

# GENERAL TEACHING METHODS



## Course

Become a 21st Century Teacher



Learning and cognition



Active Teaching and Learning



Assessment and evaluation



Classroom management



Instructional materials

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# LEARNING AND COGNITION

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# 1 THEORIES OF LEARNING

*Learners experience the curriculum in very different ways depending on their background and abilities. Their general level of development and academic attainment is usually very different, even among learners who are peers. In many cases the differences will emanate from different abilities, for example: delayed speech, poor social skills and even lack of attention in class. This makes us wonder how the information presented in class is turned into knowledge for the learners.*

*Therefore, this subtopic seeks to introduce you to cognition as a process through which knowledge is acquired through experiences, sensations and thoughts. It will also introduce you to learning, which is a process of acquiring knowledge through experience. Last, this subtopic will also explore how both cognition and learning are interrelated, as cognition is particularly important for teaching because it is the process that leads to learning.*

## 1.1 What is learning

Learning is a complex process, but what is learning exactly? Consider the following definitions and the implications each has for teaching:

- Learning is the process of acquiring knowledge or skill through study, experience, or teaching.
- Learning is experience that brings about a relatively permanent change in behavior.
- Learning is a change in neural function as a consequence of experience.
- Learning is the cognitive process of acquiring skill or knowledge.
- Learning is an increase in the amount of response rules and concepts in the memory of an intelligent system.

Regardless of which theory of learning is being applied, it is essential that teachers enable an open and flexible approach to their practice. Each learner has individual needs and slightly different ways of learning. This individuality suggests that for there to be an effective use of theories of learning, they should be used simultaneously, drawing on the benefits and overcoming the limitations of each.



### Reflection point

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Think about your own learning:

- When do you find learning easy?
  - When do you find learning difficult?
  - What strategies do you use when you learn?
-

In order to support learners in learning and developing knowledge, a teacher needs to plan strategies and respond to learners effectively through taking into account the diversity in the classroom and the learning needs of individuals. To do this effectively, it is helpful to understand some of the main theories about learning and how these might manifest themselves in the classroom. It is in this regard, we will take critical analysis of the following four key theories of learning:

- Behaviourism
- Constructivism
- Social-constructivism
- Cognitivism

## 1.2 Types and processes of learning

### 1.2.1 Behaviourism

Behaviourism defines learning as a change in the behaviour of the learner. The learning theory suggests that in order to have learning, the learners must be actively engaged and being rewarded immediately to reinforce their activity. Behaviourism concentrates on the aspects of learning that are overtly observable and measurable. The desired behaviour is advanced by external stimuli. Therefore, it is mainly based on the stimuli-response associations: given the right stimulus, you will get the right response.

If a learner shows desirable behaviour in class, the concepts of Behaviourism tells us to reinforce this behaviour as a teacher (stimuli), as it will be likely that the desired behaviour will become more probable in the future (response). Likewise, undesirable behaviour that goes unrewarded will be extinguished. All behaviour is acquired by the shaping of behaviour using and anticipating on stimuli-response associations. The Behaviouristic learning theory emphasizes that the response is observable and measurable, as knowledge and skill can be demonstrated through the learners' observable behaviour.

**The behaviourist shuts his eyes and asks only to be allowed to make observations upon what his subjects are doing under given stimulating conditions.** ”

*Watson, 1920*

#### *History*

Psychologists *Pavlov*, *Watson* and *Skinner* were responsible for the development of the behaviouristic learning theory in the early part of the twentieth century. Watch the below as an extra reference and get more background information on the research each of the psychologists conducted and how their ideas influenced the behaviouristic learning theory. The video will also give you extra insights on the stimuli-response model where the behaviouristic approach is based on.

Link to the video: <https://bit.ly/36KrQKh>



Figure 1: Pavlov



Figure 2: Watson



Figure 3: Skinner

### *Key principles and classroom implications*

The main principles underpinning the behaviouristic learning theory are:

- Learning at its best takes place through the teacher taking control over the learning process, who is actively reinforcing learners in order to get the desirable learning outcomes
- Learning outcomes are measurable/observable
- Repetition and practice is key to achieve learning, as it strengthens the relation between stimulus of the teachers and the desired response by the learner
- Feedback is vital to achieve learning, as the teachers stimulates the learner to give the desired response to measure learning outcomes
- Positively reinforced behaviour (for example, by rewards, praise or recognition) is likely to be repeated
- Negatively reinforced behaviour (for example, by ignorance) is less likely to be repeated

### **1.2.2 Constructivism**

Learning, according to the constructivist theory, occurs when knowledge is constructed by the individual as a result of their experiences in the world. The core concept of constructivism is that knowledge is constructed as learners build new knowledge on the basis of what they have already learned. As learners enter learning situations with knowledge acquired from previous experiences, their prior knowledge influences what new or modified knowledge they will build from the new learning experiences.

To build from the new experiences, learning must be active, the learner is not a passive receiver of transmitted information. If the new experience is inconsistent with learners' present knowledge, this knowledge must be adjusted to accommodate the new experience. Teachers would do this through the creation of scaffolds. This is where the teacher provides a means for learners to apply already existing skills to acquire new knowledge. The constructivist teacher is curious about learners' current understanding, provides experiences in which learners are actively involved, allows responses to guide subsequent lessons, promotes relevant experiential learning, and fosters self-reflection.

**When you teach a child something, you take away forever his chance of discovering it for himself. Teaching means creating situations where structures can be discovered.** ”

*Piaget, 1920*



## History

Dissatisfaction with the limitations of Behaviourism led researchers to look for ways to explain the unobservable changes that took place when learning occurred. These developments were rooted in the work of Jean Piaget, in the 1920s. Piaget's view was that learning occurs when knowledge is constructed by the individual as a result of their experiences in the world. This progresses through distinct stages (Stages of Cognitive Development), he termed:

- **Sensorimotor** (birth - 2 years): experiencing the world through senses and actions
- **Pre-operational** (2 years - 7 years): representing things with words and images but lacking logical reasoning
- **Concrete operational** (7 years - 11years): thinking logical about concrete event
- **Formal operational** (11 years - onwards): abstract, hypothetical thinking, systematic deductive reasoning, interest in issues



Figure 4: Piaget

Furthermore, Piaget formalised that people construct new knowledge from their prior experiences through the processes of **accommodation** and **assimilation**. People assimilate when they integrate a new experience into their already established mental framework and accommodate when they reframe their mental representation of the world to incorporate their new experience.

## Key principles and classroom implications

The main principles underpinning the constructivist learning theory are:

- Learners come to the classroom with prior understandings and experiences. To promote learning, teachers must address and build upon this prior knowledge.
- Teachers must think about what a child already knows, so that new knowledge can be related to existing schemata (assimilated or accommodated).
- Teachers must look for misconceptions in the learners' existing knowledge and provide learning activities that enable the learners to understand the limitations of their current conceptions.
- Teachers must prepare learning tasks in which the learners can actively participate as learners' own discovery as a crucial element in learning.

### 1.2.3 Social-Constructivism

The social-constructivist learning theory claims that learning is dependent on socio-cultural influences. Therefore, it is through interaction and exercise of communication that people learn. It is the teacher's role to create a situation where the learner can compile their own interpretations by using interpretations of others around them. Teachers would do this through the creation of scaffolds. This is where the teacher provides a means for learners to apply already existing skills to acquire new knowledge. In this view, the social-constructivist learning theory is a supporter of Piaget's work (Constructivism), but they disagree on one key point: Social-constructivism criticizes Constructivism for focusing on the individual learner rather than on the social context in which learning takes place and advocate that interaction between learners, through language, influences the level of conceptual understanding.

**By giving students practice in talking with others, we give them frames for thinking on their own.** ”

*Vygotsky, 1922*

#### *History*

The development of Social-Constructivism roots in the work of Russian Psychologist Lev Vygotsky. Vygotsky's view was that learners learn optimally from interaction with their peers, whether their peers are of the same age or of a higher age and whether they had the same development stage or not.



Figure 5: Vygotsky

Vygotsky made reference to the **Zone of Proximal Development (ZPD)** and suggested that there is a difference between what a person is able to do on his own and what they can achieve with the help of somebody who has greater knowledge than them. Vygotsky claimed that if a teacher can provide scaffolds with a focus on interaction during this time then the child's knowledge could be brought to a higher level as they learn from each other. The zone of proximal development is best understood as the difference between what a learner can do without help and what he or she can do with help. Vygotsky stated that a child follows an adult's or peers' example and gradually develops the ability to do certain tasks without help or assistance. It is the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance, or in collaboration with more capable peers. In this view, the best type of learning takes place when the learners are expected to develop skills that are slightly beyond their grasp, but they can develop with the help from peers.

