show differences between ants and spiders
- body structure of an ant

FOCUS OF TASK	***How do tasks promote cumulative learning?***
DETAIL	
CONNECTIONS	
TRANSFER	

Task 4.2 Example 2: Since Pamela Moved Away

This is the second of four examples to analyse for Task 4.2. Read the extract from the poem "Since Pamela Moved Away". The teacher has asked a set of five questions that guide the learner to read and understand the words, poetic devices and imagery in the poem. The last question then explores the poem's meaning. Read the responses the teacher expects from learners (in blue italics) and then move on to answering the questions about this task.

Extract from:
Since Pamela Moved Away

Adapted from Judith Viorst

The tyres on my bike are flat.
The sky is grouchy grey.
At least it sure feels like that
Since Pamela moved away.
Flowers smell like cheese.
Velvet feels like hay.
Every handsome dog has fleas.
Since Pamela moved away.
Nothing's fun to laugh about.
Nothing's fun to play.
They call me, but I won't come out
Since Pamela moved away.

From If I Were in Charge of the World and Other Worries, Macmillan, 1981.

1. In a word image, the poet writes 'flowers smell like cheese'. Why does she compare the smell of flowers to that of cheese? Underline other word images that conveys feelings of loss.
Cheese has a strong smell whereas flowers smell sweet. She says that her life has lost some joy.

2. Why has the poet used 'grouchy grey' to describe the sky?
Grouchy means to be miserable. She gives the sky human feelings of misery. Both words start with a 'g' which is alliteration and personification. These emphasise that even the sky seems sad.

3. What clues do you get from the poem about who Pamela is?
I think that Pamela is the poet's best friend because they played and rode bikes together.

4. How does the poet feel about Pamela?
She loved Pamela very much. Pamela brought joy into her life. The writer's life feels less special without Pamela around.

5.Think of how you might feel to lose contact with someone who is special in your life. Think of three images you could use to convey your feelings.
Individual responses expected, and use of interesting words, meaningful analogies and poetic devices would be valued.

Choose the one main idea you think fits the task the best.

What is the main Idea?	
	‘grouchy grey’ is an example of alliteration in poetry
	Poems use words and imagery and can be used to express experiences and feelings
	Pamela has moved away and now the writer feels lonely

Now, decide whether this knowledge helps learners to focus on detail, connections or transfer of the knowledge to promote cumulative learning.

- How ‘word imagery’ conveys feelings of loss
- Word choice
- Examples of poetic devices used e.g. alliteration, personification
- Relationship between poet and Pamela
- Images
- Applied to personal feelings of loss

FOCUS OF TASK	***How do tasks promote cumulative learning?***
DETAIL	
CONNECTIONS	
TRANSFER	

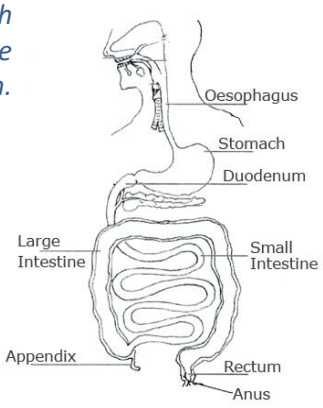
Task 4.2 Example 3: Eating a hamburger

Learners have discussed the parts of the digestive system and how food travels through the body in class. The task asks learners to answer three questions. Read the questions (in black) and the expected responses (*in blue italics*) and then proceed to the assessment task.

Eating a hamburger

1. What is the name of the body system that processes the food we eat?
Digestive system

2. Explain what happens to a hamburger as it moves through the digestive system.
The teeth break down the food mechanically and saliva starts to digest it. Chewed food moves through the oesophagus into the stomach. Stomach acid breaks the food down further. Digested food moves through the intestines where nutrients and water are absorbed into the blood stream. Waste food is excreted out of the anus.



3. For homework:
Choose one organ in the digestive system and find three facts about it to share with the rest of the class
Small intestine:

- *Food is moved along by squeezing of muscles.*
- *Blood vessels absorb nutrients.*
- *It is about 6-7 metres long.*

Choose the one main idea you think fits the task the best.	
	Different organs in the digestive system break down food and get nutrients to the body
	The small intestine is 6 – 7 m long
	Food goes in the mouth and waste comes out of the anus

Now, decide whether this knowledge helps learners to focus on detail, connections or transfer of the knowledge to promote cumulative learning.

- Names of organs in the digestive system
- The job of each organ in digesting food
- Further details about one organ of the digestive system
- Parts of the digestive system
- Sequence of food's journey through digestive system

FOCUS OF TASK	***How do tasks promote cumulative learning?***
DETAIL	
CONNECTIONS	
TRANSFER	

Task 4.2 Example 4: Did the TRC achieve its aims?

The Truth and Reconciliation Committee (TRC) was formed in 1995 by the Government of National Unity. It aimed to uncover the truth of atrocities committed under apartheid. It also aimed to bring healing to the victims of crimes committed during apartheid

After several weeks of learning about the TRC in History, learners were given this task. Learners needed to use their knowledge of the TRC and its processes. They had to prepare an argument in support or against the statement: The TRC achieved its aims.

Did the TRC achieve its aims?

Some people believe that the TRC achieved its aims. Others believe that the aims of the TRC did not do enough to heal South Africans from the pain and injustices of the past.

The Truth and Reconciliation Committee (TRC) was formed in 1995 by the South African Government of National Unity to reveal what happened under apartheid.

The aims of the TRC were to:

- *Make sure that human rights' violations were revealed and recorded*
- *Provide victims with information about what happened to their loved ones, and be compensated for their pain*
- *Allow perpetrators to admit their role in crimes, and in some cases, receive amnesty*

Today's task:
Prepare an argument in support or against the statement: The TRC achieved its aims.

Next lesson:
Formal class debate

Choose the one main idea you think fits the task the best.	
	The TRC gave amnesty to people who committed crimes during apartheid.
	The TRC revealed things that happened during apartheid.
	Twenty years after the TRC concluded its hearings; there is debate about what it achieved.

Now, decide whether this knowledge helps learners to focus on detail, make connections, or transfer the knowledge to promote cumulative learning.

- What the TRC was mandated to do
- The structure of a formal debate
- People who gave evidence at the TRC.
- Different views about the TRC processes
- Different views about the TRC aims

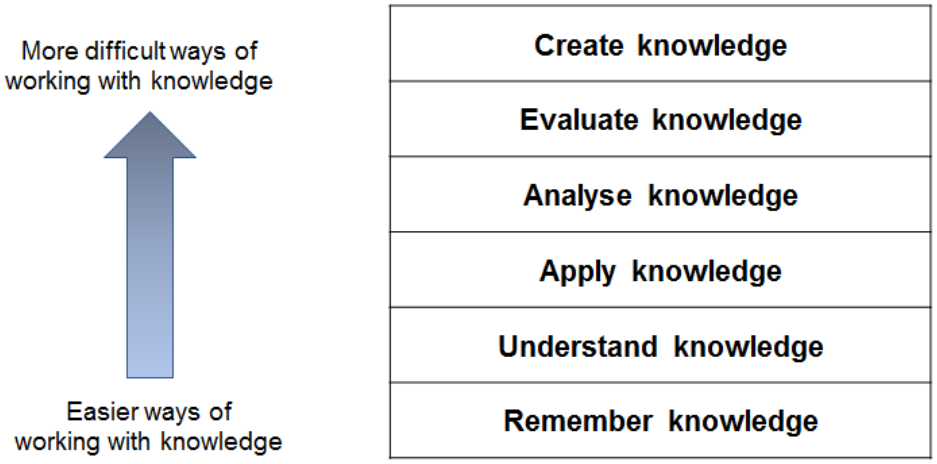
FOCUS OF TASK	***How do tasks promote cumulative learning?***
DETAIL	
CONNECTIONS	
TRANSFER	

Links to the Taxonomy of Learning, Teaching & Assessing

(Anderson, Krathwohl & Bloom, 2001)

So far, we have focused on three ways of supporting cumulative learning: through tasks that focus on detail, tasks that focus on connection and those that focus on transfer of knowledge.

In your university coursework, you may have come across the original or revised Bloom's taxonomy, which provides a different lens to describe the cognitive demands of different tasks. Some teachers use it to check that they are working with a range of thinking skills. Some teachers use it to think about sequencing assessment questions from simple to more complex ways of thinking with knowledge.



A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives

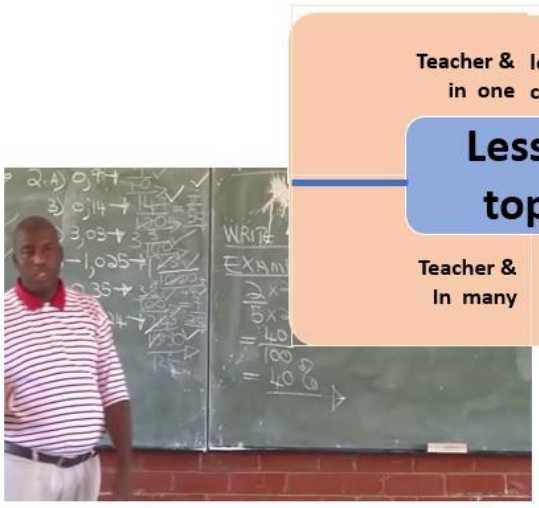
In 1956, in America, psychologist Benjamin Bloom and his colleagues published a Taxonomy of Educational Objectives. This taxonomy described a set of thinking skills that they hoped students would develop as a result of teaching at school. These objectives were knowledge, comprehension, application, analysis, synthesis and evaluation. Teachers have used these for decades to think about cognitive levels demanded by questions in assessment tasks.

One concern with Bloom's original Taxonomy is that it regarded 'knowledge' as a lower order skill. Knowledge is not a 'thinking skill' at all. All kinds of thinking require us to work with knowledge. It is true that re*membering* knowledge is the easiest way of working with knowledge. A group of Bloom's students revised his taxonomy in 2001. We now refer to this as the Revised Bloom's Taxonomy or the Taxonomy of Learning, Teaching and Assessing. The revised taxonomy uses verbs to describe the different ways in which we think with knowledge in increasingly complex ways.

4.2 Forms of learning conversations

Classroom conversations are important for promoting cumulative learning. Cumulative learning does not happen when learners are left aimlessly to chatter around topics. Giving learners a list of disconnected information does not promote cumulative learning either. Classroom conversations should always have a focus: something worth discussing and thinking about. Teacher guidance points learners' attention to what matters. Teachers often organise conversations around a concept, example or a resource (like a poster or a text). Through carefully designed learning conversations, learners become more familiar with main ideas. They connect learning to what has been done before. These conversations prepare learners for the learning tasks.

In this section, we will look how, at different times in a lesson, a teacher may use one learning conversation with all members of the class. At other times, there may be many conversations taking place. This is not mindless chatter. Learning conversations have a focus and enable learners to talk about what they are doing with the knowledge they learn.



Teacher & learners participate in one conversation

Lesson topic

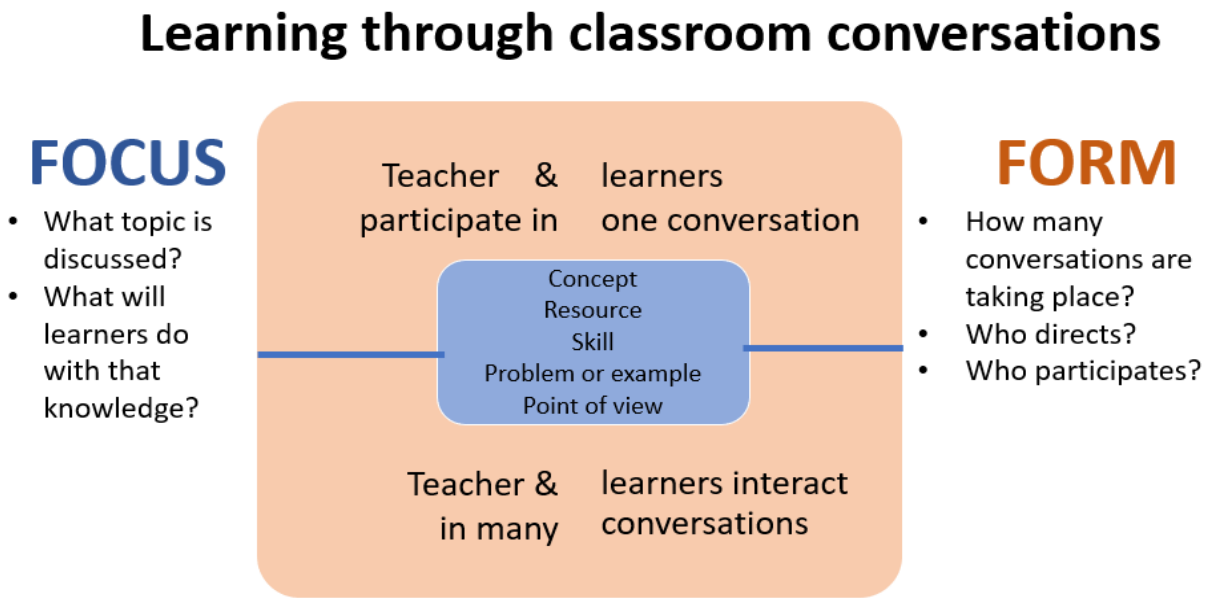
Teacher & learners participate In many conversations

Teachers and learners participate in **learning conversations** to help learners understand complex concepts and prepare them for learning tasks.

We can think about classroom conversations in terms of the FOCUS of the conversation as well as the FORM of the conversation.

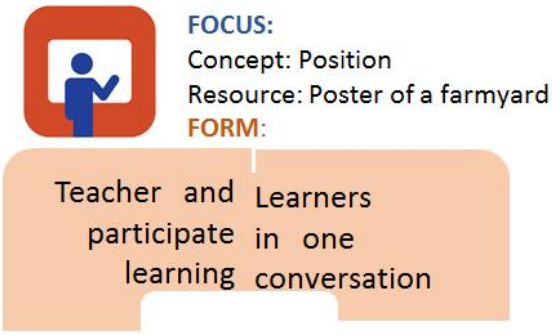
- In terms of the **focus**, classroom conversations introduce learners to those complex concepts, skills and ways of thinking that reveal how knowledge is structured in a subject. The learning conversations prepare learners to do tasks that should draw their attention to basic information, the way ideas are connected, and how they are useful to think about problems in the real world. These aspects make up the focus of the conversation.

- The ways in which the teacher and the learners interact determine the **form** of the classroom conversation. The teachers and learners could participate in *one conversation*, or there may be *many conversations* if learners are working in pairs or groups.



Teachers use classroom conversations to ensure that all learners understand concepts, know what to do and can complete the tasks successfully. Tasks that rely on learners' previous knowledge and experiences are not fair, because not everyone has had the previous knowledge or experiences. Those who already know can achieve but other learners are forced to guess.

Answering questions by guesswork does not result in cumulative learning. Well thought out classroom conversations prevent the need for guesswork. It gives all learners an opportunity to learn and succeed.



This is a lesson in a Grade 1 classroom where the topic is **Position**.
Read the transcript in either isiXhosa or English in the Resources at the end of this unit. Alternatively, you can watch the video clip on the *Teacher Choices in Action* platform or on the Funda Wande YouTube Channel:

https://www.youtube.com/watch?v=atnCn9AFViA

The teacher uses a poster of a farm to ask questions about the position of objects. Through holding one classroom conversation, she teaches, and checks learner understanding.

The second task moves learners' attention away from the poster and gives learners a different situation in which to apply their knowledge. The task requires each learner to connect their blocks in particular ways to show their understanding of position.

Grade 1 Lesson
Position

With acknowledgement

Funda Wande
Reading for Meaning

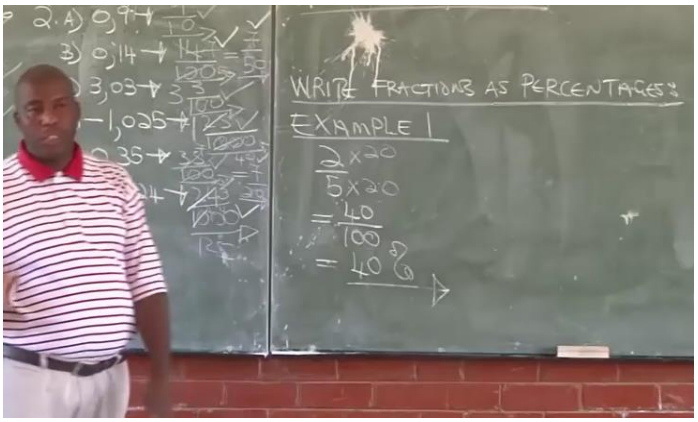
This lesson shows a teacher and a whole class of learners participating in one learning conversation. This is a good choice when the teacher wants to make sure that all learners have heard the same explanation, work together to understand a problem or give instructions. It can be a good strategy to ask different learners questions to check their understanding of new concepts that have been explained. This method ensures that learners are focused on the topic.