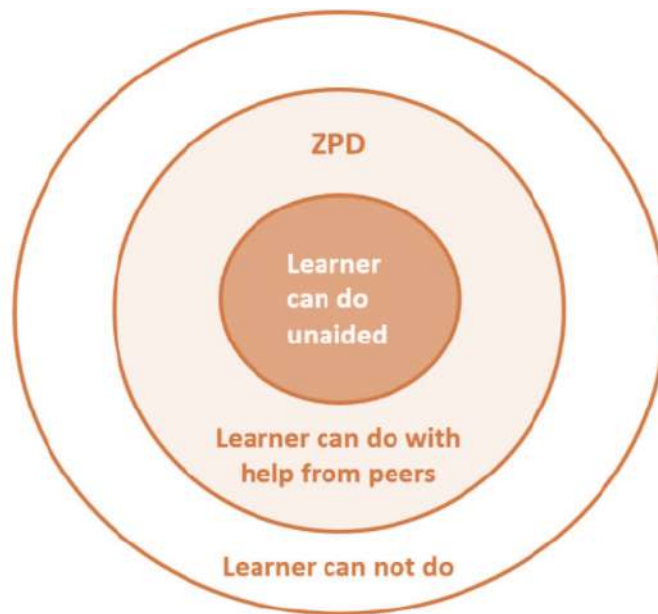


Figure 6: Model for Zone of Proximal Development

### *Key principles and classroom implications*

The main principles underpinning the social-constructivist learning theory are:

- Learning is collaborative in nature and the social context is a major factor.
- All cognitive functions originate as products of social interactions.
- Learners can transmit knowledge to each other through language, as they are received by other learners, knowledge is co-constructed.
- It is the teacher's task to encourage team work and collaboration, organize discussions and debates, provide opportunities for group work and group study.
- Classrooms need to be places where teachers create environments in which learners feel encouraged and secured enough to be able to express and explore their thoughts, feelings and emotions.

#### 1.2.4 **Cognitivism**

Cognitivism is a learning theory that focusses on how information is received, organized, stored and retrieved by the mind. It uses the mind as an information processor, like a computer. Therefore, cognitivism looks beyond observable behaviour, viewing learning as internal mental processes. In this view, learners are actively involved in the way they process information. Knowledge, memory, thinking, and problem solving are areas for development.

**Knowledge is an internal process, rather than a product.** ”

*Bruner*

## History

Cognitivist theory developed as a reaction to Behaviorism and gained credence in the 1950s. Cognitivists objected to behaviorists because they felt that behaviorists thought learning was simply a reaction to a stimulus and ignored the idea that thinking plays an important role. Although many researchers contributed to the development of the learning theory (e.g. Bruner, Vygotsky, Bloom, Ausubel), Piaget's views had a tremendous impact. Spurred by the work of Piaget (Constructivism), knowledge is viewed as symbolic mental constructs, or schemata. When a learners' schemata are changed, learning takes place. As neuroscientists continue to discover more about how the brain works, cognitive psychologists and educators are concerned with how to use that knowledge in the classroom.



## Key principles and classroom implications

The main principles underpinning the cognitive learning theory are:

- Learning is a process of organizing information into conceptualized models.
- Instructions should be organized, sequenced and presented in a manner that is understandable and meaningful to the learner.
- Retention and recall is important to build schema's in the brain.
- Memory is supported by organizing learning material.
- Teachers must provide tools that help learner's brain process information.



### Question

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Considering the key principles and classroom implications above, think about the following question:

**Which tools can teachers present to learners to help them organize and process information?**

After noting down your answers, watch the video below and get feedback on the question above.

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Link to the video: <https://bit.ly/3qy8tfd>

### 1.3 Conclusion on learning theories

Based on the four theories of learning previously discussed, you must have drawn conclusion that learning is a complex process that brings together cognitive, emotional, and external (environmental and social) influences and experiences that involves learners acquiring, enhancing, or adjusting her/his knowledge, values, skills, or views of the world. Though different learning theories involve contrasting ideas, in many cases the theories are not mutually exclusive but demonstrate overlapping or connecting ideas. Therefore, as a teacher, you will find yourself moving seamlessly through all learning theories.



#### Reflection point

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Think about your own learning:

**Which learning theory best reflects how you learn?**

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## 2 LEARNING STYLES

*Learning styles have been described as learners' tendency to adopt a particular strategy in learning based on their personal characteristics. Some people believe that this has implications for the classroom, as a learner's preferred learning style may affect the way in which they respond to your teaching. Therefore, this subtopic seeks to introduce you to different learning styles learners can adopt and how you can anticipate on different learning styles in the classroom as a teacher.*

### 2.1 Introduction to learning styles

A learner's individual learning style refers to the preferential way in which they absorb process and retain information. Learning styles depend on cognitive, emotional and environmental factors, as well as prior experiences. In other words, everyone is different and different modes of learning suite different learners. Learning styles are also termed 'learning preferences' or 'learning strategies'.

How do you prefer to learn or process information? Taking the questionnaire below, you can discover your own learning styles and find out how they influence the way you understand and process information.

Watch the below video and get an introduction to learning styles:

Link to the video: <https://bit.ly/3orQ9mk>



**Why is it important for teachers to identify learners' learning styles?**

---

#### 2.1.1 Interpersonal learners

Interpersonal learners love to interact and prefer learning through communication and interaction. Interpersonal learners are true people persons. They enjoy heading up committees, participating in group learning projects, and communicating with other learners and adults. They enjoy school activities such as speech, drama, and debate teams. The strengths of people with a high degree of interpersonal intelligence are in communicating with and understanding other people. They may be good at leading and organizing other people and groups, understanding other people and resolving conflicts. The classroom implications discussed in the subtopic on Social

constructivism are corresponding for interpersonal learners' preference to absorb information.



#### ***Suitable teaching and learning activities***

- Groupwork
- Class discussions and debates
- Peer tutoring
- Micro-teaching
- School clubs and social gatherings

#### **2.1.2 Intrapersonal learners**

An intrapersonal learner is someone who prefers working alone, which is the exact opposite of an 'interpersonal learner'. These are self-motivated learners that like to set individual goals, and prefer to study by themselves with their own thoughts and ideas rather than with others that intrude on those thoughts. They are very self-aware of their own strength and weaknesses and may have very high self-management skills. This learning style is also termed 'solitary learning style'.



#### ***Suitable teaching and learning activities***

- Learning contracts
- Independent study (provide resources as books, websites, videos)
- Allow learners to set goals and tasks for themselves
- Allow learners to study quietly and free from distractions

#### **2.1.3 Kinesthetic learners**

Kinesthetic learners absorb information best by doing, experiencing, touching, moving, or being active in some way. In other words, they best absorb information using their body, hands and sense of touch. Often, students with a kinesthetic learning style have a hard time learning through traditional lectures. In those circumstances, they fidget or

can't sit still for long, they want to get up and move around. They would prefer to pull an engine apart and put it back together, rather than reading or looking at diagrams about how it works. This learning style is also termed 'tactile or physical learning style'.



#### **Suitable teaching and learning activities**

- Learning by doing: hands on learning methods, using manipulatives, imitations and practice
- Discovery learning and experiments
- Constructions games
- Demonstrations
- Field trips and excursions
- Role-playing and simulations
- Allow frequent breaks

#### **2.1.4 Verbal learners**

Learners with a verbal learning style prefer to learn verbally by reading or listening. Thus, this learning styles involves both written and spoken words. It is possible to hear such a statement from a verbal learner "I prefer to read instructions on how to do something rather than have someone show me." It is necessary to present to them plenty of reading materials, as they love reading and writing. Verbal learners are naturally born speakers and find it easy to express themselves, both in writing and verbally. This learning style is also termed 'linguistic learning style'.



#### **Suitable teaching and learning activities**

- Activities to verbally express themselves: presentations, speeches
- Round table discussions and classroom debates
- Role-playing
- Simulations
- Word-based tasks: scripting, assertions



- Interviewing
- Repeating and rephrasing
- Group study

### 2.1.5 Visual learners

Visual learners learn best by engaging their visual senses. The whiteboard, texts for reading, or information on computers all help them succeed in the classroom. It's important to distinguish that some visual learners prefer the written form of the language, such as a book that explains grammar or vocabulary. This preference is similar to an analytical approach. Other visual learners prefer diagrams or charts that illustrate grammar or vocabulary.

Although most people believe notes aid memory, visual learners see notes as a prerequisite to memory. In other words, if they don't write down the information and/or draw charts and diagrams, then they won't remember the information. Note that listening skills are a primary component of oral communication. Extra opportunities should be given to build listening ability, with many opportunities for visual learners to hear and process the information. This learning style is also termed 'spatial learning style'.



#### *Suitable teaching and learning activities*

- Visual aids: charts, diagrams, images, mind mapping, use of whiteboard
- Flashcards with images and/or words
- Use color, layout, and spatial organization
- Allow and give time to write notes in the class

### 2.1.6 Logical learners

Logical learners enjoy learning that is systemic or follows given procedures. Logical learners like using their brain for logical and mathematical reasoning. They typically work through problems and issues in a systematic way, and they like to create procedures for future use. They can recognize patterns easily, as well as connections between seemingly meaningless content. This also leads them to classify and group information to help them learn or understand it. Logical learners are often very well with numbers and can perform complex calculations. This learning style is also termed 'mathematical learning style'.



### *Suitable teaching and learning activities*

- Problem-based learning
- Open-ended questions
- Diagrams
- Puzzles

#### **2.1.7 Auditory learners**

Auditory learners prefer to collect and confirm information via listening. Some of these learners learn best when the teacher explains orally. They can quickly process and act upon the information. Information written down has less meaning until auditory learners also hear it. Such learners enjoy a setting where they are able to clearly hear the sound in a learning situation and can easily sit at the back of the class, as they can benefit from lectures more than the other learners do.

Some auditory learners learn best when participating in speaking activities in pairs/groups. These learners more effectively absorb and retain the information with dynamic use of the language. This learning style is also termed 'musical or rhythmic learning style'.



### *Suitable teaching and learning activities*

- Storytelling
- Read information out loud (e.g. instructions)
- Provide auditory resources: CD's, podcasts
- Speaking activities in pairs/groups

#### **2.2 One size does not fit all**

Every person uses more than one learning style in the course of learning. Therefore, one single approach to teaching does not work for every learner or even for most of the learner. The educators' awareness of the various learning styles of the learners and

their efforts towards matching the teaching and learning styles may help in creating an effective learning environment for all the learners.

A teacher can adopt a variety of strategies in catering for different learners in his class, for example:

- Having a variety of learning aids on display in the class as diagrams and images.
- Varying teaching methods to cater for a variety of learning styles, such as group work, individual assignment, problem solving, dramatization, field trips and quizzes.
- Being conscious about the seating arrangement in your class. Learners can be allowed some freedom to choose where to sit and seats should be arranged in a variety of ways to cater for the differences.

### 3 LEVELS OF COGNITION

Learning, from a cognitive point of view, involves mental operations or thinking skills. It is important for teachers to clearly understand these mental operations in terms of levels of complexity in order to design meaningful lesson competencies expected of the 21st century learner. Therefore, a multi-layered model, named Bloom's Taxonomy, will be introduced in this subtopic to help you understand different levels of cognition.

#### 3.1 Introduction to Bloom's Taxonomy

Bloom's taxonomy is a classification of cognitive skills into hierarchical levels of complexity that can help teacher teach and learners learn. While the affective and sensory domains have been given less attention, the cognitive domain has been the primary focus of most traditional education and is frequently used to structure curriculum learning objectives, assessments and activities. The image below visually demonstrates the hierarchy of Bloom's taxonomy, separating lower order thinking skills from higher order thinking skills.

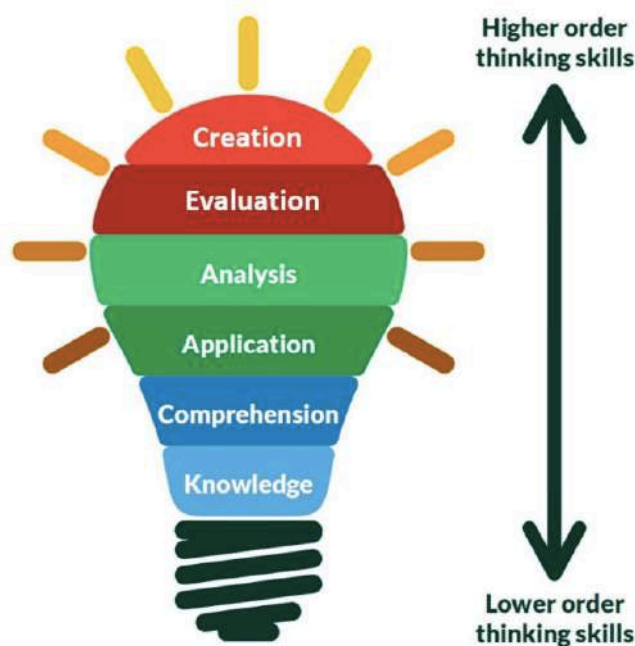


Figure 7: Bloom's Taxonomy - The cognitive domain

#### Levels of cognition

According to Benjamin Bloom, there are six levels of cognition. Each of these levels of cognition have verbs that can be used in stating lesson objectives in preparing to teach. Some of the verbs that can be used to state lesson objectives are mentioned below together with the categorized level of cognition:

**Knowledge:** remember or recall previous learned information.

**Example:** recall country capitals, memorize a poem

**Verbs:** define, repeat, list, name, ...

**Comprehension:** demonstrate an understanding of the facts.

**Example:** summarize the plot of a story, explain a process in one's own words

**Verbs:** explain, interpret, paraphrase, defend, convert, estimate, ...

**Application:** apply knowledge to actual situations, use of a concept or method.

**Example:** use a formula to solve a problem

**Verbs:** apply, develop, restructure, illustrate, modify, ...

**Analysis:** break down objects/ideas into simpler parts and find evidence to generalize.

**Example:** explain how the steps of the scientific process work together

**Verbs:** analyze, compare, examine, contrast, investigate, experiment, ...

**Evaluation:** make and defend judgments based on internal evidence or external criteria.

**Example:** make a judgment regarding an ethical dilemma

**Verbs:** evaluate, compose, criticize, appraise, defend, justify, support, ...

**Creation:** Compile component ideas into a new whole or propose alternatives.

**Example:** design a new solution to a problem that acknowledges the previous failures

**Verbs:** create, combine, compose, generate, reconstruct, rewrite, combine

### 3.2 How Bloom's Taxonomy is useful for teachers

Many educators love Bloom's Taxonomy because, among other benefits, it gives them a way to think about their teaching and the subsequent learning of their learners.

The framework can be used to state lesson objectives in preparing to teach. Furthermore, as the framework provides an order for cognitive behaviors, it can be applied to evaluate the complexity of tasks, to create assessment, to simplify or complicate an activity to help personalize learning, and many more.



Figure 8: Benjamin Bloom

Last, as Bloom's Taxonomy helps classifying classroom lesson objectives, it helps teachers to variate among the levels of complexity with a focus on achieving higher levels of the hierarchy. The framework helps teacher to develop critical thinking and higher order cognitive abilities, which are aligned with **21st century skills**, in learners. A framework for 21st century learning focuses on four key skills that are known as '**the 4 Cs**': Critical thinking, Communication, Collaboration and Creativity. Watch the video below to get an introduction to the 4Cs and how it can effect your teaching practice and learners' learning.



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# ACTIVE TEACHING AND LEARNING



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# 1 FOUNDATION AND RATIONALE

*Many reforms are geared to enable teachers to move away from standard 'learning by rote' methods. On the other hand actively engaging learners is encouraged to develop learners' knowledge, skills and attitudes necessary for the 21st century. To develop both learners' and teachers' competencies, it is important for teachers to understand the foundations and rationale of actively engaging learners. Therefore, this subtopic focuses on the underlying principles of Active Teaching and Learning.*

## 1.1 Introduction to active teaching and learning

To direct attention to the process where learners are actively engaged in learning, educators sometimes refer to student-centered pedagogy, child-centred pedagogy, critical thinking pedagogy, inquiry or discovery-based teaching. In this General Teaching Methods course reference is made to **Active Teaching and Learning** as an overarching term to describe the underlying principles and methods common to actively engaging learners in the teaching and learning process.



Many reforms are geared to enable teachers to move away from standard 'learning by rote' methods, and move to methods where learners are 'actively engaged' in learning. Take your study notebook and write down your thoughts according to the two guiding questions below:

- **What do you understand by Active Teaching and Learning?**
- **Write a short answer by completing the following sentence:**

"Active Teaching and Learning is important because...".

---

### 1.1.1 Defining active teaching and learning

Active teaching and learning is an approach that informs the practices of teaching based on the belief that people learn best by actively constructing knowledge rather than by passively adding memorised facts to an existing store of knowledge. In active teaching and learning, engaging learners to think critically about problems prevails over the transmission models where teachers are the central source of knowledge, engaging learners mainly through rote memorisation.

Active teaching and learning derives from an alternative theory of knowledge known as **constructivism**. While not opposed to the use of scientific methods to create knowledge, constructivism assumes that knowledge emerges through reflection on one's experiences, ideas and interactions.

In other words, knowledge is created through a process of new information interacting with prior knowledge and experiences of learners. Several prominent education scholars, such as Jean Piaget, demonstrate the relevance of constructivism to pedagogy. They show how knowledge is relevant when it is 'in use' and linked to previous experience rather than when it is 'delivered.'

Constructivism suggests that teachers should create the conditions for learners to discover and actively construct knowledge -to 'learn to learn'- and to develop the higher order thinking skills of analysis and synthesis through inquiry-oriented activities.



### Reflection point

---

- Think about a lesson you recently taught/observed or followed. Do you think you/the teacher used active teaching and learning in during this lesson?
  - What are the reasons for your answer?
- 

#### 1.1.2 Rationale of active teaching and learning

Teachers often rely on the traditional teacher-centered education styles where they are viewed as the information provider while learners simply listen, memorise and take notes. This approach has proven to limit the skills and knowledge development of learners. Research shows that active teaching and learning fosters understanding, memorisation and problem-solving abilities (mental cognitive processes) and helps to canalise emotions, motivation, and interpersonal relationships (psychological factors).

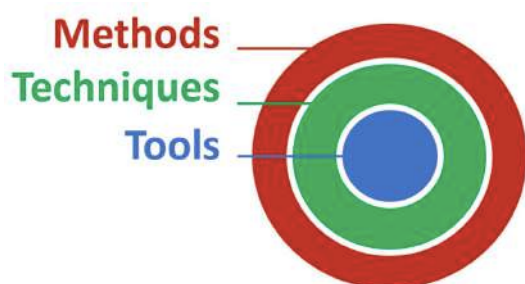
With active teaching and learning, learning systems shift focus from the teacher to the learner and foster independent reasoning, problem solving and critical thinking. Learners become more likely to retain a higher percentage of knowledge and skills because they engage with different types of study materials, participate in and out of the classroom and exchange information with their peers.

Watch the below video and learn more about what learners and teachers experience while integrating active teaching and learning in their classrooms.