Which of these ways show how this teacher uses conversation to teach 'position'?

- She gives an explanation
- Learners share personal experiences
- She gives instructions for tasks
- The teacher helps learners explore a resource, problem or example
- Teacher checks learners' understanding
- Teacher corrects errors
- Teacher answers learners' questions

Shifting between one and many conversations

Teachers may choose to step away from engaging with the whole class and allow learners to do a task individually. While the learners are doing the task, they discuss their work with one another. This is not a time for the teacher to rest. The teacher provides encouragement, further explanation, instruction and feedback to individual learners.



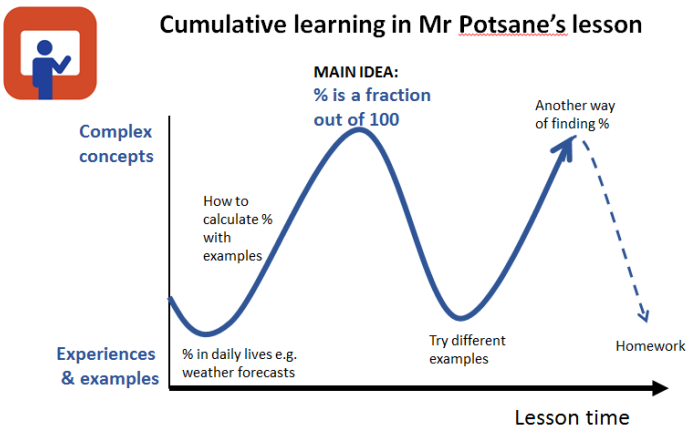
https://www.youtube.com/watch?v=JuMcd62eyPc
Acknowledgement to:
www.angelastott.co.za

In a Grade 9 Mathematics lesson, Mr Potsane uses different classroom conversations for different purposes. Sometimes, he calls for learners' attention and speaks to them in one conversation. Sometimes, he allows learners to address the class. At other times, he speaks to learners individually and makes space for learners to speak to one another.

FOCUS OF THE CLASSROOM CONVERSATIONS
Mr Potsane starts the lesson by asking learners what they know about percentages. A learner connects percentages with weather forecasts. A learner writes the percentage symbol.
Mr Potsane explains how to find the percentage using an example on the chalkboard.
He tells learners to do another example on their own.
Mr Potsane walks around the class assisting learners while they work individually.
A learner does an example on the chalkboard. Mr Potsane praises the learner. He gives learners a task to do from their textbook.
Learners work in their books. Mr Potsane walks around the class, checks their work and assists them.
Mr Potsane shows the class another way of working out percentages. He continues to walk around the classroom and assists learners.
Mr Potsane tells learners to finish their work at home.

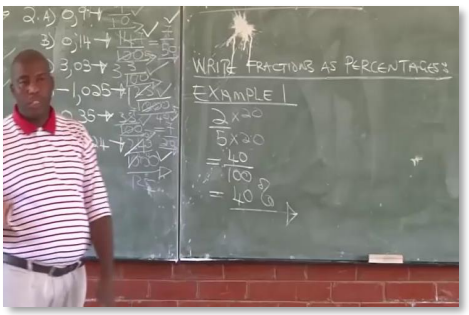
Mr Potsane's lesson follows a semantic wave. It sets up the possibilities for cumulative learning.

- He starts his lesson at a *low part* of the semantic wave. He holds one classroom conversation asking learners where they have used percentages in their everyday lives.
- The wave moves *upward* when he increases complexity by showing how the concept is written in symbols and he explains the concept using examples.
- To see if the learners have understood, he gives them opportunities to transfer their knowledge to other examples.
- He shows them another way of calculating percentages. They try this method with other examples.



Task 4.3: Learning conversations with Mr Potsane

For which purposes does Mr Potsane hold a single class conversation?



- ○ To explain a concept
- ○ To demonstrate how to solve a problem
- ○ To link the main idea with learners' everyday lives
- ○ To acknowledge a learner's work
- ○ To check learners' written work
- ○ To answer learners' questions
- ○ To give learners another example or task to do
- ○ For learners to discuss their workings with a peer

For what purposes does Mr Potsane allow many conversations to happen at the same time?

- ○ To explain a concept
- ○ To explain an example
- ○ To link the main idea with learners' everyday lives
- ○ To acknowledge a learner's work
- ○ To check learners' written work
- ○ To answer learners' questions
- ○ To give learners another example or task to do
- ○ For learners to discuss their workings with a peer

4.3 Feedback to learners

The third section of the unit considers how feedback to learners can promote cumulative learning.

Providing feedback to learners

- Feedback provides information to learners on their understanding, their work, and their effort.
- Information that helps learners improve their future work is known as *formative feedback*.
- Feedback can be in writing or given verbally.

Research has shown that giving feedback to learners makes a difference to the quality of their learning. The research of scholars like Reeves (2005) and Hoadley (2012) show how important it is that teachers provide clear feedback to learners and correct their errors.

Hattie and Timperly (2007) suggest that there are three pieces of information that learners need to make sense of the feedback on their work.

i. **What do I need to do?** In other words, learners need to be clear about what they are learning and what they are expected to do in the task.
ii. **How well am I doing it?** In other words, learners need to understand whether they are on the right track or not. They need to understand what they are doing well and what they are not mastering yet.
iii. **How can I improve?** In other words, learners need to know what they should do next.

What learners need to know....

(Hattie and Timperly, 2007)

Constructive feedback shows learners what they need to understand and be able to do, how they are currently performing and what they need to do next to achieve the learning goal. This section introduces three of the types of feedback that Hattie and Timperly (2007) found important for promoting learning:

i. **Personal feedback** given to learners about their effort.
ii. **Process** feedback given to learners while completing a task.
iii. **Product** feedback on the answers or work that learners have produced.

To explain the focus of each type of feedback, we will use the feedback provided to Kamogelo in a Grade 2 lesson. In Life Skills, his class learnt all about arachnids as part of a nature study. They studied the body structure of a spider and learnt the names of its body parts. His teacher set a task that asked learners to build a model of a spider using paper and paper plates. Their model had to show that they have made careful observations. Their model had to be a work of art that also needed to demonstrate their knowledge of spiders. Their model should have the correct body structure, with the parts connected in a scientifically correct way.

i. Personal Feedback

Teachers often use this kind of personal feedback quite naturally to motivate learners. Examples of this kind of personal feedback are: "*You are trying your best*" or "*I can see that you are concentrating*". Personal feedback creates a positive learning environment where learners feel noticed. Teachers need to remember that praise can become meaningless if it is used too often or if excessive praise is given for limited effort. Personal feedback can encourage and motivate learners, but it doesn't impact on learning unless it is also linked with process and product feedback.

This kind of feedback encourages learners to take pride in their work, but it does not specifically link to what they are getting right, and where they need correction. For feedback that improves learners' mastery of a skill or their understanding of the lesson topic, process and product feedback is needed.

Personal feedback

- Teachers notice learners' efforts.
- Teachers encourage learners to take pride in their work.

"I can see you are concentrating, Kamogelo! What are you feeling proud of?"

ii) Process Feedback

Teachers give feedback on the process that the learner went through to complete a task. Process feedback can be used to make learners more aware of their own thinking and reasoning. For example, a teacher could ask questions like, “How did you work out that answer?” or “Why do you think that keeps happening?”

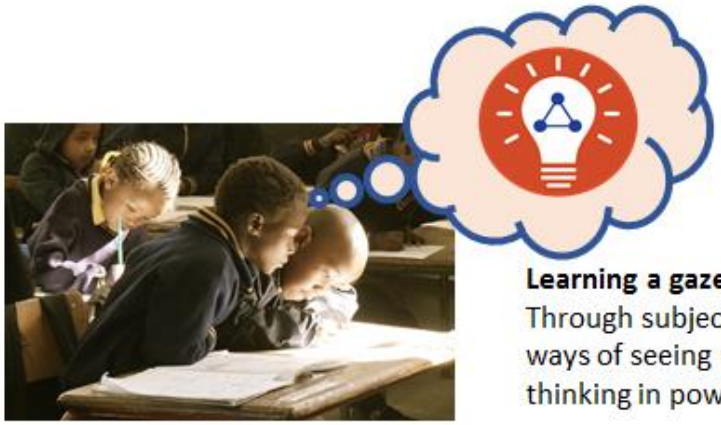
Process feedback

- Learners become aware of planning and thinking processes.
- Learners develop a *gaze* as they learn what matters in that subject.
- Learners may discover their own errors when explaining their processes.

Teacher: What are you going to do next?
Learner: I’m going to attach the legs to the spider’s body.
Teacher: Observe the spider diagram carefully. Be sure to attach its legs to the correct body segment.

Teachers need to consider how the task develops the special ways of thinking and working required by the subject. Kamogelo’s teacher sends him a message that careful observation is very important when doing Natural Sciences. Putting body parts in their correct position matters. Using the correct scientific term is valued. This kind of feedback tells learners how to succeed in the subject. In some subjects like the Creative Arts or Languages, the process of thinking and doing a task is more valued than the accurate application of rules. To achieve in Mathematics, learners must learn to show all their workings, step by step. In creative writing, learners are taught to draft, redraft, edit and proofread their workings until they submit a polished final product. This process of becoming aware of what counts as important in a subject is called developing a ‘knower gaze’ (Maton, 2014).

This kind of feedback leads to cumulative learning. The teacher is not just concerned about getting the answer correct in the immediate task. She is concerned about the learner as a future writer, mathematician or artist.



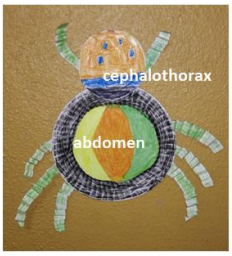
Learning a gaze
Through subjects, learners develop ways of seeing what matters and begin thinking in powerful ways.

iii) Product Feedback

Teachers can give feedback on the quality and accuracy of the product produced by the learner. This type of feedback identifies what parts are correct, points out errors and helps the learner plan corrections. It is also called *corrective feedback.* Research by Reeves (2005) and by Hoadley (2012) show that South African teachers often ignore learner errors. If teachers do not correct errors, then the learner cannot know how to improve their subject knowledge.

Product feedback

- Identify what is correct
- Point out errors
- Plan for corrections



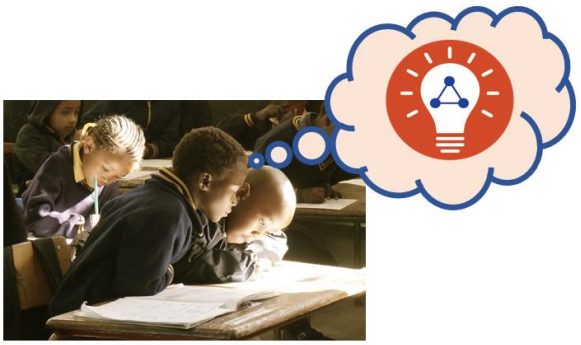
"The spider's eyes and two of its legs are in the correct place. Six of this spider's legs are attached to its abdomen. Remember that spiders' legs join the cephalothorax. Where should these six legs go?"

In this example, the product of a spider that the learner has made is partially correct. The learner has attached two of the legs and the eyes correctly to the cephalothorax and the other six legs incorrectly to the abdomen. The teacher explains both what the learner did correctly as well as what is incorrect. She poses a question to get the learner thinking about correcting the error.

Product feedback is important when the purpose of the lesson is to understand an important concept or produce a product, like a creditors' report, a graph or a technical drawing. It is important for the learner to know if they have made a mistake or have not understood something. The teacher must respond to a learner's error and give specific feedback so that the learner can see exactly where his/her error or misunderstanding lies.

The feedback helps the learner correct mistakes that have been made. Feedback on the product supports cumulative learning because it ensures that learners address their misunderstandings and can avoid making the same errors next time.

Learning a subject
Subjects are complex bodies of knowledge that connect ideas in special ways.
They have special methods for addressing problems.



Working with learner responses

Watch how this teacher works with correct and incorrect responses to her questions.

https://www.youtube.com/watch?v=atnCn9AFViA

LESSON: Grade 1 Position

Sesiphi isilanyana *esisemva* kothango?	Which animal is *behind* the fence?
Yinkukhu	A Chicken
Unyanisile. Nazi iInkukhu *emva* kothango	You are correct. Here are the chickens behind the fence.
Sesiphi isilwanyana *esiphambi* kothango?	Which animal is *in front* of the fence?
Zintshatshambo	Flowers
Sisilwanyana iitshatshambo? Unyanisile *ziphambi* kothango kodwa akosilwanyana sona. Sesiphi isilwanyana *esiphambi* kothango?	Are flowers animals? Yes, you are correct they are *in front* of the fence but they are not animals. Which animal is *in front* of the fence?
Yinkomo	It is a cow

We return to the teacher who uses a poster of a farmyard to position. Notice how she works to affirm correct answers and to correct learners when their responses are incorrect.

She acknowledges the correct answers. She points out errors and redirects the question to give the learner a chance to try again with more information. She does this without embarrassing any learner and she keeps the feedback supportive at all times. Learners are not permitted to laugh at errors in her class. Errors are an opportunity for everyone to learn. In working with errors in this way, the teacher gives feedback that improves their learning in a supportive classroom environment.

Combining different kinds of feedback

To improve learning, teachers use combinations of personal, process and product feedback.

Teacher: How long is the pencil?

Learner: 13 cm

Teacher: Close, but not quite. Tell me how you got that answer. — PRODUCT

Learner: I put the pencil on 1 cm and it reached to 13cm

Teacher: When we measure length, we begin measuring from the 0 cm mark. Why do you think we need to do that? — PROCESS

Learner: So that there's not an extra 1cm added? If I start at 0cm, then the pencil is 12cm long.

Teacher: That's good thinking – now try the next example! — PERSONAL

In this example, a teacher uses a combination of **personal**, **process** and **product** feedback.

When asked to measure the length of a pencil, the learner gives the incorrect answer of 13cm when it actually measures 12cm. The task feedback from the teacher would be that the answer is incorrect. The teacher asks the learner to explain how that answer was reached. In prompting the learner to become aware of his or her reasoning, this could lead the learner to self-correct and recognise the error. If the learner cannot do so, then the teacher would see that the learner does not understand that, when measuring, the rule is to start from 0cm and not 1cm.
If there are many learners who have made the same mistake, the teacher could consider teaching this section again.

Learning a gaze: A lesson on Slam Poetry

Mr Wilmot is an English teacher in Ekurhuleni. In his lesson, he gives feedback to a Grade 10 class. Learners had studied 12 slam poems and wrote and performed their own. Mr Wilmot shows the class a poem that a learner, Morgan, had written and performed:

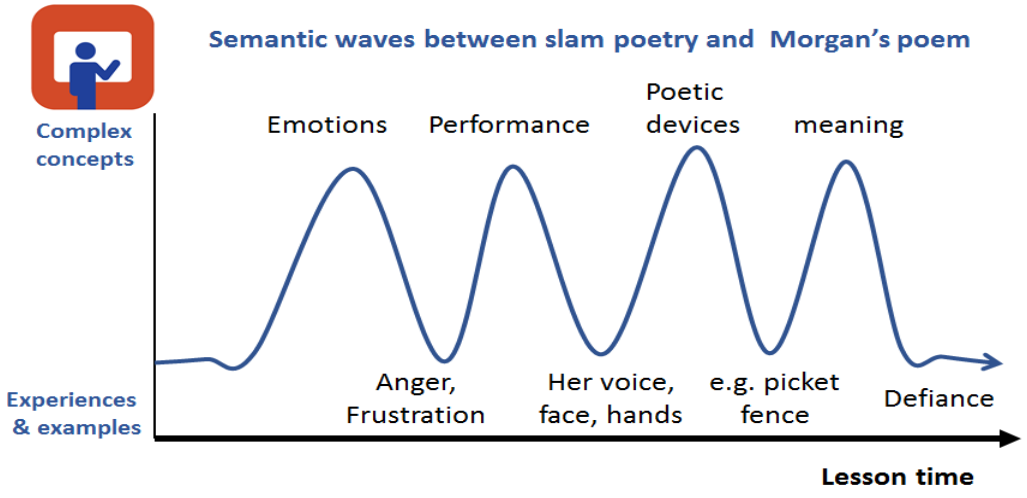
'Rotten pickets coated in white,
A never-ending fight.
Thumbs are the only finger spared from gesture,
(here comes another lecture)
Accompanied by your favourite fool, the no.1 jester.
Carefully tip-toeing like the nut-cracker
Only to be deemed a slacker'

- By Morgan, Grade 10

Read through the transcript of Mr Wilmot's lesson in the Resources at the end of this Unit.

Notice how Mr Wilmot focuses on some details of Morgan's poem, like the images she creates with words. He shows some of the connections between her words, imagery and the meaning she conveys through her poem. Through his classroom conversations, he links her poem and her performance to the principles he had taught about slam poetry. He uses all these elements to show how she conveyed her feelings of anger and frustration through poetry.