Link to the video: <https://bit.ly/37xQuwS>

## 2 METHODS, TECHNIQUES AND TOOS

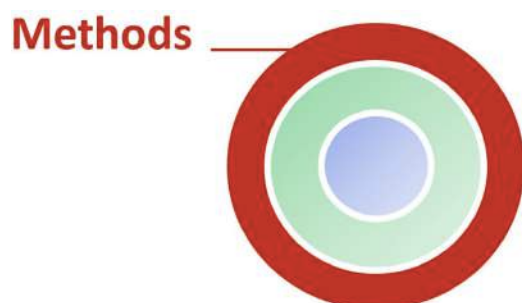
*After an introduction to the foundation and underlying rationale of active teaching and learning, this subtopic provides you with a series of methods, techniques and tools that facilitate the effective panning and delivery of the active instructional process. A variety of hands-on Active Teaching and Learning instructional methods, techniques and tools and how to integrate them during the teaching and learning process is introduced.*



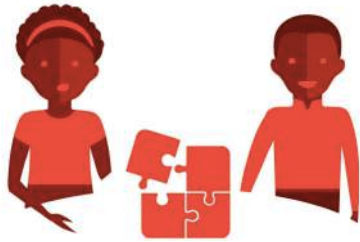
### 2.1 Methods

A method is an organised, orderly, systematic, and well-planned procedure aimed at facilitating and enhancing learners' learning. A method considers the abilities, needs, and interests of the learners and is employed to achieve certain aims of instruction. To make it an effective instrument, it should be presented with a certain amount of efficiency and ease. More so, the teaching method aims to achieve greater teaching and learning output, thus saving time, efforts and even money on the part of both the teacher and the learner.

Methods direct and guide the teacher and the learners in undertaking any lesson or activity. Remember that there is no such thing as the best method. Thus, there is no single correct way to teach a class. Instead, there are many good ways of teaching the learners.



### 2.1.1 Problem-based learning



Problem-based learning is a method that challenges learners to learn by solving problems presented in the form of case studies and simulations. This method enables learners to be self-directed and to acquire lifelong learning skills. Problem-based learning produces critical thinkers and problem solvers as learners integrate knowledge and skills from a number of disciplines. It motivates learners to find and use appropriate learning resources. The method is rooted in the experiential learning tradition. Its characteristics include:

- Complex, real world situations that do not have one ‘right’ answer
- The teachers acts as a facilitator
- It addresses a specific problem while calling for knowledge and skills from several disciplines
- Tends to be shorter than project-based learning, and follows specific, traditionally prescribed steps
- The outcome is a proposed solution, expressed in writing or in an oral presentation

#### *Overview of key steps*

1. Identify a problem relevant to the curriculum. Focus on complex, real world situations that do not have one right answer (lesson planning)
2. Split students into small groups, assign the problem to several groups for them to work on (lesson delivery)
3. Let students investigate the problem and generate ideas from various sources (lesson delivery)
4. Pose critical questions to enable students analyse ideas and knowledge obtained from various sources (lesson delivery)
5. Let students present their findings and solutions to the class (lesson delivery)

### 2.1.2 Project-based learning



Project-based learning engages individual or groups of learners in a design-research implementation process culminating in the public exhibition of a final product, such as a publication, artwork, service, object, etc. During this process, learners make multiple drafts and try-outs, learn to make choices and how to demonstrate the concepts and skills they have acquired. In agreement with the teacher, learners can choose any kind of project provided it is related to the curriculum and to a real life context.

Doing project-based learning, learners become motivated and self-directed critical thinkers and problem solvers, able to research and integrate knowledge from various sources and disciplines to acquire lifelong skills.

#### *Overview of key steps*

1. Define to project selection criteria (lesson planning)
2. Guide learners in designing and planning each step of their project and support them to define their project goal and final product (lesson delivery)
3. Guide learners in the research and implementation phases (lesson delivery)
4. Organise feedback sessions on planning, progress, problems, solutions, etc. (lesson delivery)
5. Organise an exhibition where all final products are presented to peers, academic staff, parents, community members, etc. (lesson delivery)

### 2.1.3 Learning stations



Learning stations (also called 'corners' or 'activity centres') are specific areas in a classroom where learners rotate from station to station to complete an educational task using different approaches. A debriefing session follows after to discuss what was learned at the different learning stations. During this session, learners can also answer questions and explore next steps.

A classroom learning station is a designated place in a classroom where learners complete an educational task. This could be at a computer, where learners are asked to investigate a topic (e.g. through an online search assignment). This could be a table where historical objects are on display for examination. This could be a boom box where learners listen to music from a particular time period. The fundamental objective of all tasks at learning stations is to promote the use, elaboration, and application of concepts to advance learner understanding.

### *Overview of key steps*

1. Determine the overall objective (lesson planning)
2. Define the different tasks for each station (lesson planning)
3. Explain the different tasks and timing for each learning station (lesson delivery)
4. Assign learners in manageable groups and move around the stations to assist the learners (lesson delivery)
5. Facilitate participatory debriefing sessions (lesson delivery)

#### **2.1.4 Learning contracts**



A learning contract is an agreement, written collaboratively between a learner and a teacher that details what is to be learned, how it will be learnt, and how that learning will be verified. It sometimes involves the learner's parents. Learning contracts allow learners to decide what they wish to strive for, which activities they will engage in, and how they will demonstrate that they have satisfactorily completed their studies.

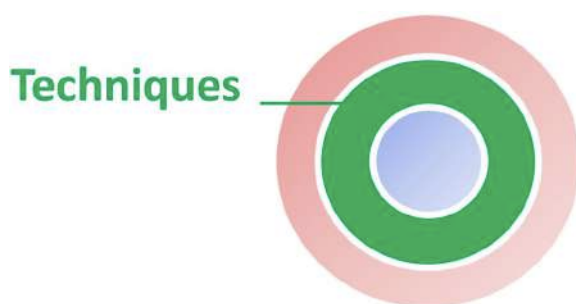
### *Overview of key steps*

1. Identify the learning objectives in relation to the curriculum and determine where the learner should be in regard to each competency. Ensure that the objectives describe what learners will learn, not what they will do.
2. Develop a rubric clearly indicating learning objectives, measurable criteria, tasks and levels of achievement required, and grading system.
3. Specify the material and human resources needed, and the methods and strategies (techniques, tools) that will be employed.
4. Specify realistic target dates for follow-up meetings and for completion of the contract.
5. Carry out the contract.

## 2.2 Techniques

The objective of using different techniques is to engage teachers in the use and development of teaching and learning resources and in sharing these resources, not only with their colleagues, but also with their learners. Different techniques have different potentials to enhance active teaching and learning.

All the techniques introduced address the process where teachers and learners are constructing knowledge and insight in the world around them through active exploration, experimentation and reflection by interacting with each other and the learning materials. Techniques have the potential to innovate and/or transform classroom teaching and learning practice. The different techniques can for example support collaborative learning, problem solving, meaningful learning, etc.



### 2.2.1 Groupwork



Group work is a form of cooperative learning that involves having learners work together to maximise their own and one another's learning. Group work technique is mainly used to generate ideas, increase learners' confidence in their answers, encourage broad participation in plenary session, promote higher level of reasoning and learn concepts in-depth, develop skills such as teamwork, critical thinking, interpersonal communication and peer teaching.

Typically, a group consists of around 5-10 learners, though in large classrooms, group work can be organised for as many as 15-20 learners. Whether you use a small or large group in a teaching/ learning situation depends on the nature of the assignment, Effective group work assigns responsibilities to all members and brings discipline in cooperative learning to both dominant personalities and to shy learners. The outcome of group work is usually better and richer than what an individual would have done.



### Overview of key steps

1. Design the task(s) for the group activity(s) (lesson planning)
2. Determine the groups' size and assign learners groups (lesson delivery)
3. Clearly describe the objectives and assignments given to each group, and identify learner roles (secretary, timekeeper, spokesperson, etc.) (lesson delivery)
4. Set and explain ground rules to learners including duration of activities and time of transitions (lesson delivery)
5. Monitor the group activities, facilitate knowledge sharing and analysis of findings (lesson delivery)

### 2.2.2 Demonstration



Demonstration is a specific type of presentation and a technique of teaching by example rather than simply explaining. Demonstration is a visual practical presentation of a concept, process or skill showing how something works or is performed. The learners perform a demonstration to ascertain learning.

The demonstrator performs the tasks step-by-step to enable the learners to repeat the same task independently or in groups. Here, the teacher supports the learners in their attempts, provides guidance and feedback, and offers suggestions for alternative approaches. Demonstration helps learners to 'learn-by-doing' when there is not enough equipment, when specialised knowledge is required or when safety of the learners is at stake.

### Overview of key steps

1. List the equipment, teaching aids and other materials that you will need during the lesson (lesson planning)
2. List relevant questions for before, during and after the demonstration to engage the learners and assess their understanding (lesson planning)
3. Prepare the equipment before the lesson (lesson planning)
4. Arrange the classroom seating to enable all learners to clearly view the demonstration
5. While giving the demonstration, ask the relevant guiding questions you had earlier prepared (lesson delivery)

### 2.2.3 Presentation



A presentation delivers content through oral, audio and visual channels allowing teacher-learner interaction and making the learning process more attractive. Through presentations, teachers can clearly introduce difficult concepts by illustrating the key principles and by engaging the audience in active discussions. When presentations are designed by learners, their knowledge sharing competences, their communication skills and their confidence are developed.

#### *Overview of key steps*

1. Define the objectives of the presentation in accordance to the lesson plan (lesson planning)
2. Prepare the structure of the presentation, including text, illustrations and other content (lesson planning)
3. Set up and test the presentation equipment and provide a conducive seating arrangement and environment for the audience (lesson planning)
4. Invite the audience to reflect on the presentation and give feedback (lesson delivery)
5. After the presentation, propose activities or tasks to check the learners' understanding

#### *Tips*

- Use **Mentimeter** for interactive presentations and to get instant feedback from your audience. [www.mentimeter.com](http://www.mentimeter.com)
- An infographic; graphic visual representations of information, data, or knowledge, is an innovative way to present. Use the digital tool **Canva** to create your own infographics. [www.canva.com](http://www.canva.com)
- Use the Microsoft software **PowerPoint**, to easily create digital presentations.
- The purpose of a presentation is to visually reinforce what you are saying. Therefore the text should contain few words and concise ideas organised in bullet-point.
- Support your text using **images**.
- Provide time for reflection and interaction between the presenter and the audience, for example by using **Mentimeter**.

## 2.2.4 Brainstorming



Brainstorming is a technique to generate ideas and thoughts. It does not have the purpose to find a solution for a specific problem, but to gather a list of spontaneous ideas from learners. Different brainstorming techniques can be applied to facilitate the process of gathering and organising ideas. For all these techniques, learners are given a specific task on a given topic and to share their ideas at various levels. Example techniques are:

### **Paper-carousel**

Each participant spontaneously notes an idea on a sheet of paper, then passes it to the neighbour on the right side. On the sheet of paper you got from the left side, each participant notes a second idea. The last two steps are repeated until the learners get back their original sheet of paper. The best ideas are highlighted and selected.

### **Falling leaves**

While standing in a circle, each learner notes down ideas on a flash card and drops them on the floor. Each learner looks at the ideas dropped on the floor and will not drop the same idea. After a set of time, the session is stopped and related ideas are clustered, appropriate heading is provided.

### **Think, pair, share**

Each learner first thinks individually through a task. Then, the class is organised into pairs who share ideas and come up with a consensus solution. Next, couples are organized to pair up (groups of four) to consequently share ideas and also come up with a consensus. Last, each group of four presents their ideas in plenary.

### ***Overview of key steps***

1. Clearly define the topic to be brainstormed (lesson planning)
2. Choose the type of brainstorming that is more relevant to your class: Paper-Carousel, Falling Leaves, Think/Pair/Share (lesson planning)
3. Set up ground rules for the group to function: timing, learners' active participation, number of ideas per person, etc.
4. Facilitate the process until the end to help learners to come up with several relevant ideas (lesson delivery)
5. With the learners clarify, merge, categorise and evaluate the ideas generated by the group (lesson delivery)

## 2.2.5 Simulation



Simulation is the setting-up of a realistic environment modelling a real life situation or a scientific process by using role-play, models, games, virtual labs, etc. Simulation involves learners trying out situations, such as future occupational experiences as it happens in reality.

In this learning process, they will be able to learn by doing, predict outcomes and express their feelings, perceptions and experiences. Simulation is useful to analyse phenomena, objects or events. It can assist learners in identifying problems and solutions and enables them to apply previously learned theory in a realistic way. Teachers can use simulations to illustrate how things work so that learners get a better insight of complex processes.

### *Overview of key steps*

1. Design or choose the simulation tool relevant most suitable to your lesson: role-play, low-cost experiment, virtual lab program and make sure it is well integrated in the lesson plan.
2. Create a positive learning climate so that learners feel comfortable using the technique.
3. Prepare the instructions on flashcards or on the board to ensure that they are clear for everyone.
4. Allow time for feedback on the simulation and to summarise the learning points.

### *Tips*

- Make the simulation as similar as possible to the real life situation. For example, if you teach road transport use models of buses and taxis, and characters representing pedestrians, drivers or policemen.
- Make sure to gradually introduce learners to the simulation technique, starting with a simple situation in which the whole class can participate.

## 2.2.6 Storytelling



People like hearing stories, putting themselves in the place of characters and telling and re-telling stories. Stories are helpful to convey society's culture, values and history in form of legends, fables, myths and real life experiences. Storytelling is used to present or demonstrate processes, introduce ideas, challenge learners or illustrate abstract concepts such as life, honour, wisdom and courage.

Photo stories can give more body to a story as one image can tell more than thousand words. Storytelling promotes creativity and critical thinking as well as confidence, fluency in speech, listening, reading and writing skills. It develops imaginative skills and inquiring minds and provides opportunities to transfer learning, deepen understanding of concepts and retain information. By capturing the attention and interest of the learners, storytelling boosts the teacher-learner relationship and makes the instructional process lively and interesting.

### *Overview of key steps*

1. Identify ideas.
2. Design a scenario or a plan.
3. Collect data and resources: text, images, music, actors, voices, equipment etc.
4. Develop and rehearse the story.
5. Prepare for sharing: presentation, publication etc.

### *Tips*

- Select a story relevant to the concept(s) to be learnt.
- Apply appropriate gestures, facial expressions, posture, movement, tone of voice and pace.
- Keep the story short and lively.
- Design relevant questions about the story to check the learners' understanding.
- Provide a conducive environment for the presentation and to enable sharing of ideas.

### 2.2.7 Drill



A drill is a classroom technique to aid memorisation by way of spaced repetition. Drills promote the acquisition of knowledge or skills through repetitive practice.

Drill is a useful technique to introduce a new lesson and to familiarise learners with new concepts. Flashcards and quizzes can be used to execute a learning drill. A flashcard bears information in words or numbers while a quiz is a form of mind game in which the learners (as individuals or in teams) attempt to answer questions correctly. Both can also be used to consolidate or assess knowledge after finishing a certain section. Drill exercises can give the teacher immediate feedback about learners' understanding at each phase of lesson.

#### *Overview of key steps*

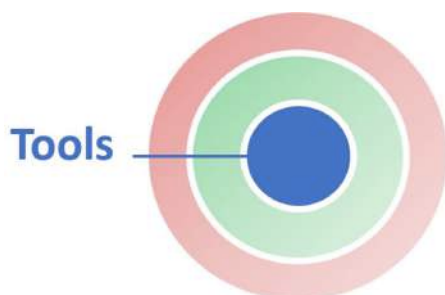
1. Choose the drill tools most suitable to your lesson theme: flashcards or quizzes
2. Adequately prepare for your chosen tools.
3. Prepare the ground rules that will encourage active participation by the learners: timing, members' active participation, number of ideas per person, etc.

#### *Tips*

- Drill exercises should be short to allow assessing progress several times during the lesson.
- Provide enough time for all learners to actively participate in the drill.
- Provide enough time to correct misunderstandings or respond to the learners' challenges.
- Try to alternate between different drill tools (flashcards, quizzes) to maintain learners' motivation until the required level of achievement is attained.

## 2.3 Tools

Tools should inspire teachers to reflect on teaching methodologies and learners' learning. Tools will not automatically change the teaching practice and the learning activity as it all depends on how teachers and learners use them. All tools have the potential to innovate and transform teaching and learning practice, with a focus on the learner and real-world applications. Teachers are expected to have the skills to explore a series of teaching and learning tools and understand the added value of these resources for the enhancement of Active Teaching and Learning.



### 2.3.1 Quiz



A quiz is a mind game in which learners (as individuals or in teams) attempt to answer questions correctly. Quizzes are usually scored in points and many are designed to determine a winner from a group of participants. In an educational context, a quiz is sometimes used to assess learners. It often has fewer questions of lesser difficulty and requires less time for completion than a test.

Quizzes can be used to introduce a new topic. This gives the teacher an instant idea of what learners already know about the topic. Quizzes can be used to revise learners' retention of previous lessons or at the end of a lesson. This allows the teacher to get feedback on learners' progression.

#### *Overview of key steps*

1. Design the quiz: blackboard, flipchart, flashcards, etc. (lesson planning)
2. Determine the resources you need: computer, projector, manila paper, markers, audio-player, etc. (lesson planning)
3. Carefully design questions relevant to your lesson plan and set clear ground rules for the learners (lesson planning)
4. Set the scoring system and time learner get per question (lesson planning)
5. If learners are participating in teams, think about the composition of those teams (lesson planning)

6. Decide whether you want to award the winners with a prize (lesson planning)

### *Tips*

- Amaze learners by creating your quiz using specialised digital tools as **Kahoot!**, **Quizzizz** and **Mentimeter**
- Quizzes can be useful to implement **drilling techniques**.
- Quizzes can be organized as a form of **groupwork**.

## 2.3.2 Roleplay



Roleplaying is a sort of **simulation** allowing learners to impersonate the behaviour of specific roles such as a supervisor or a client who must make a decision in a real life context. To try to respond as their given character would, learners conduct research, and engage in higher order thinking. By interacting with their peers, learners experiment and learn to deal with unfamiliar real life situations while also exercising their observation and communication skills.

### *Overview of key steps*

1. Prepare a scenario relevant to the lesson (lesson planning)
2. Distribute clear instructions (handouts) for the roles that learners will play (lesson delivery)
3. Give learners time to prepare and rehearse their roles (lesson delivery)
4. After each performance, allow time for class discussion and to summarise the learning points (lesson delivery)

### *Tips*

- Encourage and give time to learners to research their character's features.
- Set ground rules in order to ensure a conducive environment for all to feel safe while acting.