By linking Morgan's poem and the nature of slam poetry, Mr Wilmot creates semantic waves in his lesson. Mr Wilmot's lesson starts with a low flatline as learners discuss their experiences and feelings during the 2020 Covid-19 pandemic lockdown when schools were closed. His lesson does not stay at a low semantic flatline for long. He reminds the class that they are there to learn English. He gives feedback on the poetry learners wrote during lockdown. Slam poetry is to be performed, he insists, and he shares Morgan's performance of her poem with the class. He uses Morgan's poem as an example that demonstrates the nature of slam poetry.



Mr Wilmot shows how Morgan's poem conveys anger and frustration. He asks the class to think about how she used her voice, hands and face to give a powerful performance. He points out a range of poetic devices that convey powerful images. He discusses with her the meaningful message in her poem. By linking Morgan's poem to general principles, he creates semantic waves in his lessons.

Through the semantic waves in his lesson and his use of feedback, Mr Wilmot enables learners to develop a gaze for appreciating poetry. The learning is cumulative because learners further develop their gaze about what makes good poetry.

Task 4.4: Feedback on slam poetry

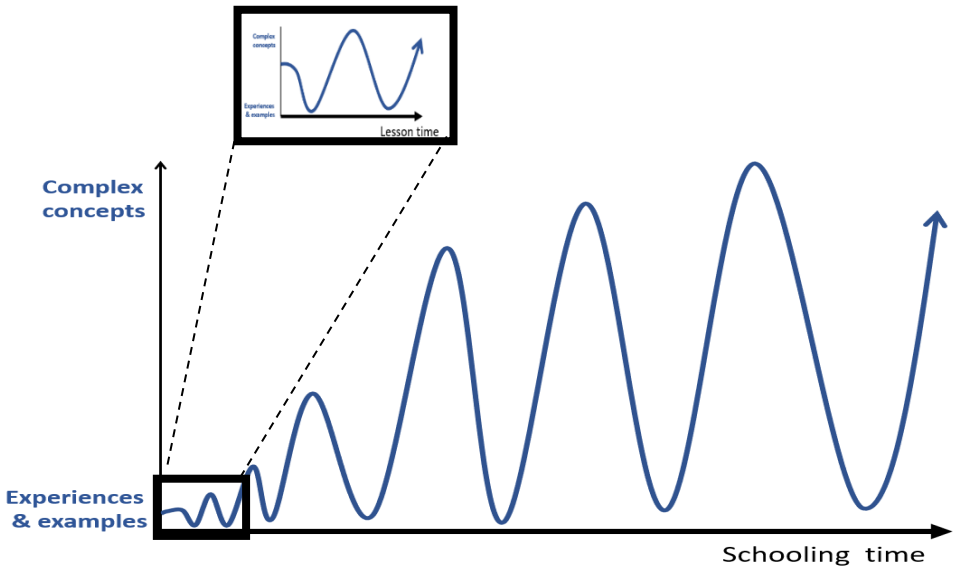
From the transcript of Mr Wilmot's lesson, identify what messages he sends learners about what matters when writing and performing slam poetry.

Tick the relevant blocks in the table.

Which of these matter for writing and performing slam poetry, according to Mr Wilmot?	
	It often protests something unfair in society.
	It must always end with a rhyming word.
	Changing your voice intensity during a performance makes it better.
	It should use a range of poetic devices, figures of speech.
	It is best written from a place of deep emotion.
	It must always contain a simile.
	Facial expression, body language are important in its performance.
	Every line must have the same number of syllables.

Cumulative learning needs many semantic waves over time

This is not the first time that learners will have analysed a poem. We know that they analysed 12 excellent examples of slam poetry before writing their own. Although these learners are in Grade 10 now, they started learning and discussing simple rhymes in the Foundation Phase. Perhaps they analysed a poem like “Since Pamela went away” during their Intermediate Phase years.

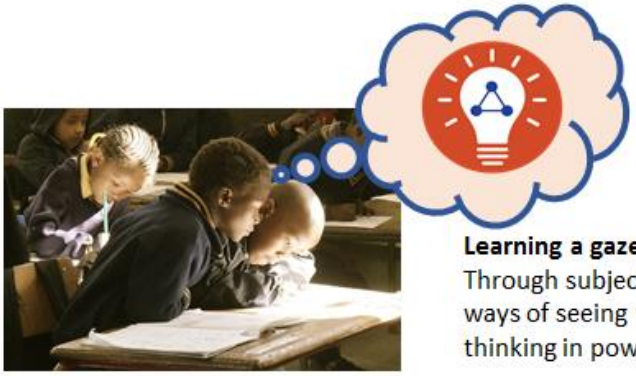


In all these lessons, teachers have contributed to the development of a gaze about what matters in poetry. Over the years, the semantic waves have got higher and higher, reaching greater levels of complexity. As much as the learners build up knowledge and skills, they also develop as knowers with a sense of what matters for achievement in different subject areas.

Cumulative learning does not only lead to more and more complex bodies of knowledge. It also develops learners’ ways of thinking and seeing.

Learning a subject

Subjects are complex bodies of knowledge that connect ideas in special ways. They have special methods for addressing problems.



Learning a gaze

Through subjects, learners develop ways of seeing what matters and begin thinking in powerful ways.

Recap of Unit 4:
Teacher choices that promote cumulative learning

Cumulative learning builds on what has gone before. It links principles and concepts with real world examples so that what is learnt has meaning beyond the classroom. Cumulative learning builds complex knowledge and enables learners to develop a gaze, or ways of thinking. This is the kind of learning that doesn't merely keep children busy with disconnected pieces of information during lesson time. It gives them something worthwhile to learn, and it gives them something meaningful to do with that learning.

Cumulative learning is characterised by repeated up and down movements between complex concepts and experience/examples in a series of *semantic waves* (Maton, 2014).

In this unit, you learned about three ways that teachers can promote cumulative learning:

- The first section was how **tasks** give learners opportunities to work with knowledge in ways that increase complexity.
- In the second section, you learned about **learning conversations** that take place in the classroom, which looked at who directs the conversation, who participates and whether there are one or many learning conversations happening at the same time.
- In the final section, you learned that there are different kinds of **feedback** a teacher can give to learners. Feedback helps learners understand what they are doing well, and how they can improve the quality of their work.

Reflection on Unit 4:
Teacher choices that promote cumulative learning

Please answer these three questions about your learning in this unit.

1. What links did you notice between this unit and coursework you have studied this far?

2. What links did you notice between this unit and your previous experiences in the classroom?

3. How are ideas from this unit useful in your phase and subject specialisation/s?

Additional resources

The following resources and links are useful to find out more about promoting learning

- Krathwohl, D.R. (2002) A Revision of Bloom's Taxonomy: An Overview, Theory Into Practice, 41(4): 212-218
  https://www.youtube.com/watch?v=ykTv6jwtX0U (ViaAfrica video explaining Bloom's revised taxonomy with useful examples 5:35 minutes)

- Hattie, J. & Timperley, H. (2007) The power of feedback. *Review of Educational Research*, 77: 81-112.
  https://www.youtube.com/watch?v=CXGt53AGGng Prof John Hattie. Types and purposes of feedback.

- Hoadley, U. (2012) What do we need to know about teaching and learning in South African schools? *Education as Change*, 16: 187-202.

- Maton, K. (2014) *Knowledge and knowers: Towards a realist sociology of education*. Abingdon: Routledge.

- Maton, K. (2013) Making semantic waves: A key to cumulative knowledge-building. *Linguistics and education*, 24(1): 8-22.

- Maton, K. (2020) Semantic waves: Context, complexity and academic discourse, in Martin, J. R., Maton, K. & Doran, Y. J. (eds) *Accessing Academic Discourse: Systemic functional linguistics and Legitimation Code Theory,* London: Routledge, pp.59–85.
  https://www.academia.edu/42313093/Semantic_waves_Context_complexity_and_academic_discourse

- Moll, I., Bradbury, J., Winkler, G., Tshule, M., van Voore, M. & Slonimsky, L. *Learners and Learning.* Johannesburg: SAIDE.
  (Free to download from https://www.oerafrica.org/system/files/8803/learners-and-learning-guide_0.pdf?file=1&type=node&id=8803&force=1)

- Reading to Learn website https://www.readingtolearnsouthafrica.com/

- Reeves, C. (2005) The effect of 'opportunity-to-learn' and classroom pedagogy on mathematics achievement in schools serving low socio-economic status communities in the Cape Peninsula. PhD, University of Cape Town.

- Semantic waves, includes blogs by teachers:
  http://legitimationcodetheory.com/practice-and-impact/semantic-waves/

- https://www.youtube.com/watch?v=q-myBw36_DA Dylan Wiliams. What do we mean by assessment for learning? 11 Sept 2018

Resources

Learning through classroom conversations

Grade 1 lesson: POSITIONS

With acknowledgement to Funda Wande

https://www.youtube.com/watch?v=atnCn9AFViA

ISIXHOSA	ENGLISH
Niyakhumba UKUBA izolo besifunda ngamagama asixelel ukuba izinto zindawoni	Do you remember that yesterday we were learning about words that tell us where things are?
Khawundijongele kulo mfanekiso	Look at this image/**chart**/picture
Sesiphi isilwanyana esiphezulu emthini? Zintaka Jonga izintaka ziphezulu emthini	Which animal is up in the tree? Birds Look, birds are up in the tree
Sesiphi isilwanyana esisemva kothango Uthi inkomo (looking surprised) inkomo iphi? Isemva kothango? Iphi inkomo? Isebuhlanti? Yima. Jonga! Uyabona le nto (pointing at the fence) Yintoni le nto? lithango Kuphi emva kothango (pointing on the other side of the fence) ngapha Kusemva kothango Apha kuphi (pointing on the outer side of the wall) Kuphambi kothango	Which animal is behind the fence? He says it's a cow (looking surprised) Where is the cow? Is it behind the fence? Where is the cow? In the kraal? Wait. Look. Do you see this thing? (Pointing at the fence) What is this? It is a fence Where behind the fence or on the other side of the fence. (Pointing on the other side of the fence) on the other side Here, Where? (pointing on the outer side of the wall) In front of the fence
Sesiphi isilanyana esisemva kothango? Yinkukhu Unyanisile. Nazi iInkukhu emva kothango	Which animal is behind the fence? A Chicken You are correct. Here are the chickens behind the fence
Sesiphi isilwanyana esiphambi kothango? Zintshatshambo Sisilwanyana iitshatshambo? Unyanisile ziphambi kothango kodwa akosilwanyana sona Sesiphi isilwanyana esiphambi kothango? Yinkomo	Which animal is in front of the wall? Flowers Are flowers animals? Yes, you are correct they are in front of the fence but they are not animals. Which animal is in front of the fence? It is a cow
Yintoni ephakathi ebuhlanti? Zihagu Jonga jonga Ubuhlanti buphi Zigusha Igusha ziphi? Uyazibona? Ziphakathi ebuhlanti	What is in the veld? Pigs Look, look. Where is the kraal? Sheep Where are the sheep? Can you see them? They are inside the kraal

Ubani oyibonayo ukuthi iphi ihokwe yenkukhu? Nansiya Indawoni? Nansiya phi? Yile eyenziwe ngecanca	Who can see where is the chicken? There it is. Where? The one made with corrugated iron roofing.

Sesiphi isilwanyana esingaphansi kwehokwe yenkukhu? Ngumvundla	Which animal is under the fowl run? A rabbit
Uyazibona ezibloko eziphambi kwakho? Ngicela uzenze zibe loose, zingadibani (Separating)	Do you see the blocks that are in front of you? Please separate them.
Okukuqala Thatha iblock yakho emhlophe. Mandiyibone iblock yakho emoyeni Ngoku Ndifuna ufake ebomvu ngaphansi kwale block emhlophe Ibeke ngaphansi ndiyibone Sisi ingaphansi xa injalo? Yimise kakuhle Nami mandiyifake neyami ebomvu	Firstly, take your white. Let me see it. Now, I want you to take the red one and put it underneath the white one. Put it underneath. I want to see it. Sisi, is yours underneath when it is like that? Let me also put my red one underneath the white one
Thatha eyakho eluhlaza uyifake ecaleni kule imhlophe Mandiqale ndijonge kuni. Mani ndiyakopa	Take your green one and insert it next to the white one. Let me first observe from you. I am copying from you.
Ngoku Ushiyeke nenjani? Epinki	So what colour is remaining? Pink
Le epinki ndifuna ingene ecaleni kured Mayingene ecaleni kured Yima yima. Masijonge Masijonge leya ipha khawusiphakamisele le yakho siyibone(asking a learner to show his/hers) Iseceleni kured leya? No Hhayi njani? Jonga! Xa ndiyifake apha. (placing the object under different colours) Isecaleni kured? Uba ndiyifake apha Iphansi kored. Uyabona nina, niyamamela	I want the pink one to be placed next to the red one. Wait! Wait! Let's look at this. Let us look at the one over there. Lift is up for us to see (asking the learner to show his pieces). Is that next to red? No No, how so? Look! When I insert it here (placing the object under different colours) Is it next to red? If I insert it here? It is under red. You are a good class because you listen well.

Task 4.4: Feedback on slam poetry

Mr Wilmot's feedback to Grade 10 learners' Slam Poetry	
T:	We've been talking about what your experience of COVID was like, and your experience of the lockdown, and I've heard a variety of different opinions. First of all, we spoke about it at a personal level, and I think what Jayde pointed out was that you felt quite socially starved for that time.
Jayde:	*Yeah, and I'm an introvert so that's like harsh.*
T:	Okay, very interesting. What that indicates is that an introvert doesn't mean that you don't need social interaction – you still need that connection with other human beings.
Jayde:	*I just prefer my own company.*
T:	Ja. Very interesting, yes. Everyone, Morgan was actually then commenting on the fact that it hasn't only had a personal impact, but it is also going to have a national impact. It's going to affect the economy, it's going to affect the way forward in terms of the next few months, maybe years, anybody else got concerns about that? In terms of the personal learning experience, Julia – you said that you found online learning something you really enjoyed and embraced. Anybody else who really enjoyed that online learning experience?
Ls:	*[Mumbing] Yes/No*
L:	*The fact that I didn't have to wake up early!*
T:	Absolutely! What I found really interesting about that is that science shows that the teenage body has different circadian rhythms to the adult body, so they say that, for example, teenage brains are really only active after about nine o'clock in the morning. So, waking up later, and then working later into the afternoon or evening, actually makes a lot more sense. How many of you changed your routines? Here we go – Morgan, tell me about your routine. Because I picked up that you had a very strange way of structuring your time.
L:	*I did, sir! I did nothing the whole day and then worked from eight at night 'til like three in the morning.*
T:	So, you completely flipped your day then? Very interesting. And Jayde? What did you do?
L:	*Well I'm a morning person but I found that I was waking up later and then just not moving at all.*
T:	Okay so waking up later didn't really benefit you in terms of your attention and concentration?
L:	*No. Not at all.*
T:	Everyone, I want to give you some feedback, though, about the work that you submitted. I think that the work that you submitted was exceptional – exceptional quality of work… In this first period, I'd like to actually share with you some of your work that you submitted.
T:	It was brilliant work! …. So, everyone, I want to share some of the best work with you.
T:	What I want to do is I also want us to think about how some of your slam poems reflected quite strongly on what you were going through. Like Morgan – yours is the first I'm going to share! Listen up. I'm going to give you some context for Morgan's slam poem before I show it to you. Morgan and I had a little bit of an exchange about some work that was outstanding and I could see that your poem came from an angry place – because your teacher was on your case and your parents were on your case! But I thought it was such a brilliant protest poem about what you were going through at the time. So, remember, this is also an English lesson, so as you watch these protest poems that I want to show you, your performance poems or slam poems, what I would like you to do is to think about the elements of performance in these poems. Remember when you were studying slam poetry, we spoke about how slam poetry is a performance art. So, it's not just about the text itself – it's about the delivery of the poem. It's got a lot to do with the use of the body; with facial expression; with the intensity of your voice, so the power of the delivery, but I also wanted you to use a variety of different poetic devices or literary devices so I wanted you to use a range of figures of speech; to think about how you could use a variety of sentence constructions, how you could make use of rhythm and rhyme, and make use of a variety of sound devices in your work as well. All of

	those things that we studied, I wanted you to apply in your work. So, while we watch these poems, and we start with Morgan's, I want you to think not only about the powerful delivery – which was outstanding – but also about how she used a range of these poetic techniques in her work. No! This is to showcase! So, are you ready, everybody? Let's watch.

Teacher and learners watch Morgan's performance on the screen.