### 2.3.3 Low cost experiments



Unlike what many may think, you don't need a big fancy lab full of expensive materials and you can use experiments in any subject (not only science). Many experiments can be conducted with the help of simple and inexpensive everyday materials. For learners and teachers, it stimulates creativity.

Experiments are a form of **simulation**. The main objective of low-cost experiments is to enable teachers to introduce practical activities to the learners, thus improving their critical thinking and problem solving skills. Practical activities allow linking theory with practice and daily life. Moreover, with practical activities you can address specific skills and attitudes with learners such as team work, accuracy and creativity.

#### *Overview of key steps*

1. Decide which kind of experiment you want to set up (lesson plan).
2. Look for low-cost materials.
3. Try out the experiment in advance.
4. Set up the experiment in class.
5. Clearly explain all the different steps and leave time for learners to design and/or execute the experiment themselves.

### 2.3.4 Flashcards



Flashcards are cards bearing information such as words or numbers, or questions and answers on either or both sides. They can be used in classroom or during private study. Flashcards can support learning of any subject matter. In the classroom, an immediate teacher overview of the learners' understanding of the topic at hand can be obtained by asking learners to display their answer to a specific question on a flashcard.

Coloured cards can also be used for learners' self-assessment of their level of understanding (e.g. green card for "understood", yellow card for "need support", red card for "not understood"). For example, flashcards can be used question and answers **drills**, interactive education games, or the assess learners' progress.

### Overview of key steps

1. Prepare the flashcards according to your need (blank, coloured or pre-filled cards).
2. Explain the rule to the drill to the learners.
3. With the learners, observe and discuss the answers of the class.
4. Use the results to guide the current and/or future lessons.

### Tips

- Create flashcards online using **Quizlet**. Quizlet employs you to create sets of terms and descriptions in the form of flashcard and provides you with several ways (e.g. quizzes and other interactive games) to review the content on the flashcards. You might also encourage your learners to create their own flashcard decks to share with their peers.
- There are also other uses for flashcards: in private study, flashcards are useful to summarize, memorize and classify knowledge for further revisions; pre-filled flashcards can also be used to design interactive educational games for any subject.

### 2.3.5 Videos



Videos are used to record, playback, broadcast and display moving visual images. Educational videos have been widely used in classrooms, as they can provoke reflection and discussion and provide deeper insight of issues that have been introduced.

Videos are particularly useful to explain a process or an action. As videos can be paused and rewinded at any time, teachers and learners can control the speed (e.g. slow motion) or repeat particular fragments as needed. With their smartphone or with a cheap video recorder, videos can be produced by teachers and learners to document an experiment, a role-play, a class trip etc. As learners are involved in acting or making the video, their motivation to participate, assess, and receive feedback increases.

### Overview of key steps

1. Select the process or action you want to show.
2. Search a relevant video online.
3. Show the video and pause it on the parts you want to emphasise.
4. Allow for class discussion.

### Tips

- There is a wealth of educational videos on specialised websites as **TeacherTube**, **TED**, **Teaching Channel**, **Edpuzzle**, etc.
- Amaze learners by creating your own educational videos using **Powtoon** [www.powtoon.com](http://www.powtoon.com)
- Download videos, so you can use them offline.

### 2.3.6 Images



**"Every picture tells a story and one image says more than a thousand words..."**

An image can be used to introduce, express, share, and describe a range of subjects (concepts, stories, trips, phenomena, persons, objects or events). Teachers can use images to present a problem through visual stories that learners will be encouraged to solve. For example, a picture of a tropical storm/melting ice caps can be used to introduce the concept of global warming. The use of images in teaching and learning has benefits to support learner's comprehension, retention, and application. It stimulates spatial intelligence and increases the motivation of the learner.

### Overview of key steps

1. Select the concept, story, phenomenon, person or event you want to depict.
2. Find or draw the picture(s) you need.
3. Brainstorm with the learners which words or concepts come to mind.
4. Guide the learners discussion by questioning their interpretations.

### Tips

- Many images, photos and editing software are available online, such as **Pics4Learning**.
- A digital photo story can combine different media: images, text, voice, motions and music.
- Think of images that would present the subject in just one or a few images.

### 2.3.7 Charts and maps



Charts and maps can be used to present abstract ideas or show their relationships in a visual form. A chart is a graphical representation where data is represented by symbols such as bars, lines or slices. A map is a graphical representation of tri-dimensional space where physical, social, medical or other features can also be indicated, e.g. brain map, DNA map, cosmic map etc.). It can be static (road map) or animated (weather forecast).

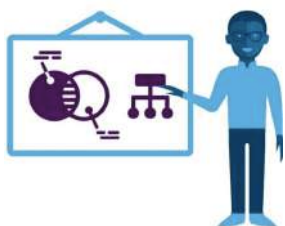
#### Overview of key steps

1. Choose the kind of charts and maps you need, according to the data you want to illustrate.
2. Draw your charts and maps before the lesson, either by hand (with flipchart, manila paper or rice-sacks, colour markers and a ruler) or by computer using free office software or maps available on the internet.
3. Display the charts and maps in class in a visible way (stick it to the board, or use a projector).

#### Tips

- Bring the world inside your classroom using **Google Maps** and **Google Earth** mapping services.
- Make simultaneous reference to the chart or map to enhance understanding of the concepts introduced.
- Engage the learners in researching or drawing maps and charts helps them to memorise the lesson.
- Charts and maps should be designed in a clear and attractive way (colours, labelling, etc.)
- Charts and maps can be used at the different stages of a lesson to facilitate discussion and consolidate knowledge

### 2.3.8 Diagrams



A diagram is a visual representation of information used to show how conceptual objects are interrelated. Diagrams are particularly useful to study complex

material. Diagrams are useful to transform text-based data and information in a visual representation. Learners' attention is also more likely to be attracted by a diagram rather than by a long text. Finally, diagrams help learners with a visual rather than verbal memory to better retain the displayed information.

### *Overview of key steps*

1. Define the kind of diagram you need, according to the topic you want to describe.
2. You can draw your diagram by hand, but there are also free online diagram software available, such as **Draw**. Also, Microsoft software as **Excel** and **PowerPoint** are useful to create digital diagrams.
3. Display the diagram in class in a visible way (stick it to the board, or use a projector).

### *Tips*

- Use different shapes and colours to depict objects, processes and relations and remember to include a legend.
- Ask the learners to make diagrams in class or as an assignment: they will have fun while checking and summarizing their knowledge.

## 2.3.9 Student portfolio



A student portfolio is a systematic collection of learner work and related material that depicts a learner's activities, accomplishments and achievements in one or more subjects. Portfolios allow for competence-based assessment by measuring the learner's growth and development. Learners develop a sense of ownership about their portfolios and understand where they made progress and where improvement is needed. Contents of a learner's portfolio may vary with the level of the learner and the types of assignments given in class. Some examples are:

- Learner's work (assignments, assessments, evaluations, score sheets, sample products, attendance sheets).
- Reflections, teacher observations, conference records, progress reports, worksheets, artefacts (poems, letter, reading logs and audio /videotape recordings, photos, sketches).

### *Overview of key steps*

1. Decide together on the portfolio content, such as samples of learner's work, reflections, teacher observations and conference records, and agree on timelines.

2. Develop assessment criteria and procedures to keep track of the learners' progress.
3. Plan for formal learner-teacher conferences as well as informal meetings in which progress is reviewed and discussed, and reflection encouraged.

*Tip*

Ask your learners to develop their portfolio online (E-portfolio) using **Padlet** ([www.padlet.com](http://www.padlet.com)) Padlet is an application where learners can easily create a virtual pin board to hold resources and to showcase their work.



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# CLASSROOM MANAGEMENT AND ORGANIZATION



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# 1 INTRODUCTION TO CLASSROOM MANAGEMENT AND ORGANIZATION

*Get ready for an introduction to classroom management and organization. This first subtopic will give you everything you need to get comfortable with the concepts 'classroom management'/'classroom organization' and its underlying principles.*

## 1.1 Defining classroom management

Classroom management refers to the collection of techniques that teachers use to encourage effective learning by minimizing distractions and disruptions. It includes all of the things that a teacher does toward fostering learner involvement, cooperation, and a productive working environment. When classroom management strategies are executed effectively, teachers minimize the behaviours that impede on learning and by so doing reinforce the practices that foster learning.

A teacher can have great lesson plans and materials. However, if a teacher cannot manage her/his class, effective learning will not happen. So, what are the essential elements of good classroom management? It is important for a teacher to have good classroom management skills. Both technical and personal relationship skills are important in classroom management. Below are management skills required of a teacher:

- Planning a programme of learning and teaching for your class
- Decision making concerning resources, teaching strategies and discipline
- Organizing learning activities
- Attending to learner diversity
- Coordinating learning in the classroom with learning from other sources
- Communicating with learners and parents
- Establish good relationship with the learners
- Establish class expectations, consequences and goals

## 1.2 The role of the teacher

Classroom management is one of the core responsibilities of the teacher. It is an important function and concerns the co-ordination and co-operation necessary for learning. A teacher has the authority to direct and facilitate what goes on in the classroom. However, the teacher's authority does not mean being autocratic, domineering or an overt use of power. Instead, a positive teacher's authority is a quality

that facilitates a smooth operating classroom and is at the heart of successful group management.