Rotten pickets coated in white,
A never-ending fight.
Thumbs are the only finger spared from gesture,
(here comes another lecture)
Accompanied by your favourite fool, the no.1 jester.
Carefully tip-toeing like the nut-cracker
Only to be deemed a slacker'

T:	WOW! Tell us about the inspiration for your poem, because it obviously came from a very powerful and emotional energy that you were experiencing at the time, and from a very deep personal place.
Morgan:	*Yeah, I wrote it in like ten minutes, because my mom was like, "I'm coming upstairs to see if you've submitted your slam poetry" and I hadn't started … sorry … and then in like ten minutes I recorded it.*
T:	Well it didn't look like it took ten minutes, it's so well crafted. I think it probably had been incubating at the back of your mind.
Morgan:	*No, sir, it was the fear!*
T:	Oh, fear! So, fear can sometimes be a good motivator! Well, I wanted to take a quick look at the text of your poem, so we can actually really get to the poem. Now, everyone, let's take a quick look at the text of Morgan's poem because I'd like us to analyse her use of those poetic techniques that we were talking about. So, who picked up some performance elements in her poem?
L:	*She used her facial expressions very well.*
T:	Excellent. She made very good use of facial expression. What range of expressions was she indicating on her face? What emotion was she conveying through facial expression?
L:	*I think exasperation.*
T:	Right! Exasperation – frustration with her situation. Nice. What else?
Morgan:	*I felt jaded.*
T:	You felt jaded. So you're feeling like emotionally drained at that point?
Morgan:	*Yeah. I was just tired – it was like eleven o'clock.*
T:	Okay, interesting. Talk to me about Morgan's use of body language. Of gestures? Of movement?
L:	*She used her hands a lot.*
T:	Right, absolutely. She used her hands a lot and she made use of gesture. So, there were all those important performance elements. And her tone of voice? Did you notice that she varied the tone of her voice but underlying there was quite a strong kind of sarcastic tone I think, which I really understand. Look, we are not critiquing your poem, we are looking for the performance elements in it and I think your performance and your delivery were really excellent. And I liked the control in your delivery as well. Although there was an emotional intensity, your delivery was very controlled as well. Okay, everyone, I hope you are able to see the text of the poem. *"Rotten pickets coated in white, A never-ending fight."* Very interesting, that, because what is she referring to in that line, "Rotting pickets"?
Morgan:	*So, the white picket fence is the ideal living situation that obviously is a façade, and coated*

	in white.
T:	Very, very nice. I am sure you have all heard of the story… the image or the metaphor of a "white picket fence," I think it comes from America. But it's the idea of the "ideal" suburban existence. This perfect suburban existence. But, as [Morgan says] then, that it's rotten and then covered in white. So then creating an outward appearance of this "suburban bliss"? But with it, is tension underlying it.
Morgan:	*Yes.*
T:	*"Thumbs are the only finger spared from gesture,* *(here comes another lecture"* Very interesting, so is that a reference to the scolding parent?
Morgan:	*Another one!*
T:	The middle finger?!
Morgan:	*Yeah! I'm just saying though…*
T:	That's very interesting. So the scolding finger would be the parental finger, and then the middle finger, would that be your defiance?
Morgan:	*Yes.*
T:	And then – *"Accompanied by your favourite fool, the no. 1 jester; Carefully tip-toeing like 'the nut-cracker'; Only to be deemed a slacker" ….* Who can pick up the allusion here: "the nut-cracker"? The reference there? It's a nice cultural allusion reference. The Nutcracker Suite? Is that a Tchaikovsky? Yes, Tchaikovsky composed the music for The Nutcracker Suite. The Nutcracker Suite is a ballet and so am I right in saying, Morgan, that what you implied by that is that you are expected to dance for the pleasure of the adults?
Morgan:	*I have to tiptoe around, like walking on eggshells.*
T:	Ah, lovely. So, the tiptoe – walking on pointe like a ballerina. Nice. Very, very nice.

UNIT 5: Teacher choices that **make lessons inclusive**

Glossary of Important Terms

barriers to learning	Anything that stands in the way of a learner being able to learn effectively. They can be physical, social or emotional. They may be because of society and home circumstances, poverty or hunger. Barriers to learning can also be as a result of school arrangements such as unqualified teachers and poor resources.
code-switching	Using a word or phrase from learners' home language to explain a concept for learners who are struggling to understand in the LOLT.
differentiate	Modify the curriculum, resources, teaching methods or assessment tasks to enable learners to overcome barriers to their learning and achieve learning outcomes.
diversity	Diversity recognises that learners have both similarities and differences between them. These differences include, among others their race, gender, sexual orientation, languages, abilities/disabilities, ethnicity, religion, and socio-economic backgrounds.
exclusion	Isolating or marginalising individuals or groups by not addressing their specific needs.
home language(s)	The language(s) used in the home. Most children come to school knowing and speaking their home language(s) fluently. This is also called 'mother tongue' or first language.
inclusion	Ensuring all learners can participate in learning and social experiences.
LOLT (language of learning and teaching)	The LOLT is the language that is used for learning and teaching. Materials and assessments are also in the LOLT of the school.
prejudice	A set of attitudes and behaviour based on the belief that some groups of people are superior to others.
multilingual classrooms	A classroom that includes learners who have different home languages.
multilingual teaching approaches	Ways of supporting learners who are not yet proficient in the LOLT (Language of learning and teaching). The variety of languages spoken are used as a resource to support learning.
scaffolding	Levels of temporary support that help learners reach levels of understanding and achievement beyond what they could have managed independently.
stereotype	An oversimplified generalisation about a particular group of people.

Tasks in this unit are:

Name of the task	Expected time on task:
Task 5.1: On being included	1 hour
Task 5.2: Who can participate?	1 hour
Task 5.3: Language in learning	1 hour
Task 5.4: Scaffolds for extra support	1 hour
Task 5.5: Teachers' beliefs and their effect on learning	1 hour
Reflections on Unit 5	30 minutes

Introduction

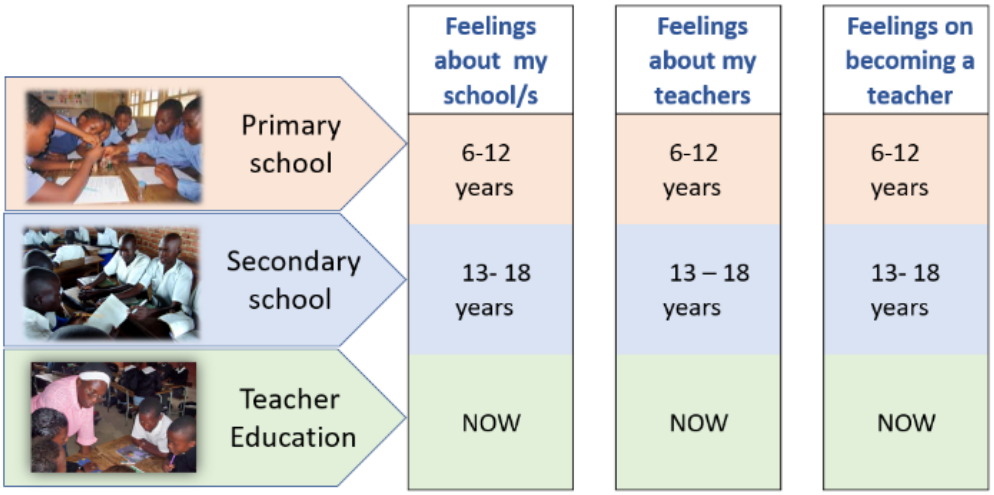
This unit focuses on teacher choices that make lessons inclusive by focusing on three important areas:

5.1 Choosing resources for teaching
5.2 Teaching in multilingual classrooms
5.3 Providing learner support

Before you begin the unit, reflect on your experiences about being included and excluded during your schooling, and how this affected your learning.

Task 5.1: On being included

Think about your experiences when you were at school.



Did you ever feel excluded? Or, did you feel included in school activities? All of the time? How did these experiences affect your learning?

Did teachers' attitudes towards you affect your ability to learn and succeed? If so, how?

Write a response on the online platform or in a personal journal.
It should be as long as it needs to be.

Acknowledge diversity and barriers to learning

Teachers have a responsibility to ensure that all learners in the class can participate in their lessons. Some teachers believe that when they treat learners exactly the same, they are being fair to all. This is not always the case. Although we share a common humanity, we are diverse. There are many individual and social differences between learners. These include diversity of race, religion, language, culture, gender, sexuality, socio-economic background, dis/ability and learning ability and many others.

When teachers value diversity in the classroom, all learners feel that they belong, and that their individual differences are respected. Learning together can teach learners to understand and respect the views of those who have different social identities and life experiences. However, sometimes differences can act as a barrier to learning. A barrier needs to be overcome and wherever possible, removed completely. When learners experience barriers to learning, teachers need to consider how these barriers can be overcome, worked around or removed.

I need to make choices that enable all learners to learn:

Inclusive teaching is my responsibility.

Include all learners in lessons I teach.

Make teaching choices so that all learners can participate.

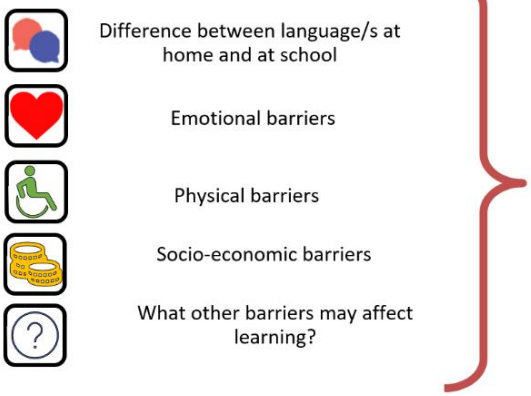
Teachers need to consider that some differences may cause barriers that affect learner behaviour and learning. Barriers to learning can stem from a difference between the language spoken at home and the language spoken at school. They may be emotional, physical, social or economic barriers. Where the barrier cannot be completely removed, teachers need to choose what kind of adaptations and accommodations they can provide for all to participate and learn. This needs to be done in consultation with the parents/caregivers and the school-based support team.

At the start of the year teachers should ascertain obvious learning barriers. These could include:

- Learners with low vision may need enlarged font worksheets and be seated close to the board.
- Hard-of-hearing learners may need to be seated close to the teacher.
- Learners with dyslexia might need more time to complete assessments.
- Learners in a wheelchair/walking support may need more space and easy access for entry and exit.

These accommodations to support learners need to be in place for all lessons all year.

Differences that can affect behaviour and learning:



Difference between language/s at home and at school

Emotional barriers

Physical barriers

Socio-economic barriers

What other barriers may affect learning?

Communication between teachers and parents/guardians helps to support learners

The SACE Professional Teaching Standards states that teachers have a responsibility to ensure all learners are "given the support they need for equitable access to learning opportunities". Teachers need to be aware of differences between learners, and how these differences may affect behaviour, learning and social interactions. Many learners are labelled and excluded from ordinary learning opportunities because of the barriers they experience. This is extremely harmful for learners and leads to painful feelings that stay with them for many years. Professional teachers need to be committed to teaching *all* learners in their classes. They need to understand that all teachers are inclusive teachers. They also need to understand that small adjustments can often make a difference to enabling all learners to participate in learning opportunities.

This unit works with the side of the triangle that connects teachers and learners. It focuses on the choices that teachers make to ensure that learners can participate fully in diverse classrooms. Teachers make decisions about what to keep the same for all learners, and what to make different in their lessons for particular learners.

Professional teachers commit to teaching *all* learners:

Teachers give equitable access to learning opportunities for all learners.

How will differences affect behaviour, learning, and social interactions?

Avoid labels and shaming.

All teachers are inclusive teachers!

5.1 Teacher choices about learning resources

Teachers must make pedagogical choices that enable all learners to learn. Diversity can make it easier for some learners to understand some lesson topics better while others struggle. Teachers need to understand what aspects of learner diversity are pedagogically significant so that they can choose examples, resources or teaching strategies that allow all learners to participate in lessons. Inclusive teachers need to consider whether their choice of teaching resources will give all learners access to the target knowledge and whether the resources reflect the diversity of the learners in the class.

They need to consider how they will use language or multiple languages so that all learners will have access to the new ideas and specialist concepts and terminology. They also need to think about the kinds of life experiences that enable some learners to contribute to the discussions.

Inclusive teachers consider:

Whether **teaching resources** *give access to knowledge* and *reflect the diversity* of learners.

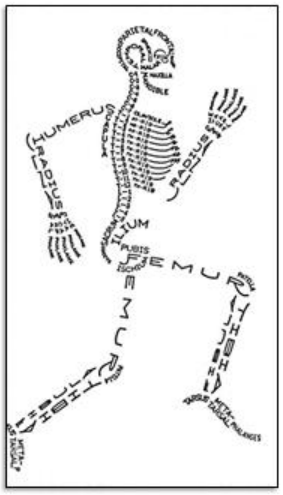
How to **use language/s** so that all learners have access to new ideas and specialist terms.

Whether learners' life experiences make it easier for some to **contribute to lessons** while others have difficulties.

Teaching and learning resources are important for making knowledge accessible to learners. Pictures of new objects and examples can be shown. Discussions and debates can be started using pictures, cartoons, news reports, songs or recorded clips. Reading texts, like stories, can give all learners a common starting place so that their participation in the lesson does not depend on their personal experiences or prior knowledge. The meaning of concepts and information can be represented in diagrams, tables and graphs. Teaching and learning materials are only useful when they help learners to understand the lesson topic better. When teachers are selecting resources for their lessons, an important consideration is whether the resources will help learners access the knowledge. Another consideration for teachers when choosing resources is whether they reflect the diversity of the class.

Certain topics, words, pictures and graphics can be discriminatory and can exclude learners. The images and texts we see around us send us messages about who we are and how we are valued. Teachers need to be aware of how the teaching and learning materials they use reflect the diversity of their learners, where appropriate.

Learners develop a sense of belonging when they see others like them in teaching and learning resource materials used in the classroom.



Resources that represent knowledge: A diagram showing bones of the body (Resource by Aaron Kuehn)

Choose **Learner Support Materials** that

- Represent knowledge and make it understandable
- Allow all learners to participate in the lesson
- Reflect diversity of learners

This teacher uses a reading text to ensure all learners participate in a lesson on peer pressure (from: Read2 Learn SA)

Who is reflected and valued in the learner support materials?

Although some lesson topics allow teachers to bring in images and examples to which the learners can relate, not all lessons can do this. Some lessons teach learners about people, places and things beyond their own experiences and contexts. In these cases, the teacher needs to select resources to make that knowledge more familiar to learners.

Making classrooms inclusive and respectful spaces

To make a classroom an inclusive and respectful space, teachers should take care to choose resources, texts, and examples carefully. Where appropriate, resources should be selected to reflect learner diversity and portray positive role models. When selecting resources, teachers should analyse them to check the kind of messages being sent to learners. These can be messages about what and who is valued. The teacher needs to check that there are no harmful and hurtful discriminatory representations.

Here are some important questions that teachers should ask about the resources they use:

- *Check the images*: Who is in them? Who is not in them? Do the images reflect the diversity of the learners in the class?
- *Check the illustrations*: Who is doing what? Who is active/passive? Who has the power/leadership roles?
- *Check the story line*: Are the problems faced by a minority character solved through the 'goodwill' of someone from a more powerful group? Are painful experiences in history being glossed over or left out?
- *What relationships between people are shown?* Who makes the most important decisions?
- Which learners would identify with the *characters* in case studies and stories?
- *Check for generalisations and hurtful words*.
- *Check for gendered language*: e.g. "Man in his environment" or "mankind".
- *Check if learners can relate to the content provided*. Is it within learners' experiences? If not, how can the teacher provide a shared experience or resource to enable participation?

If there are biases in prescribed teaching resources, they could be used to teach learners about privilege, power and acting against discrimination and prejudices.

Check resources for exclusionary and harmful messages

Task 5.2: Who can participate?

Look at the picture and read the task that has been set for learners. A teacher would think about which learners would be included in this lesson? Would any learners be excluded based on who they are and their previous experiences?

- Write a story about a day at the beach.
- Describe:
  - The feel of the sand
  - The sound of the waves
  - The smell of the sea
  - Paddling in the waves
  - Building sand castles

The first question in this task asks you to think about which learners might be unable to achieve in this learning task. A list of five categories is given. For each one, indicate whether you think that this category matters *very much*, *somewhat* or *very little* for learners' capacity to participate in this learning opportunity.

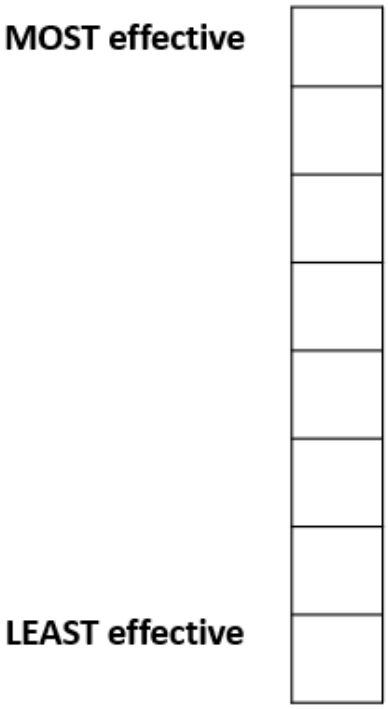
1. Look at the task and tick the appropriate block for each statement on the left

	This matters **a lot** in this lesson	This is **somewhat important** in this lesson	This matters **very little** in this lesson
Learners may have a different racial or gender identity to children in the picture.			
Learners may think cartoon pictures are silly.			
Learners may never have been to the beach.			
Learners may not know how to swim.			
Learners must know that they need to apply sunblock.			