The role of the teacher in classroom management include:

- setting the tone and culture for learning in the classroom
- building a warm and friendly learning environment
- mentoring and nurturing the learners' behaviour
- being a role model

### 1.3 Defining classroom organization

Classroom management and organization are intertwined. While rules and routines influence learner behaviour, classroom organization affects the physical elements of the classroom, making it a more productive environment for learners. How the classroom environment is organized influences the behaviour in it. For example, actions as simple as establishing fixed locations for laboratory supplies and designating specific places for other classroom supplies can have a dramatic effect on classroom organization and, consequently, on learning.

Classroom organization is evident in a room even if no one is present. Furniture arrangements, location of materials, displays, and fixed elements are all part of organization. Effective teachers decorate the room with learner's work, they arrange the furniture to promote interaction as appropriate, and they have comfortable areas for working. They also consider learners' needs in arranging the room by leaving space for wheelchairs to manoeuvre, having walkways so learners can access what they need with minimal disturbance to others and organizing in such a way as to allow the teacher to freely move around the room to monitor progress. Effective teachers think about the little details that enhance the use of available space in the classroom including different types of classroom settings for different teaching activities.

#### Considerations for effective classroom organisation

In order to organize a classroom effectively, it is important to create a positive and safe environment for your learners that will maximize learning and will minimize the frequency of behaviour problems. The following actions can be taken into consideration:

##### *Floor space*

- Count the number of desks and chairs needed
- Try to ask for furniture or needed items well ahead of time
- Place the desks where learners can easily see the teacher
- Keep high-traffic areas clear

### *Learner area*

- Plan areas for learner's belongings.
- Provide space for learner's binders, back-packs, lunch boxes, umbrellas, shoes, etc.
- Plan for learners to hang up/store jackets or coats.

### *Wall space*

- Cover one or more bulletin boards with coloured paper and leave bare for learner work.
- Display classroom ground rules
- Post procedures, assigned duties, calendar, clock, emergency information, schedules, menus, charts, maps, etc.
- Have a consistent place for listing the day's or week's assignments

## 1.3.1 Classroom seating arrangement

Classroom organization can significantly influence learning. The physical setup of chairs, tables, and presentation in a classroom can impact how the teachers communicates with learners and how the learners interact with each other. Furthermore, this can impact engagement, motivation and focus. Therefore, it is important that teachers consider ways to modify seating arrangements and match them with the demands of classroom activities in order to help maximize learning.



### Question

---

**What could be a convenient classroom seating arrangement for the below methods and techniques for Active Teaching and Learning?**

- **Learning Stations**
- **Brainstorming**
- **Demonstration**

Take your study notebook and write down your answers. Consider principles of Active Teaching and Learning and give reasons for your answer. After noting down your answers, watch the video below to get more insight in classroom seating types and suitable learning activities.

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Link to the video: <https://bit.ly/3gb7mxt>

## 1.3.2 Overview of classroom seating arrangement styles

### Traditional

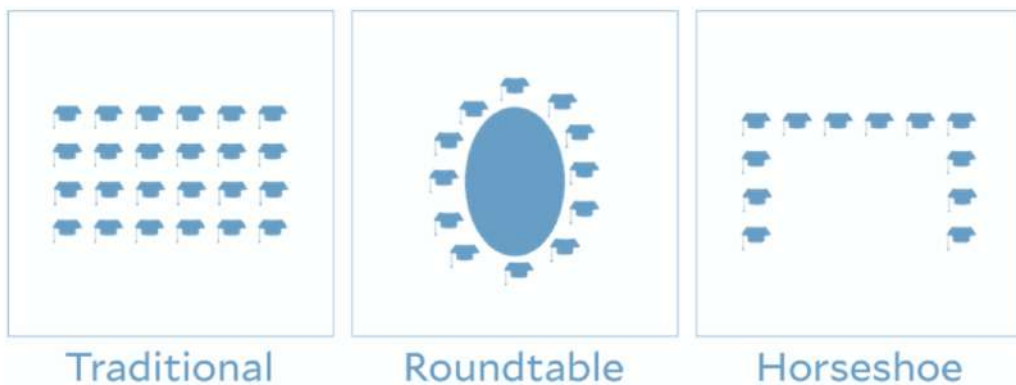
The traditional lecture setup typically consists of rows of fixed seating where learners face the teacher with their backs to one another. The highest communication interactions between teachers and learners typically occurs with learners in the first row or along the middle of the classroom.

### Roundtable

A classroom seating arrangements may consist of learners sitting in a circle or around a single large table. This seating arrangement can also be formed using individual desks. Learners and teachers all face one another in this setup, which can support whole-class as well as pair-wise dialogue.

### Horseshoe or Semicircle

The horseshoe or semi-circle offers a modified roundtable setup, where all learners face each other while the instructor can move around the classroom. The horseshoe encourages discussion between learners and with the teachers

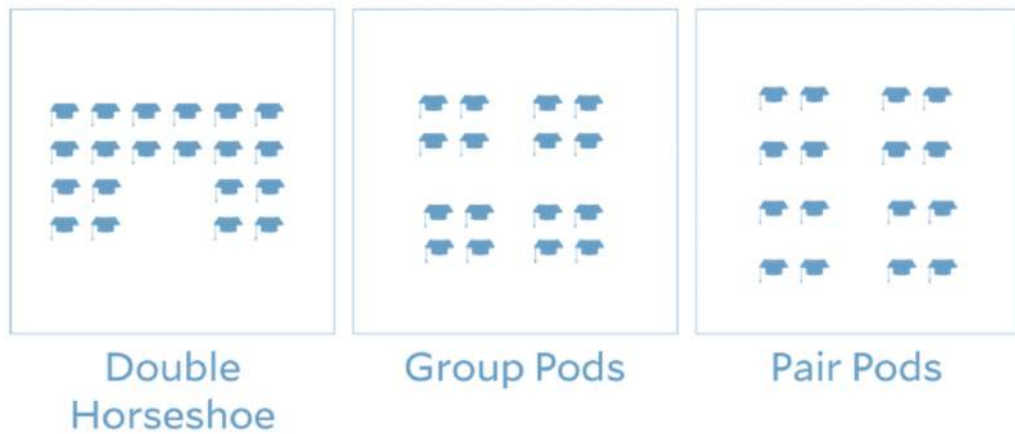


### Double Horseshoe

This seating arrangement involves an inner and outer horseshoe, and similar to the conventional horseshoe, invites greater discussion than the traditional format. It is more limited by the backs of learners within the inner circle facing learners in the outer circle. However, learners may also more easily interact with those nearest to them or turn around and face learners behind them for group work.

### Pods (Groups, Pairs)

The pod or pair arrangement can be designed with learners' individual desks. With regards to stations, teachers can place several tables together to form learners groups (e.g. 3 - 4 learners), or pairs. This arrangement is useful when learners will work in groups or pairs for a large portion of class time.



## 1.4 Benefits of effective classroom management and organization

### Learner benefits

The prime benefits of a well-organized classroom will accrue to the learners. The organization and procedures of the teachers (or lack thereof) are, after all, ever present reminders to the learners of how to behave, how to conduct tasks, and how best to be effective without discord in a group. Respect for others, consideration, efficiency, pride of accomplishment, security in knowing what, how, when, and where to do something - all these positive elements are the hallmarks and characteristics of learners who learn in well-organized classrooms. Learners like a predictable, safe, and orderly environment and they like going to a school that provides that environment. For these reasons alone, it is important for teachers to pay close attention to good classroom management and organization.

### Teacher benefits

Aside from the benefits to learners, good organization brings powerful help to the teacher. In fact, it can be truthfully said that the first “aide” any teacher has is his or her ability to organize the classroom well. The immediate benefits of a well-organized classroom to the teacher are clear; less wasted time and therefore more efficiency. Not so immediately apparent, perhaps, are the following very significant elements:

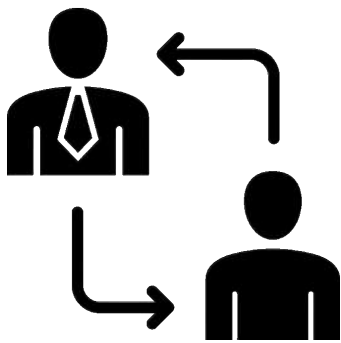
- improved learner-teacher relations
- improved parent-teacher relations
- increased job satisfaction
- increased enthusiasm for professional growth
- increased academic progress

## 2 STRATEGIES FOR EFFECTIVE CLASSROOM MANAGEMENT

*In a well-managed classroom there is a strong sense of classroom management where learners feel safe and respected and have the desire to learn. In a well-managed classroom, learners also know what is expected of them, learners can make the choice to follow those expectations or not. It is always possible that learners do not behave the way a teacher expects them to. This subtopic puts light on strategies for effective classroom management in order to give you more insights in achieving desired learner behaviour.*

### 2.1 The teacher as a model

Teachers have an important role in instilling desired behaviour of learners. as they should be models/exemplary in behaviour. This is possible by attending school regularly and punctually, having knowledge of and enforcing school rules and regulations without fear or favour. Knowing each learner as an individual and keeping learners busy by giving them meaningful work to do and involving them in school/class activities to avoid idleness and redundancy.



Teachers should also involve learners in making class rules; practice democracy and involve learners in problem solving, observe and assess their learners carefully, make learners feel loved and that their time at school is put to good use, make the learners to understand and enjoy what they are doing at school, be firm, unbiased and objective, refrain from using harsh word and unfair punishment, and be consistent in the way learners are handled.