Task 5.2: ‘Who can participate?’ continued…

2. Making the ‘Day at the beach’ learning task more inclusive

Listed below are eight different ways that teachers could make this lesson more inclusive. Read through them and rate their effectiveness from the most effective in the top block to the least effective in the bottom block



A. The lesson topic is about being at the sea, so the teacher could use a story of a visit to the sea. The task should ask learners to analyse the story.

B. The lesson topic should be completely avoided unless every learner in the class has been to the beach.

C. The purpose of the lesson is to describe using one’s senses. The teacher should change the context to an experience that is shared by all learners.

D. The task should be left unchanged.

E. The task should ask learners to write about the friendship between the two children in the picture.

F. Keep the task the same. A different picture should be used.

G. The teacher should organise a different classroom experience (e.g. perform a dance) and then ask learners to describe that experience.

H. The task should ask learners to describe the picture.

Recap

Learners have social identities and come from different home circumstances. To teach inclusively, teachers need to think carefully about the **Teaching and Learning Resources** they use.

Not only should resources represent knowledge and make it understandable, they can allow all learners to participate in a lesson. When lessons provide a common resource as a starting point, like a diagram, a reading text or a problem, learners can participate regardless of their personal experience of the topic. Wherever possible, the teacher should take care to use resources that reflect the diversity of learners in the class.

5.2. Teacher choices in multilingual classrooms

All teachers (not just language teachers) need to make linguistic choices about how they present, teach, design and assess content in a way that is just and fair for all learners.

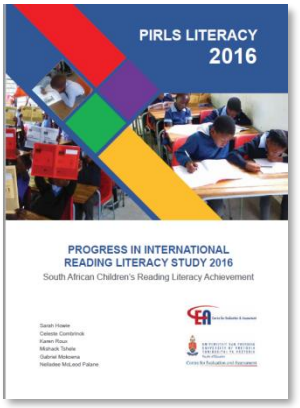
In South Africa, the Language of Learning and Teaching (LOLT) in many schools is English. This is not the home language of most learners and many teachers.

Foundation Phase learners are taught through their home language. They have vocabulary with which to express themselves and learn new skills and content. In Grade 4 children must learn subjects such as Mathematics, Social Sciences, and Natural Sciences through the medium of English. Recent literacy studies (PIRLS 2016) show that 78% of Grade 4 learners in South Africa cannot read for meaning in their home language. If children cannot read in their home language, they are likely to struggle to read and comprehend texts in an additional language such as English. Children who do not speak the LOLT at home have a double task: first, they have to understand what is being said and written in an additional language and secondly, they need to understand the complex concepts being taught.

PIRLS study:

78% of South African Grade 4 learners cannot read for meaning in their home language.

- They are more likely to struggle to read in LOLT.
- Children who do not speak the LOLT as a home language have to:
    - Understand the language
    - Understand complex concept(s)



https://nces.ed.gov/surveys/pirls/

[Source: Howie, Sarah & Combrinck, Celeste & Roux, K & Mokoena, M & Palane, Mcleod. (2017). South Africa Grade 4 PIRLS Literacy 2016 Highlights Report: South Africa. 10.13140/RG.2.2.11110.73282].

Task 5.3: Language in learning

Watch Sink or Swim on the YouTube link:
https://www.youtube.com/watch?v=1bJt5FVJYis

Answer the following questions:

1. Learning complex concepts happens through a shared language. True or False

2. The best way for learners who don't know any English is for them to be taught only in English from their first day of school.
   True or False

3. Which of the following words caused a problem for medical students in a test?
   - eliminate
   - compensatory investment
   - hegemony
   - oppression

4. Prof Neville Alexander recommends
   - English instruction from the first day of Grade 1
   - Making Afrikaans and IsiXhosa compulsory
   - Bilingual mother-tongue education
   - Teaching in home language only

With acknowledgement to
PRAESA
Growing biliteracy and multilingualism

Prof Neville Alexander

Research shows learners' languages affect their learning

Prof Kgethi Phakeng's research shows how learners' language affects their learning of maths. She has given many lectures to help teachers think about the connection between her research findings and their classroom practices.

Read her papers and watch the lectures she has on her site:
http://mamokgethi.com/category/fab-academic/

Prof Phakeng's research has important implications for Foundation Phase teachers in their numeracy classes. Think about the implications of her research for teaching learners in your subject and phase.

Prof Phakeng's research has been supported by the National Research Foundation of South Africa

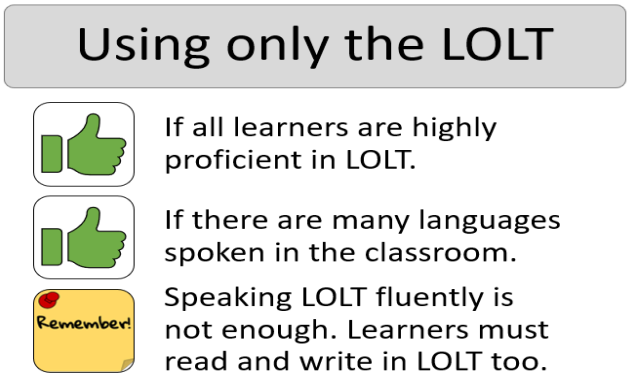
The use of LOLT and additional languages for learning

Teachers need to consider the school context and learner proficiency in the LOLT when thinking about language usage in the classroom. They need to think about their own language choices as well. Not all choices will support access to knowledge in all contexts. Depending on the needs of learners in the context of the school and its community, one of the following ways of using language would be most appropriate:

i. Using only the Language of Learning and Teaching (LOLT)
ii. Using mostly LOLT with multilingual resources
iii. Moving between different languages

i. When it's best to use only the LOLT

It may be possible for teachers to use only the LOLT in contexts where all learners are highly proficient in the LOLT. This means that they can read, speak and write in the LOLT with comprehension. This is often more possible in the higher grades and in contexts where learners speak the LOLT as one of their languages at home. It may be appropriate if learners have many different home languages, and classroom communication is best done through the LOLT.



Teachers need to remember that while learners may be able to speak the LOLT fluently, it does not mean that they can necessarily read and write academic LOLT proficiently. Teachers must make sure that learners have guided reading and writing tasks during class time. They also need to include visual resources and scaffolded tasks that support teaching and learning.

ii. When it's best to use mostly LOLT with multilingual support

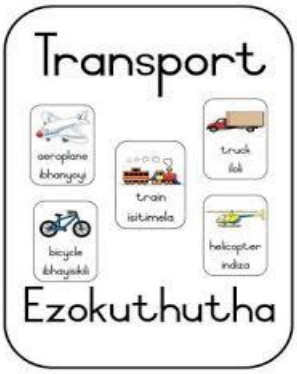
In some contexts, teachers may be able to use mainly the LOLT but supplement the presentation, application and assessment with multilingual support. This includes the use of multilingual concept dictionaries, charts, glossaries and allowing opportunities for learners to discuss the concepts in the LOLT as well as in their home languages. Teachers could create opportunities for learners to discuss the main ideas, examples and their tasks with peers in their home languages. Learners could help one another to develop multilingual glossaries on important concepts and terms.

Using the LOLT with support from other languages

Learners use their home languages to discuss work with peers

Multilingual concept dictionaries, charts, glossaries

In multilingual classrooms, learners need opportunities to speak, read and write in their home languages and the LOLT



iii. When it's best to draw on different languages

Teachers may be able to draw on different languages and use code-switching strategies to ensure learners understand new concepts. However, teachers need to do more than explain in the LOLT and then repeat in learners' home languages. To give learners opportunities to acquire the language of learning and teaching, they need chances to explain their understanding of concepts and write in the LOLT as well.

Using different languages

If the teacher is fluent in the LOLT and learners' home languages.

Remember! Always repeating the content in both languages can encourage learners to ignore the LOLT.

Remember! Learners need to speak, read and write using the LOLT.

Recap

Teaching, learning, and thinking happen through language. It is easier to learn unfamiliar concepts in a language we understand and can read and write fluently. When the language of teaching is different to the learners' home language(s), learners might struggle to understand fully or demonstrate their understanding. Therefore, it is important for teachers working in multilingual classes to consider how they can use the languages of their learners as a resource for learning.

There are different ways that teachers can respond to the linguistic needs of learners in South African schools. It may be possible to use only the LOLT in lessons, but this would require that all learners are proficient in that language. Secondly, teachers could use the LOLT and multilingual resources to scaffold understanding and responses. Learners could be encouraged to discuss their schoolwork with one another in their home language to enhance learning support. If teachers have a good understanding of both the home language and the LOLT, they could thoughtfully switch between the languages.

5.3 Teacher choices that support learner achievement

Teaching everybody in the same way ignores the fact that some learners experience barriers to their learning. These barriers can make it more difficult for learners to access knowledge and participate in learning. Sometimes barriers to learning can be removed. Hunger, understood as a 'barrier to learning' can be removed by a school feeding programme to ensure that learners are not obliged to learn when hungry. Removing other barriers can take much longer. For example, becoming proficient in the LOLT or learning to read takes time. In the meantime, teachers need to find ways to help learners overcome such barriers so that they may participate fully in all lessons.

Lessons should enable learners to access knowledge and develop skills in more and more complex ways over time. Teachers must ensure that all learners can access the knowledge and skills that lessons teach. Effective teaching decisions consider *what is being taught, who the learners are, and working with what is possible in the school context.*

This section considers teacher choices around supporting the academic achievement of diverse learners. Teachers work with *learner similarities* as much as with *learner differences*. Teachers need to be thinking about what they keep the same and what they change so that all can learn. Teachers need to think about what they can keep the same for the whole class and what they need to change to support particular learners in the lessons they teach. Being responsive to diversity allows teachers to ensure that all learners can participate and develop an understanding of the lesson topic.

Explanations and making knowledge accessible

All learners need to meet the same curriculum outcomes, and gain access to the same knowledge and skills. Each lesson has key concepts or content that are crucial for *all* learners to learn. Teachers must ensure these are made understandable to all learners. The question is how best to do that.

Teachers choose what to keep the same for all learners, and what to make different for some learners in the lessons they teach.

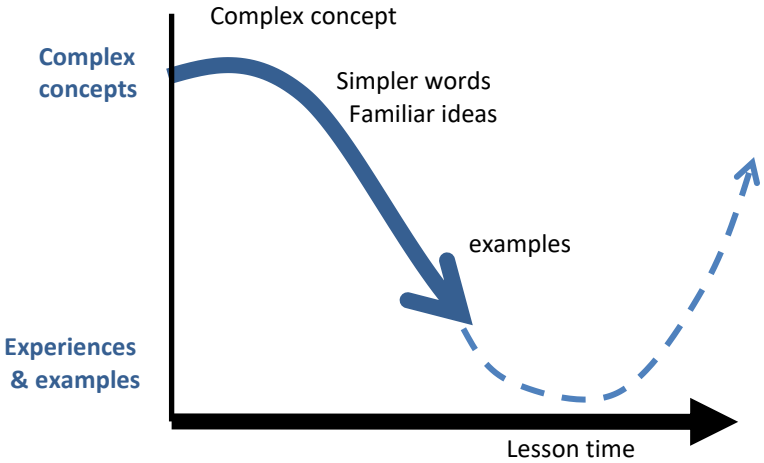
Here are three common approaches:

- Design a single learning pathway for all learners, but make sure that there is support that all learners can use if they need it.
- Keep the explanations the same for all and then work with smaller groups to revise or extend concepts.
- Teach different groups separately, varying the explanations or language.

One learning pathway that has support freely available

Teachers often keep all learners together for an explanation in whole-class teaching during a lesson.

Teachers must think carefully about how to introduce specialist terminology and unpack its meaning using simpler words, smaller parts, familiar ideas and how it links with experience and examples. The downward part of semantic waves helps teachers to think about when to do this in their lesson steps.



The teacher must remember to give learners a task to ensure that they build up the complexity of knowledge again.

It is possible to teach a lesson to the whole class and still be inclusive, if learner support is included for all learners from the start? When doing this, the teacher must be sure to build support required by different learners so that it forms part of the general lesson design. Not all learners will need to use the support structures to complete the task but support structures should be available to all.

These may include:

- Diagrams, pictures, word lists and other resources to support whole class learning.
- Examples from beyond the lesson topic to make concepts more relevant and understandable.

Keep the lesson the same for all learners, with support available to everybody

If all learners are being introduced to a new concept or are building on a previously introduced concept

Give the whole class access to the support required by some learners

Teach the whole class, then work with smaller groups

Teachers sometimes keep part of the lesson the same for all learners, and then work with smaller groups. They may do this for a variety of reasons. They may focus on reading skills with some learners, or recap an explanation while other learners begin an activity independently.

Acknowledgements to Funda Wande

This could be a good choice if some learners require more assistance or input in understanding the concepts. It might be that learners have differing reading abilities and the teacher wants to spend some time working with developing their literacy. Some learners may not be as proficient in the LOLT as others, and the teacher may wish to check their understanding of new words and ideas.

Teachers making this choice need to remember that it is important to establish the type of classroom culture which does not label some learners as less able than others. Learning is not about who finishes first. Learners need to be taught that it's okay to work at different paces and with differing levels of support.

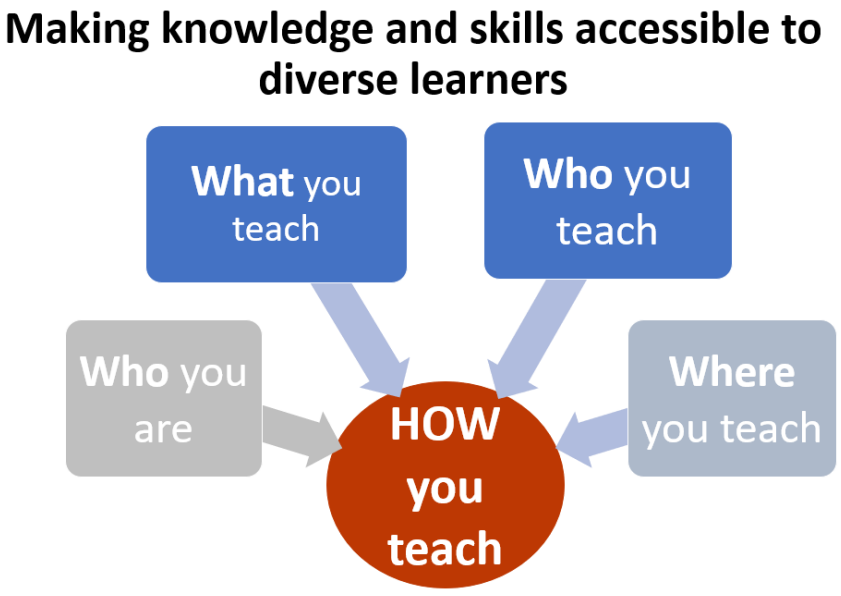
Teachers work with smaller groups

This would be a good choice if some learners require more detailed explanations or explanations that are supported by modelling, visual aids and/or different examples. Teachers making this choice need to remember that not all learners learn in exactly the same way or at the same speed. They must also remember to cater for both the struggling learners as well as those learners who are excelling and be aware that this changes over time, activity and subject.

Acknowledgements to Funda Wande

Acknowledgements to Strengthening Foundation Phase Teacher Education: European Union Policy Support Programme

The teacher in the picture on the left is working on a reading lesson that is chosen for this group of learners. This allows the teacher to vary the presentation of the lesson in terms of book choice, level of reading difficulty and/or learner interest in specific book topics. The teacher on the right wants a group of learners to learn with beads.



Lesson observation

Read through the transcript (found at the end of this Unit) of a set of lessons on a story called *The Little Yellow Chicken*. This Foundation Phase teacher presents *one lesson* that caters for all learners. This story is new to all learners. By working with a story (instead of prior experience or knowledge), all learners start the lesson from the same point. She provides learning support for all of them.

Through a series of language tasks, learners work with words found in sentences from the story. By the end, all are ready to write a whole class paragraph.

Make notes about how she enables all learners to participate in the lessons.

You will use these notes for Task 5.5.

Reading to Learn South Africa

Designing activities for all to learn

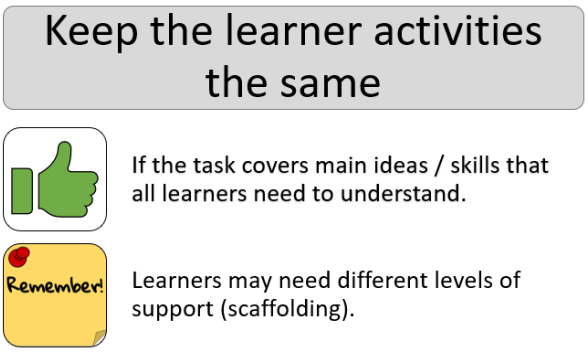
Varying parts of the lesson can help learners who require more support to reach their goals. When learners reach their learning goals, albeit using different pathways, it gives them a sense of achievement and their confidence grows. Some might need support longer than others, so it is important for teachers to be observant and aware of the shifting needs of their learners. Teachers could think of ways to structure activities to make sure that all of the learners still work with the most important concepts that they have learnt.

They could choose to:

- Keep the activity the same with varying levels of scaffolding built in, or
- Differentiate learner activities/tasks.

Using scaffolds to support learner achievement

When using the same task that all learners are required to complete, teachers need to remember that learners may need different levels of support to be able to complete the task successfully. The kind of support that teachers use is often referred to as scaffolding. Scaffolding is *temporary support* that helps learners reach levels of understanding and participation beyond what they could have managed on their own. Although learners are set the same learning tasks, teachers can offer varying levels of support. In doing so, they can be responsive to differences between learners. The goal is that all learners should successfully complete the tasks.



Scaffolding *is the temporary support that builders use to reach higher levels.*
It is also the temporary support that teachers provide to help learners achieve more than what they would manage on their own.

These are some ways in which teachers could expect learners to complete the same task, but with different levels of support built in to help them all achieve a successful outcome. There are different ways of providing support that would help learners achieve success:

- Learners who struggle to concentrate would benefit if a large task is broken up into a set of shorter steps.

- Some learners could begin the task independently. Others could start the task working together with the teacher, then continue in pairs, and finally individually. In that way, all learners have lots of support at first, then work more independently with time.

- Learners could get different types of scaffolding to complete the required task. For example, some learners may be expected to write paragraphs independently. Others may be provided with a set of keywords to use while some learners may be able to achieve the outcome with 'sentence starters'. In this way, they all write notes but do so with varying degrees of support.

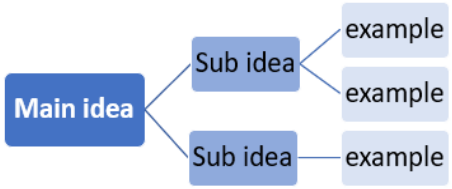
- It may be that some learners are able to complete a different number of questions, with all learners starting with the core tasks.

Some of the scaffolds commonly used in classrooms

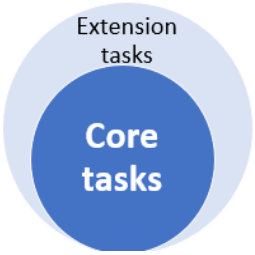
Large task divided into **smaller steps**

Examples done with **increasing independence**

Tasks with more/less **structured support**
e.g. word list; an graphic organiser; paragraph frame; sentence starter



Core tasks and extension tasks



The worksheet that follows provides a structure for learners to extend and consolidate knowledge on the topic 'Parts of a plant and their functions'.

Task 1 in the worksheet below builds support for all learners into its design. Learners have a text to read. They do not need to guess the knowledge. As they read the text, there are different reading activities. They are directed to underline and circle various parts of the text. It's like a treasure hunt to find the main idea and important things to know. The basic parts of a plant become a labelling activity. The learners have the plant drawing given to them so that they can focus on the labelling, not the drawing. This graphic makes the task simpler by reducing its complexity.

Task 2 connects the parts of the plant to two important processes: photosynthesis and reproduction. The learners need to build up complexity and find a way to organise their new knowledge into two sections, that of making food, and that of making seeds.

Study the worksheet and its tasks carefully. There are many scaffolds built into the '*Parts of a plant and their functions*' worksheet. Find 5 of them.

Parts of a plant and their functions

Name: _____

1. Read about the different parts of a plant, using the word list on p.2 if you need it.
2. Complete Task 1 in pairs. Check your answers with the memo on the chalkboard, then do Task 2 on your own.

Task 1: Read the text, then follow these instructions:

1. Use a green pencil crayon to underline the different parts of a plant.
2. Use a blue pencil to circle the things a plant needs to make food.
3. Use a red pencil to underline words that tell you what the part of the plant does.
4. Use the words you underlined in green to add labels of the parts of the plant to the diagram below.

About the parts of a plant

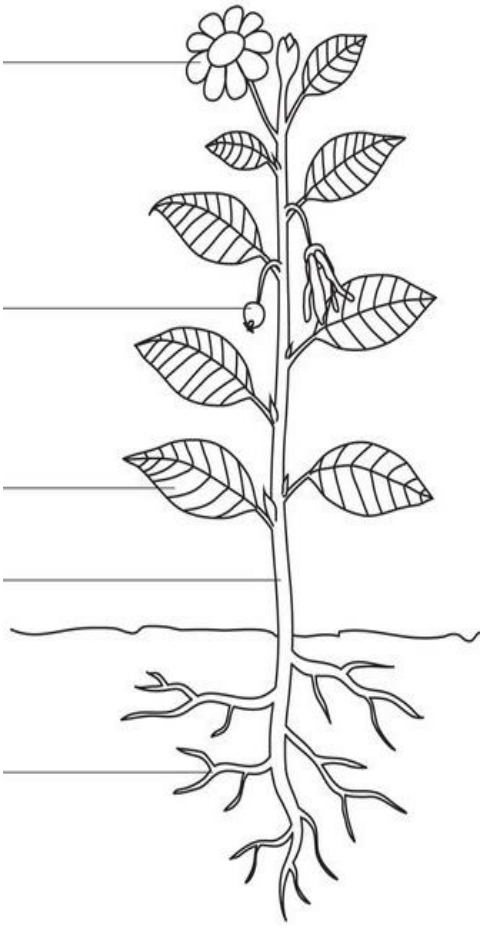
The parts of a plant each have a different role to help the plant thrive in its environment.

The roots of the plant anchor it in the soil. The roots suck up water and nutrients from the soil. Water is required for the plant to make its own food.

The stem holds the plant up and it brings nutrients from the roots to its other parts.

The leaves of the plant catch as much sunlight as they can. Sunlight is also required for a plant to make its own food. The leaves also have tiny pores in them that take in carbon dioxide. Plants need carbon dioxide to make their food through the process of photosynthesis. Leaves release oxygen as a waste product of photosynthesis.

Flowers are often brightly coloured or sweetly scented to attract insects. Flowers contain seeds that can develop into new plants. In some plants, the flowers develop into fruit that attract birds and other animals. Those who eat the fruit and seeds transport the seeds from one place to another. If they land in a suitable spot, the seeds can grow into new plants.



Task 2: Answer these questions in full sentences

2.1. To make food, a plant needs water, carbon dioxide and sunlight. Explain how the following parts help the plant to collect what is needed for the plant to make its food?

The roots help a plant to make food by…
The leaves help a plant to make food by…
Stem:

2.2. Explain how the following parts of the plant help it to reproduce.

A flower helps a plant to reproduce because…
fruit:
seed:

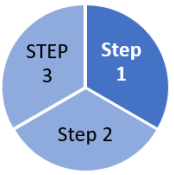
Word list	
environment	The place where something lives
thrive	To grow well
anchor	To hold firm and keep it in one place
nutrients	Chemicals that help a body or plant to grow and be healthy
photosynthesis	The process of making food from sunlight, carbon dioxide and water
reproduce	To make others like itself

Task 5.4: Scaffolds that enable task completion

Now think about what else the teacher can do to provide additional support during the lesson. Match up the pedagogical support (on the left) with the kind of scaffold (on the right)

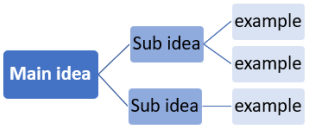
- TASK 1: Read the text with teacher before writing in partners
- List of keywords available
- Everybody do Task 1. When successfully completed, proceed to Task 2
- TASK 1: Read through the text in partners and write by yourself
- Step by step instructions
- TASK 2: Provide sentences to put in the right place
- TASK 2: Make 'sentence starters' available
- TASK 1: A list of labels available. Put them in the right place

Large task divided into **smaller steps**

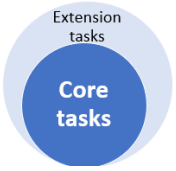


Examples done with **increasing independence**

Tasks with more/less **structured support**
e.g. word list; an graphic organiser; paragraph frame; sentence starter



Core tasks and extension tasks



Task differentiation

Offering different learning tasks could be a good choice if all tasks still cover the main ideas. Teachers making this choice need to remember that learners should not be denied the opportunity to tackle complex ideas and meaningful tasks. Teachers should ensure that all tasks are meaningful and that allow learners to achieve the learning outcomes.

Differentiate learner activities

Tasks cover main ideas at different levels of complexity.

All tasks demand meaningful work.

All learners need to achieve the learning outcomes.

Task 5.5: Teachers' beliefs and their effect on learning

Think about your response to *Task 5.1. On being included*, in which you considered how teachers' attitudes towards you affected your learning.

Now read what Teacher Patricia says about her approaches to lesson planning.

"I can't plan lessons to suit everybody. So, I have to remember there are always going to be those kids that do very well and there will always be those who fail. There is not much I can do for the ones who are going to fail. I think about the ones in the middle when I plan lessons – I plan for those kids who are the average. That way I know the lesson will suit most of them. That is the easiest way."

What would you say to Teacher Patricia so that she could:

- Feel confident about teaching all learners?
- Be more responsive to children's learning needs through her teaching choices?
- Ensure the full participation of all learners during her lessons?

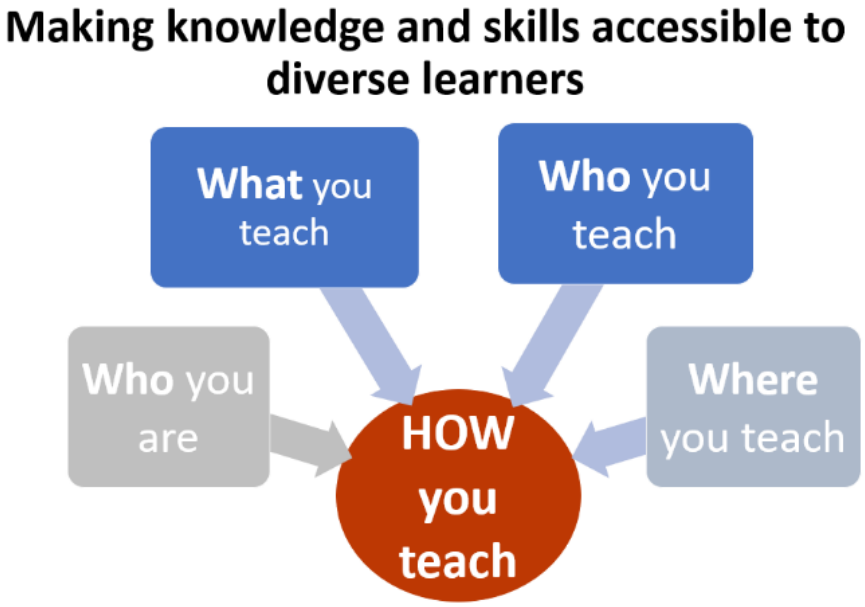
Recap of Unit 5:

Teacher choices that make lessons inclusive

There are many ways in which a teacher can give all learners access to the complex concepts and skills being taught in a lesson. You have learnt that what you teach and who you teach affect how you teach. You have learnt about the various ways that you can select resources being mindful of their value in enhancing understanding and being thoughtful about how they represent diverse learners in your class. You have also learnt that you need to work carefully with both the Language of Learning and Teaching and learners' home languages to help them develop knowledge. You have learnt how to keep some parts of a lesson the same, and some parts of the lesson different to support the learning of all.

Most importantly, you have learnt that all teachers are inclusive teachers. This is not a choice. The choice teachers have is *how to be inclusive* in conceptually informed and contextually responsive ways.

All teachers are inclusive teachers



Reflection on Unit 5:
Teacher choices that make lessons inclusive

Please answer these three questions about your learning in this unit.

1. What links did you notice between this unit and coursework you have studied thus far?

2. What links did you notice between this unit and your previous experiences in the classroom?

3. Which ideas in this unit inform how you hope to support learners?

Additional resources on inclusive education

Are you interested in finding out some more about using language to promote inclusion in your classroom? Look for these resources to deepen your knowledge.

- Resource book on Multilingual teaching approaches.

https://www.teachingenglish.org.uk/sites/teacheng/files/Using_multilingual_approaches.pdf

- Longman Maths and Science multilingual dictionaries for Grades 4-9.
- Department of Arts and Culture Multilingual Mathematics Dictionary Grade R – 6.
- http://www.dac.gov.za/sites/default/files/terminology/multilingual-mathematics-dictionary-r-6.pdf
- https://www.readingtolearnsouthafrica.com/
- http://www.read.org.za/
- https://africanstorybook.org/

Are you interested in finding out some more about inclusive teaching? These resources are excellent and will deepen your knowledge.

- http://www.included.org.za/news/what-is-inclusive-education/
- http://www.included.org.za/wp-content/uploads/2019/10/Using-Learners-as-a-resource-for-Learning-Support.pdf
- https://teachforall.org/
- Florian, L. & Black-Hawkins, K. (2011) Exploring inclusive pedagogy. *British Educational Research Journal*, 37(5): 813 - 828.
- Florian, L., & Walton, E. (2017) Inclusive pedagogy within the Southern African context. In P Engelbrecht & L Green (eds). *Responding to the Challenges of Inclusive Education in Southern Africa.* Pretoria: Van Schaik Publishers.
- Engelbrecht, P., Nel, M., Smit, S. & van Deventer, M. (2016) The idealism of education policies and the realities in schools: the implementation of inclusive education in South Africa. *International Journal of Inclusive Education*, 20(5): 520-535.
- Engelbrecht, P, Nel, M., Nel, N. & Tlale, D. (2015) Enacting understanding of inclusion in complex contexts: classroom practices of South African teachers. *South African Journal of Education*, 35(3): 1–10.
- Themane, M., & Thobejane, H. R. (2019) Teachers as change agents in making teaching inclusive in some selected rural schools of Limpopo Province, South Africa: implications for teacher education. *International Journal of Inclusive Education*, 23(4), 369-383.
- Walton, E. (2013) Learner support through differentiated teaching and learning. In N. Nel, M. Nel & A Hugo (eds). *Learner support in a diverse classroom* (pp.117-140) Pretoria: Van Schaik.

Resources

The Little Yellow Chicken

Reading to Learn Process
(Foundation Phase)
Shared Book Reading

Narrator	: The teacher can prepare for reading by giving learners an overview of what the story is about by using the pictures and talking about their knowledge or experience of what the story will cover.

(The learners are sitting on the mat in front of the teacher who is showing them the cover of the book titled 'The Little Yellow Chicken')

Teacher : The story is about this chicken which is yellow. This chicken was going to have a party. Who comes to your birthday party?
A learner : Friends!
Teacher : Friends. Right.
A learner : Cousins!
Teacher : Right! Also cousins! Okay – who else?
A learner : Her parents!
Teacher : Her parents.
A learner : Uncles!
Teacher : Uncles. Very good! All that – parents, uncles, cousins, we call all that, together their…
The class : Family!
Teacher : Well done! I want us to look at the pictures. Wow!

(The teacher opens the book to the first page which displays a picture of the little yellow chicken wearing a green birthday crown and a blue balloon on a string attached to her right wing. The teacher points to the little yellow chicken and asks the class…)

Teacher : What do you see here? The chicken, right?
A learner : A balloon!
Teacher : What do you use balloons for?
A learner : To decorate!
Teacher : To decorate so that the room will look…
The class : Nice!

(The teacher turns the page to display the little yellow chicken holding an orange bucket and standing next to a bee, a green frog and a brown beetle. The teacher continues…)

Teacher : Let's look here.
(The teacher points to the frog and the insects and asks the class…)
Teacher : Who do you think these are?
A learner : Friends!
Teacher : Friends! These are her friends. Very good!

(The teacher then points to the picture on the opposite page of the little yellow chicken pushing a shopping trolley with her orange basket inside.)

Teacher : What do you think she is doing now?
A learner : She is pushing a trolley.
Teacher : She is pushing the trolley. Ok, very good!
A learner : She is going to shop.
Teacher : She is going to shop. Well done!
A learner : She is shopping!
Teacher : She is shopping. You are all correct. When you go shopping, what do you need?
A learner : A shopping list!

(The teacher points to the picture of the trolley and the learners identify it as a "trolley"! The teacher turns over the page to show a picture of the little yellow chicken wearing a green and white striped apron and standing next to a stove with two pots - a small black one and a larger red one.)

Teacher : Let's look at this picture. What do you see here? She is cooking. How do you know that she is cooking?
A learner : An apron.
Teacher : Right! She is wearing an apron. Ok, how do you know that she is coming to cook here? Look at the pictures. Tell me!
A learner : The pot is on the stove.
Teacher : The pot is on the stove. We can see the stove and we can see the pot. Very good!

(The teacher then points to the picture on the opposite page which shows the green frog, the bee and the brown beetle)

Teacher : What do you see? We said that these are her…
The class : Friends!
Teacher : Very good!

(The teacher turns over the page to reveal a picture of the little yellow chicken standing next to a table with a festive table cloth and a stack of plates. She discusses with the learners the use of the plates being on the table. The learners chorus that plates are for "eating!")
(The teacher turns over the page and the picture displayed is of the birthday table with plates of food and coloured balloons and streamers above the table)

Teacher : Wow! You can see all the food on the …
The class :Table!
Teacher : And what do you call these?
The class : Balloons!
Teacher : I'm sure she is ready for the…
The class : Party!
Teacher : Good!

Narrator : The teacher reads the story with the learners many times and explains it so they understand it, enjoy it and can recite all the words.

(The teacher reads to the class…)
Teacher : 'And the big brown beetle said: "Stop bugging me!"
The class : Aah!
Teacher : What are the names of her friends?
The class : Frog, bee, big brown beetle.
Teacher : Very good.
(The teacher continues reading…)
Teacher : "He went shopping by himself" Okay, so is the chicken a girl or a boy?
The class : A boy!
Teacher : A boy. Very good.
(The teacher continues reading…)
Teacher : "So the little yellow chicken did the cooking by himself." Anyone help the little yellow chicken?
The class : No!
Teacher : No-one, very good!
(The teacher continues reading…)
Teacher : "I am hungry," said the frog. "I am starving," said the bee. And the big brown beetle said, "What about me?" Where were they when the little yellow chicken was busy preparing cooking? Where were they? Did they help him?
The class : No!
Teacher : But now when the food is ready, see now they are coming and they are telling him that they are …
The class : Hungry!

(The teacher continues to read...)
Teacher : "What shall I do?" Who is asking now?
The class : The little yellow chicken!
Teacher : Very good!
(The teacher continues to read ...)
Teacher : "Don't let them in." What is granny saying?
The class : Don't let them in!
Teacher : Huh?
The class : Don't let them in!
Teacher : Said the little red hen: "Eat all your food yourself." What does she say?
The class : Eat all your food yourself!
Teacher : Yes!

Narrator : This can be followed by a closer reading of the book pointing to the words as they are read.

(*The learners are now seated at their desks and the teacher has placed the book on a flipchart stand in front of the class and is using a ruler as a pointer. She points to each word as indicated below and the learners read aloud with her pronouncing each word as she points to it with the ruler:"*

Teacher : Let's read, Grade 3!

'The Little Yellow Chicken'

The little yellow chicken
thought he'd have a party.
He said to his friends,
"Will you help me
do the shopping?"

His friends laughed at him.
"Hop it!" said the frog.
"Buzz off!" said the bee
And the big brown beetle
said, 'Stop bugging me!"

Everything was ready for the party
The food smells delicious.

The friends knocked on the
little yellow chicken's
door.'

(While the class is reading, they pause between the words 'chicken' and 'thought' in the first two lines of the story. The teacher stops them and asks)
Teacher : Why are you pausing here because there is no full stop? Right you move with me. Let's read.

(*They continue to read together until they get to the word 'delicious', the teacher discusses the spelling of the word 'delicious' with them.) (The teacher then points to the last two words on the page - 'chicken's door 'and points specifically to the apostrophe and discusses the grammatical use of the apostrophe.*

Recognising Words and Making Sentences

Narrator : Once all the learners understand and can say the words in the story or at least part of the story, they can easily learn to read the words sentence by sentence with the following three steps:
a) Recognising each word in the sentence

The teacher shows the learners how to recognise each word as they read it by pointing to the words and saying them as they read. This is done by using cardboard strips so the learners can say and point to the words easily.

(The learners are seated at their desks and have the same sentence on cardboard strips on their desks in front of them as is posted on the chalkboard)

The little yellow
chicken thought
he'd have a party.

Teacher : In front of you, you have the same sentence. Grade 3, as you are reading, you use your finger to point to the words to read.

(The learners all read the sentence aloud together)

Narrator : Do this two or three times until the child is pointing to the words and saying them at the same time.

Teacher : Right, read again.

(The learners once again read the sentence out aloud together while pointing to each word)

Teacher : Now tell me. Who is the sentence about?
The class : The little yellow chicken.

Narrator : Then the children can point to each word themselves as they say the words. They can do this because they now know the meanings of the words and their sequence in the sentence.

Teacher : As you are reading, you point to the words.
(The learners read the sentence out aloud pointing to each word as they read)
Teacher : I want you to point. Who is the sentence about?
The class : The little yellow chicken.
Teacher : Very good.

Narrator: Recognising Words and Making Sentences

b) Cutting up word groups

Once all the learners can read the sentence accurately, they are ready to start pointing at each group of words in the sentence and cutting them out.

(The following cardboard strip is posted on the chalkboard. The teacher points to each word and, together with the learners, she reads each word aloud…)

The little yellow chicken

Teacher : Now, I want you to use scissors and cut out some words.

Narrator : Help the learners identify each group of words by asking questions about each group.

Teacher : Who is the sentence about? Grade 3?
The class : The little yellow chicken!

Narrator : Then they cut these words off the cardboard strips. Then they put the word groups back in the sentence and read the sentence again.

Teacher : Can you put it in front of you? I want to see it. Put it in front of you.

(Teacher observes what a learner has done and says…)

Teacher : Well done! Put your finger on the 'T'. The 'T' is a …
The class : A capital letter!
Teacher : Why is it a capital letter?
A learner : Because it's at the beginning of a sentence.
Teacher : Well done! Because it's at the beginning of the sentence. We always use a capital letter to start a sentence. If you look at the other piece, there is a full stop there. Can you see the full stop?
The class : Yes!
Teacher : Put your finger on the full stop. Where should the full stop come when you're writing a sentence?
The class : At the end of the sentence!
Teacher : Very good! What is the little yellow chicken doing in the sentence?

Narrator : Then ask them to point to the next word group in the sentence and cut it out.

(The teacher then pointed to her head and asked…)
Teacher : What did he do?
The class : He thought!

The little yellow chicken	thought

Teacher : Thought is a doing word. We call a doing word a…
The class : Verb!
Teacher : What did he do? He…
The class : Thought!
Teacher : What did he do? He…
The class : Thought!
Teacher : Right. Now cut out the word that tells us about what he did. Just that word, Grade 3. So which word are you going to cut?
The class : Thought!
Teacher : Very good!
(Teacher walks around the class and says 'Well done' to some learners as she sees their cutting.)
Teacher : If you've got your word, put it up, I want to see it. Everybody put the word in front of you. Now read that word…
The class : Thought!

Narrator : Then do the same for the remaining word groups in the sentence.

Teacher : Also cut out the words 'he'd have '

he'd have

Narrator : Ask them to say the words as they put them down.

Teacher : The words 'he'd have'- put them down in front of you and read the words 'he'd have' Everybody…
The class : He'd have.
Teacher : What is it that he'd thought he'd have? Put your hand up and tell me.
A learner : A party!
Teacher : Well done! Everybody?
The class : A party!
Teacher : Find the words that say 'a party' Show me the words that say 'a party.'

The class :(*Pointing to the words)* A party!

Narrator : Then the learners put the sentence back together.

Teacher : You can have one l-o-n-g sentence in front of you.

Narrator : Then they can say the whole sentence to themselves to help them remember the sequence of words.

Teacher : Grade 3, now I want you to use your finger to point to the words and read the sentence.

(The learners all read the sentence out aloud together...)
The class : The little yellow chicken thought that he'd have a party.

Recognising Words and Making Sentences

c) Making sentences
Learners now get more practice in recognising the words by mixing up the cards and putting the sentences back together again.

Teacher : Mix them; you can even put them upside down. Right, now Grade 3, who can remember the sentence before we cut it?
A learner : The little yellow chicken thought he'd have a party.
Teacher : Everyone, what was the sentence before we'd cut it?
The class : The little yellow chicken thought he'd have a party.
Teacher : Right put the sentence back together.

Narrator : It's very important to allow the learners to do this themselves as much as possible. Keep doing this until all the learners can put the sentence back accurately and read it.

Teacher : Everybody read your sentences.
The class : The little yellow chicken thought he'd have a party.

Spelling and Forming Words

Narrator : Learners practise spelling the words they know by cutting them up into their letter patterns.

(The teacher holds up the following word on a cardboard strip)

party

Teacher : Read the word, people.
The class : Party.
Teacher : Very good. Again.
The class : Party.
Teacher : Ok. Let's think about cutting up this word in order to learn how to write it.

Narrator : Show the learners how to cut up words into groups of letters such as 'par' and 'ty'

(A learner demonstrates on the teacher's card that the word 'party' can be broken down into 'par' and 'ty". The teacher asks the learners for other words ending with 'ty'.)

Narrator : Then they practice writing each letter pattern in turn on their boards.

Teacher : We're first going to write 'par' and then 'ty'. I want you to write 'par' three times.
(The learners write 'par' three times on their personal chalkboards and hold them up for the teacher to see. The teacher walks around the classroom to check. The teacher then requests that they add 'ty' to the end and read their words.)

Narrator : When they can remember each letter pattern, they can write the whole word. Show them the word first and then turn over the card and let them write it from memory.

(The teacher pastes the word party on the chalkboard in the front of the class and then speaks to the learners)
Teacher : Let's read the word.
The class : Party.
Teacher : Again!
The class : Party.
(The teacher removes the cardboard with the word 'party' and asks the learners to write it themselves)
Teacher : Now it's your turn. Write the word 'party'
(The learners write the word and hold up their boards to show the teacher)

Rewriting Stories

Narrator : After practising sentence writing, learners can start writing new stories together with the class. Use the same sentence patterns of the shared reading story that they have learnt to write with new content. Brainstorm new characters, events and settings for the story that will fit into the patterns of the shared reading story.

Teacher : Let's think about it. Give me ideas.
A learner : Little yellow bird.
Teacher : Little yellow bird? Very good.
A learner : The brown horse.
Teacher : The brown horse. Good. Ok. I think we have enough ideas now. We've had the little yellow bird, the little brown horse, the little brown puppy, the little yellow cat. Which side is winning?
The class : The little brown horse!
(The teacher begins writing the new story on the chalkboard about the little brown horse.
Teacher : As it is the title of our new story, I must use what?
The class : Capital letters
(The teacher rubs out the lower case first letters of the words in the title and replaces them with capital letters and so it reads… The Little Brown Horse)

Teacher : Wherever it says: 'The 'Little Yellow Chicken' we are changing it to: 'The Little Brown Horse.'

Narrator : Put the shared story reading up as a model on a sentence maker or enlargement. The teacher can start writing each sentence on the board and then get learners to add words that they know. As the class writes they can keep brainstorming new elements to fit into the pattern of the shared reading story. Once this activity has been practised several times, learners can start writing their own stories, again following the patterns of the shared reading story but with new characters and events that they have thought of themselves.

(The teacher has a section of the original story of The Little Yellow Chicken written on flipchart paper and pasted on the chalkboard to use as a guideline for the new story of The Little Brown Horse. The teacher goes sentence for sentence and encourages the learners to give ideas for the new story which she writes on the board. The class reacts enthusiastically and brainstorms with the teacher to write the story of The Little Brown Horse. See below how the learners created a new story based on the original one that they had read in class with the teacher.

The Little Yellow Chicken

The little yellow chicken thought he'd have a party.
He said to his friends, "Will you help me do the shopping?"
His friends laughed at him.
"Hop it" said the frog.
"Buzz off!" said the bee.
And the big brown beetle said, "Stop bugging me!"

So the little yellow chicken went shopping by himself.
When the shopping was done, the little yellow chicken said to his friends:
"Will you help me do the cooking?"
His friends shook their heads.
"Hop it! "said the frog.
"Buzz off!" said the bee.

The Little Brown Horse

The little brown horse thought she'd have a party.
She said to her friends. Will you help me do the shopping?
Her friends laughed at her.
"Stamp it!" said the elephant
"Swing it!" said the monkey
And the donkey said, "Stop annoying me!"

UNIT 6: Teacher choices for **managing learning environments**

Introduction

This is the final unit of the *Teacher Choices in Action* module. When you have finished this unit, you will complete the summative assessment of the course and you will be invited to participate in a nationally important research project.
This unit looks at the thinking teachers do before, during, and after the lessons they teach. It focuses on how teachers work to deal with space and time in order to manage learning environments.

Teachers are professionals who are committed to the learning and well-being of those they teach. They bring their values, knowledge, skills and personalities into the classroom and are most effective when they make thoughtful choices about what they do and why.
Expert teachers make teaching seem simple which creates the sense that teaching merely involves keeping learners busy. In previous units, you have learnt that organising worthwhile learning is not the same as giving them opportunities to learn. Effective teachers need to manage knowledge and learning. They also need to manage classrooms so that there is a safe environment for learning.
The unit focuses on how teachers manage space and time to support learning:

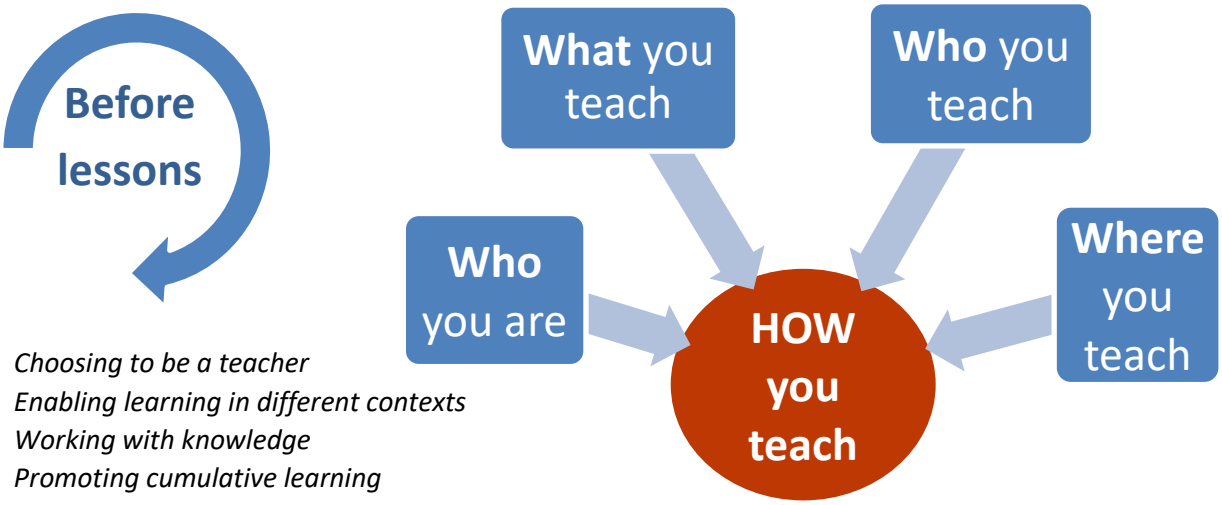
6.1. Managing space to enable learning
6.2. Managing time to enable learning

Through the *Teacher Choices in Action* module, you looked at many important choices that teachers need to make in their classroom practice. Each unit focused on a different set of choices that enable learning.

In practice, all these choices merge. Teachers work with a subject curriculum, in a particular school, and with diverse learners. Good choices require that teachers take all these things into account when deciding how to plan their lessons.

Planning embodies the teacher thinking that happens before lessons take place. Teachers need to develop more than just a list of steps to follow. It is expected that professional teachers can explain the choices they make in terms of **what** they teach, **where** they teach, **who** they teach and **what** is important to them as knowers. All this informs **how** they teach. For this reason, it is important that lesson plans provide a rationale for the lesson design.

Teacher thinking



- *Choosing to be a teacher*
- *Enabling learning in different contexts*
- *Working with knowledge*
- *Promoting cumulative learning*
- *Making lessons inclusive*

RATIONALE for Lesson Design:

A lesson rationale explains the reasons why lessons are designed in particular ways. It is important for student teachers to think about these questions because with experience, these questions become a natural part of how teachers think about their classroom practices.

1. How does the *knowledge of this topic* inform choices for lesson design*?*

- What are the *main idea/s* and most important things to know about the topic?
- What *ways of thinking and doing* are important for this topic?
  - How can knowledge be organised to promote cumulative learning?

2. How do *learners and their diversities* inform choices for lesson design*?*

- What *prior experiences/knowledge* do all learners have about this topic?
- What *barriers to learning* could prevent learning about this topic?
  - How can lessons enable all learners to participate and learn?

3. How do *opportunities in this context* inform choices for lesson design*?*

- What *resources* are available in this context?
  - What *possibilities and constraints* need to be considered?

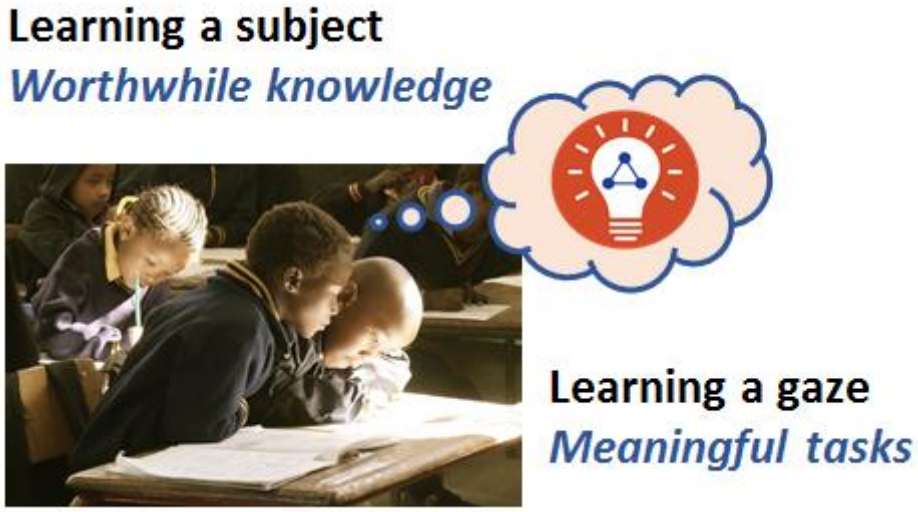
A Rationale for Lesson Design has three sections:

In the first section, teachers need to think about the knowledge of the topic and how the lesson contributes to developing a way of thinking and being that is important in learning that subject.

The second section asks teachers to consider which aspects of learner diversity are relevant for learning their lesson topic. Not all aspects of learner diversity will be significant. It may be significant that some learners do not have access to electricity when learning about safety in their homes. It would not be as significant when learning to add fractions. The teacher needs to consider what barriers might prevent access to learning this topic, and devise ways that the lesson can enable all learners to participate fully.

In the third section, teachers need to think about what resources are available and possible within the school context.

Expert teachers know which choices work best to organise meaningful learning opportunities. They also know that their choices may differ with a different topic, class, or context. What might be a good choice that enables learning in one situation may prevent it in another. This is the reason why teaching is not a routine that can be learnt off by heart. Teaching requires educated and thoughtful professionals who can make reasoned judgments that are appropriate for the subjects and learners they teach.

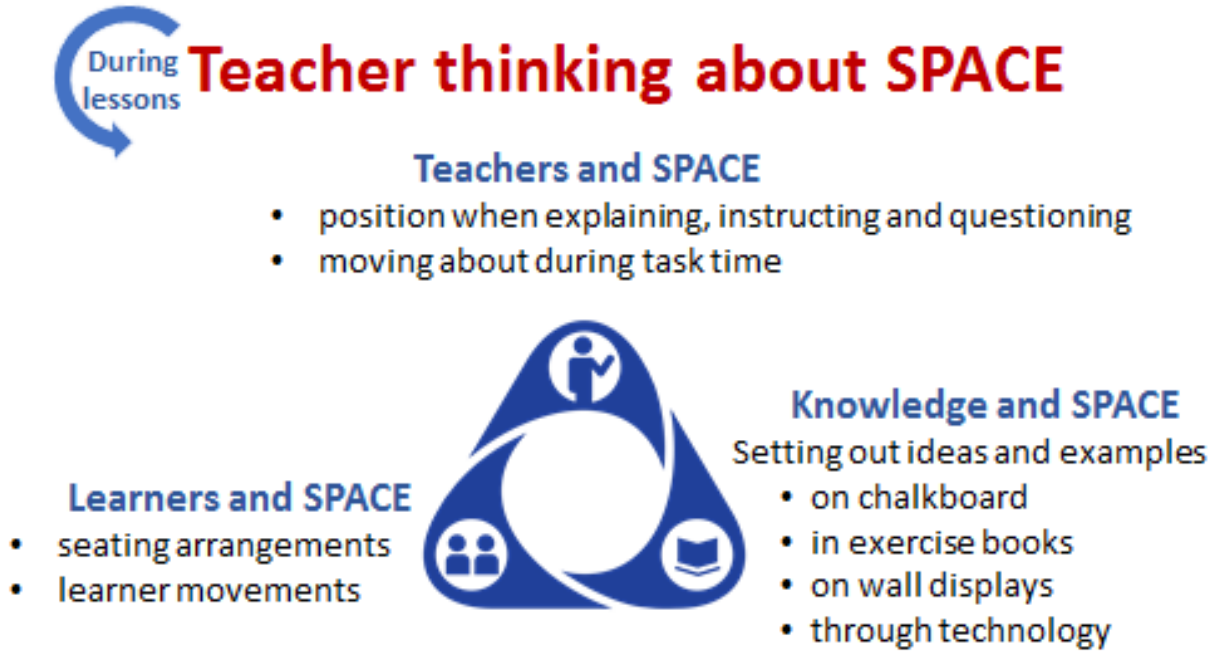


Some people believe that the most difficult part of teachers' work is managing classroom environments. This is not true. Lessons that have no content and keep learners busy with meaningless tasks are very difficult to manage.
Classrooms are more manageable when teachers have worthwhile knowledge in their lessons and meaningful tasks prepared for learners to do. This is part of the reason why teachers study for many years. Teachers need to know their subjects and how to teach them extremely well. Their lessons should help learners to build their knowledge of the important ideas of that subject. The lessons should also help learners to develop a gaze of what is important when doing that subject.

6.1. Managing space to enable learning

A well-managed classroom environment does not happen by chance. Managing classrooms is about managing different spaces. We will look at how:

- knowledge is managed in space
- learners are managed in space and
- teachers manage themselves in space



When thinking about managing space and knowledge, teachers must pay careful attention to how knowledge is organised and presented to learners. Teachers organise knowledge in various spaces: on chalkboards, with technology (such as PowerPoint presentations), in the way that they ask learners to set out their work in their exercise books, and how they arrange pictures and labels on their classroom walls.

Important questions to ask are:

- Does the way knowledge is organised make the main idea/s clear to learners?
- Are there opportunities for learners to think about real-world examples and their own experiences?

Teachers need to consider how they manage learners from a physical space perspective. For learning to be effective, teachers need to arrange learners appropriately so that all can participate in the learning tasks. Careful attention to space means that learners should be able to see properly, work comfortably, and interact with one another when required.

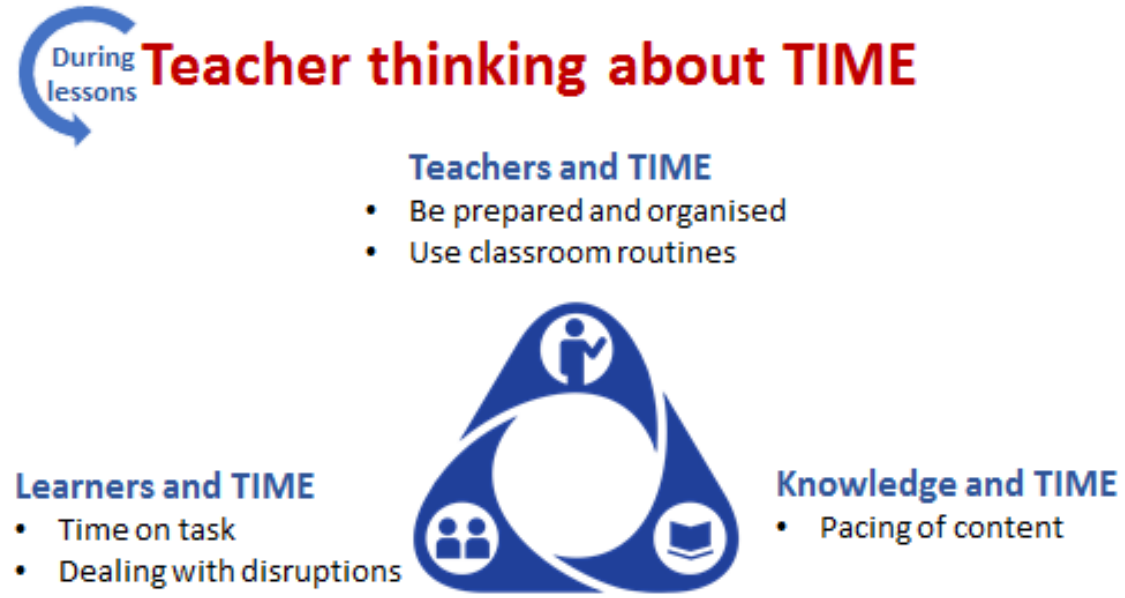
Teachers need to be aware of how they position themselves in the classroom during their lessons. It is important to position themselves in such a way that they are visible to all learners while teaching. Teachers need to think about how they move around the classroom when learners are working. They should not merely do the motions but should stop and engage with learners to ensure that the learners have understood the main ideas of the lesson.

6.2. Managing time to enable learning

Expert teachers often say that their most precious resource is time. Effective teachers manage classrooms to make sure that every possible minute is devoted to learning.
Research shows that high-achieving classes get as much as three times the amount of time for learning than under-achieving classes do. Effective teachers ensure that lessons are paced suitably, and appropriate assistance is provided to learners to ensure that they can complete the work.

Let's now look at how:

- knowledge is managed in time
- learners are managed in time, and
- teachers manage themselves in time



Teachers use lesson time wisely when they have a clear idea of the most important content to teach and the lesson steps they will follow. They ensure that all resources and equipment are ready at the start of the lesson. They use classroom routines to make the most of learning time. This reduces wasted time.

It may appear that expert teachers do not spend much effort on classroom management, but this is not true. They have learnt to recognise distractions and attend to them quickly before they disrupt the learning process. Once a learning process has started, teachers should try not to break the flow. There are many things that teachers can do to manage minor distractions and ensure the flow of the learning process.
They can: Announce an expectation such as, “I am waiting for silence so we can continue our learning…”
They can: Remind learners about the rules by saying something like, “In this classroom, we listen when others are asking a question.”
They can: Make eye contact with learners who are distracting others, mention their names, or direct a question to them.
They can: Move the disruptive learner to the front of the room and pause the lesson briefly.
They can: Physically move closer to the learners who are disturbing others from learning.

If learners lose attention, it is important for a teacher to ask themselves if the pace of the lesson is too fast or too slow. Pacing is about how much knowledge and learning tasks are packed into the lesson time. When pacing is too fast or too slow, opportunities for learning can be reduced.

If too fast, many ideas and tasks are squashed into a lesson and learners feel rushed. They may not have enough time to understand what is being taught and become discouraged and frustrated.

Pacing that is too slow can cause learners to lose interest. If teachers spend too much time covering knowledge that learners already know and understand, they become bored and may become easily distracted.

It is better for a teacher to teach one main idea in a lesson than try and cover many different topics. Learners work best in the lesson with one main idea, focused tasks that are properly scaffolded, and with realistic time limits.

Reflecting on teaching and learning

Teaching experience and teaching expertise are very different.
Teachers may gain experience by spending time in the classroom teaching exactly the same lesson with different classes year after year. Their teaching stays the same and they do not adapt the lessons, make changes or improve them from year to year.

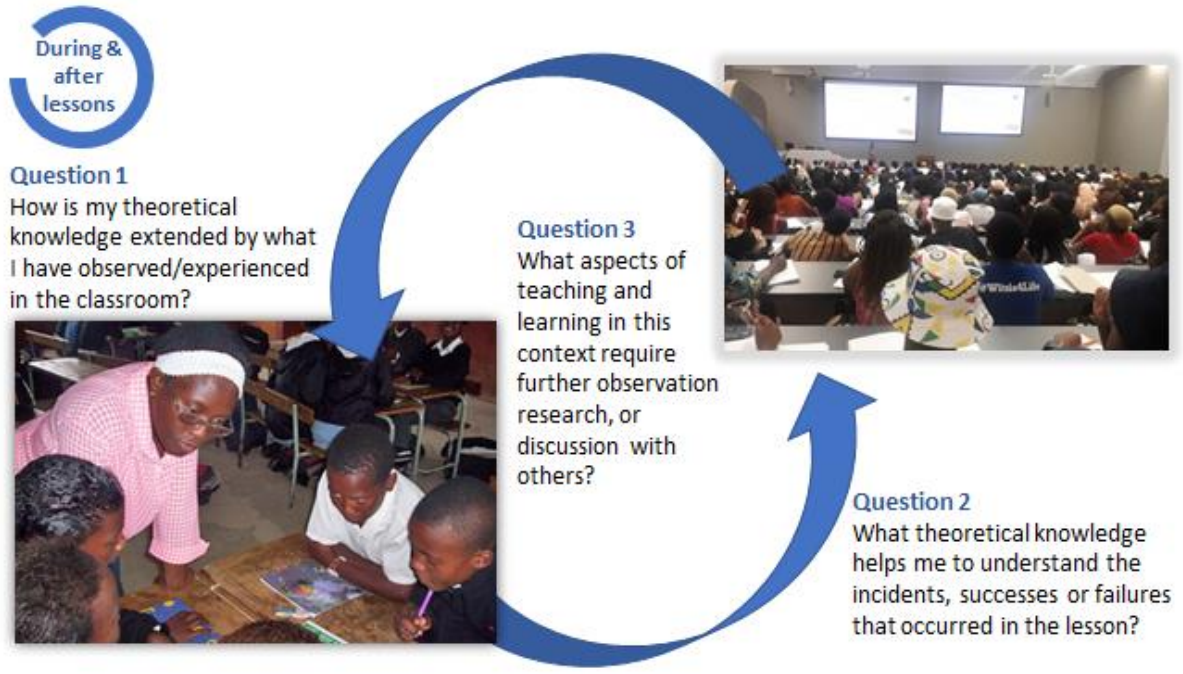
Expert teachers are thinking teachers who think about making learning happen before, during and even after the lesson has finished. They know it is important to consider what worked and what didn't work in their lessons so as to improve their lessons over time because they reflect on how learners responded and adjust their approach accordingly for the next time.

There are important ways that theoretical knowledge and classroom practice are connected. Theory helps teachers understand what is important, but does not provide a direct solution for every classroom situation. Teachers use knowledge to make judgements about appropriate choices for the content of their lessons, the context and the learners that they teach.

Classroom experience can extend teachers' theoretical understanding.

It can also raise questions needing further research.

Three important reflection questions can act as a bridge between theoretical knowledge and classroom contexts.



When teachers use their classrooms as sites for research, they contribute to a professional body of teacher knowledge that strengthens teaching practices.

Teachers need to spend time reflecting – even after the lesson - as there is important knowledge to be gained from thinking about what worked, what didn't work and why? This is how teachers gain experience and also develop expertise in their teaching practices.

Teacher thinking and action

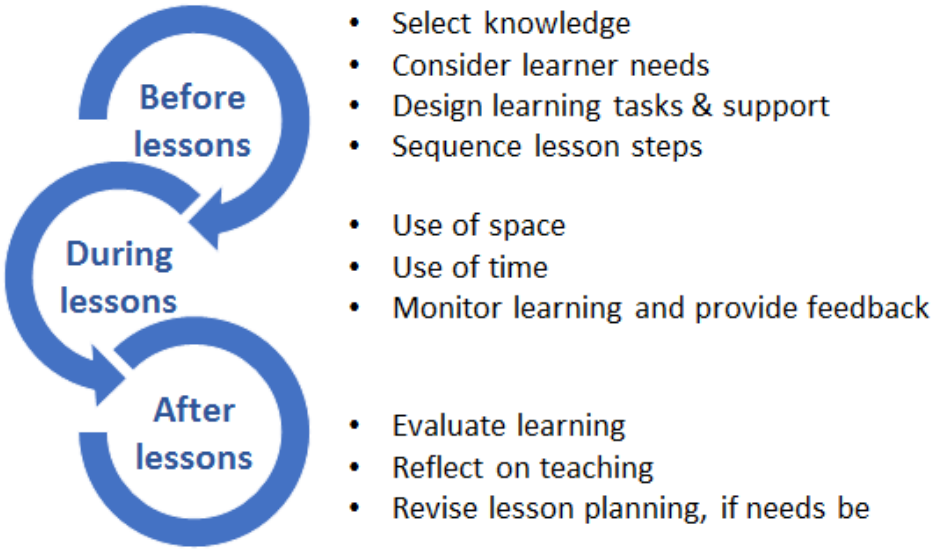
Teaching involves thinking work, before, during and after lessons. Action without teacher thinking leads to classroom busyness without purpose.

Before their lessons, teachers need to think about the choices they make. They need to think about how knowledge is selected for the lessons, what learners should do with that knowledge and how lesson steps are sequenced. Lesson planning requires not only steps but rationales as well for choices made in the design of learning pathways.

During lessons, teachers need to think about how learners respond to their explanations, their questions and the instructions to the learning tasks. They also need to monitor learning and provide learners with feedback.

Learning happens in safe, respectful environments where teachers and learners can focus their attention on the lesson topic and learning task. Classroom management is not so much about controlling learner behaviour but rather about managing space and time to use as much of the lesson as worthwhile learning time.

Teacher thinking continues after the lesson in reflecting on the teaching and how it helped or hindered learning. Every child deserves teachers who make appropriate choices and think about the impact of those choices on their learning.



Additional resources

Here are some useful resources to learn more about being a reflective teacher, and managing time and space in lessons.

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