### 2.2 Desired learner behaviour

If learners do not behave the way a teacher expects them to, punishment is commonly used to achieve desired behaviour. Learners are commonly punished for giving wrong answers, failures, coming late, truancy, vulgar language, etc. Most forms of punishment hurt, embarrass and frustrate learners rather than discipline them. Therefore, punishment is not the best way of inculcating discipline because discipline backed by punishment leads to hostility and depending on adult authority to behave.



However, where punishment cannot be avoided, it should be equitable to the offence committed with a genuine desire to teach the learner self-control and good behaviour. It should be appropriate to the age and character of the learner as well as the change of behaviour desired. A teacher who uses consistent discipline strategies exhibits more effective classroom management than an inconsistent teacher. This is because classroom discipline refers to the strategies a teacher uses to manage learner behaviour and attitude during instructional time.

### **Alternative for desired behaviour of learners**

As most forms of punishment embarrass and frustrate learners rather than discipline them, teachers must look at alternative means to achieve desired behaviour of learners.



Guidance and counselling will make the learner feel cared for, valued and loved; isolation will cause sense of embarrassment and guilt leading to behaviour reform; changing position in class to minimize bad influence and peer pressure; assigning leadership roles to stubborn learners will lead to create a sense of responsibility. Depriving interest, while others engage in something interesting or are set free will make the learner think through their misconduct.

Discipline is essential and cannot be separated from teaching. For the most part, how you teach will determine behaviour, for instance:

- A flexible, classroom set up
- Discipline as feedback and as learning
- Peer involvement in rules and enforcement
- Class meetings emphasizing the affective dimension of the classroom
- Pairing, partners, and cooperation
- Adding movement, music, humour, and "chance" elements to the lessons



### 2.2.1 Rewarding learners

Motivating your learners to learn and to participate can be very hard. Some teachers have their hands full with class management and they don't even get to teaching. In order to stimulate learning and to motivate good behavior, lots of teachers use rewards for learners. Rewarding is a type of behavior management that focuses on rewarding what is done well by learners. Teachers focus less on reprimanding learners for misbehavior and more on rewarding good behavior and accomplishments.

Learners are motivated to achieve and conform to appropriate behaviours when either intrinsically or extrinsically rewarded. Those Learners who prefer intrinsic motivation enjoy, personally challenging projects and accomplishing educational tasks just for the love of learning. On the other hand, learners who prefer extrinsic motivation look for fame, grades, and praise. The type of reward given to learners must be fair and consistent for all learners but also must vary for each task. Advantages of rewards are the following:

- Promote appropriate behaviour
- Increased motivation for full effort on classroom tasks
- Positive learner welfare
- Boosted self-esteem
- Higher learner achievement

### 2.2.2 Types of rewards

Teachers can offer many types of rewards to learners, but they all fall into the categories of compliments, symbols, tokens and prizes.

#### ***Praise***

Verbal praise is the most common form of rewards that teachers offer learners. It consists of complimenting learners when they behave in a way that is positive. When offering praise, make sure to offer it promptly, so the emotional impact of the action is still present. Furthermore, be specific with praise. Let the learner know exactly why what she/he did was admirable, and that your words aren't empty and automatic.

#### ***Symbolic rewards***

Symbolic rewards are rewards in the form of objects that represent exemplary performance of character or achievement. Perhaps the most common form of symbolic reward is the gold star. Others could be the inclusion of the learner's name or photograph on a bulletin board or poster. Symbolic rewards operate similarly to praise in that they are public demonstrations of favour toward a learners. Symbolic rewards, unlike praise, have the ability to last longer than a single spoken statement, and can serve as reminders for learners to maintain their good standing.

#### ***Token rewards***

Tokens are physical rewards that represent value, or a form of currency that can be redeemed for a prize such as a voucher, extra free time or outings.

### ***Tangible and activity rewards***

Tangible rewards and activity rewards are awards you supply directly to the learner, without the step of symbols or tokens in between. A tangible reward is a prize for positive behaviour or achievement, and includes items such as school supplies or other physical objects. Activity rewards are intangible prizes, such as getting to be line leader or being the teacher's helper, being a team captain during activities.

### **2.2.3 Reinforcing learners**

A reinforcer is an event that occurs after a behaviour, and due to the reinforcer the behaviour is likely to occur again in the future. Basically, if something is expected or enjoyed after engaging in a behaviour, one is likely to do the behaviour again.

By reinforcing the desired behavior with praise, the child will be more likely to perform the same actions again in the future. But positive reinforcement can also increase the probability of not only desirable behaviour but also undesirable behaviour. For example, if a learner screams to get attention and is successful in getting it, the attention serves as positive reinforcement, which increases the likelihood that the learner will continue to scream when looking for attention.

#### **Types of reinforcers**

##### ***Natural and direct reinforcers***

This type of reinforcement results directly from the appropriate behaviour. For example, interacting appropriately with peers in group activities will lead to more invitations to join such activities. The natural reinforcement for appropriate bids for attention, help, participation, etc. is providing the attention, help and opportunity to participate. The goal should always be to move the learner to natural and intrinsic reinforcement.

##### ***Social reinforcers***

These are reinforcers that are socially mediated by teachers, parents, other adults and peers which express approval and praise for appropriate behaviour. Comments ("Good job," "I can tell you are working really hard," "You're nice"), written approval ("Super"), and expressions of approval (nodding your head, smiling, clapping, a pat on the back) are all very effective reinforcers.

##### ***Activity reinforcers***

Activity reinforcers are very effective and positive for learners. Allowing learners to participate in preferred activities (such as games, computer time, etc.) is very powerful, especially if part of the reinforcement is being allowed to choose a classmate with whom to participate in the activity. This also provides social reinforcement from the partner.

##### ***Tangible reinforcers***

This category includes edibles and other awards. Awards can be in the form of certificates, displaying work and letters home to parents commending the learners's progress. These are powerfully motivating reinforcers.

## 2.2.4 Delivering a reinforcer

How should reinforcement be delivered? In order to make positive reinforcement an effective intervention, the following guidelines can help:

### ***Reinforcement should be consistently delivered***

Use a planned reinforcement schedule. If it is not, no connection will develop between appropriate behaviour and the reinforcement and the behaviour will not change.

### ***Reinforcement should be delivered immediately***

Learners should know when they can expect reinforcement. If the teacher waits until the end of the day to reinforce a learner for remaining in her seat during second period, the effect of reinforcement is reduced if not lost.

### ***Improvement should be reinforced***

Do not wait until the learner's behaviour is perfect to deliver reinforcement. A teacher should recognize improvement and let the learner know that the effort is recognized.

### ***Pair any reinforcement with social reinforcement***

If your reinforcement plan is letting learners participate in preferred activities, make sure to give some sort of social reinforcement, such as telling the learner, "You really did an excellent job today. You should be really proud of yourself" or let the learner choose another learner for the activity.

## 3 LESSON PLANNING

*A well-managed classroom starts with a good preparation prior to teaching. As classroom management and classroom organization are part of lesson planning, many problems related to classroom management occur due to lack of adequate planning. Lesson planning is also the only way to ensure that your educational objectives are achieved. Therefore, it is important to think about how you would like your learners to behave in order to achieve educational objectives. Planning begins with thinking about how you would like your learners to approach their learning in your subject, and what you would like them to understand, know or be able to do by the end of the session.*

*This subtopic provides insight in how teachers can design a lesson plan and apply appropriate procedures that support learning of target concepts.*

### 3.1 Definition of a lesson plan

An order to understand what a lesson plan is, it is important to fully understand the concept of a lesson. A lesson is a single activity or a series of activities designed by the teacher so as to achieve one or more instructional objectives determined, or desired in promoting positive change in the learner. A lesson is thus a period of instruction or contact between the teacher and the learners which is totally devoted to a prior identified, specified and single limited title, skill, content or idea.



Lesson planning is the activity which the teacher performs before the actual lesson takes place. A lesson plan is a detailed description of the instructional strategies and learning activities to be performed during the teaching/learning process. This important preparation involves the following:

- Identification of learning as well as teaching objectives, activities and tasks to be undertaken by both the learners and the instructor.
- Sequencing of these activities and tasks.
- Determining appropriate instruction aids, methods and references.
- Deciding the proper organisation and or management of the learning resource available, environment and activities.
- Determining evaluation process i.e. how the learner shall be deemed to have acquired the desired change of behaviour or mastery of content and/or skills.

The importance of a lesson plan is that it enables the teacher to read ahead in order to enrich the content area and skill to be taught, to have confidence during the actual teaching/learning process and to logically present the content standards for effective learning.

### 3.2 Components of a lesson plan

A lesson plan is a step-by-step guide on what students need to learn and how it will be done effectively during the class time. A teacher's lesson plan includes many components, watch this video to discover the key components of a lesson plan:

Link to the video: <https://bit.ly/3oqpGFM>

#### **Overview of key components:**

##### ***General information***

The course subject, class and the topic.

##### ***Learning outcomes***

What should be achieved at the end of the lesson.

##### ***Learning materials***

The materials needed to deliver the lesson.

##### ***Lesson phases***

A lesson has a middle, beginning and end.

##### ***Learning activities***

Types of activities learners will need to engage in.

##### ***Active Teaching and Learning***

Methods, techniques and tools to make learning meaningful and interactive.

##### ***Timeline***

Estimation of how much time each of the activities will take.

##### ***Differentiation***

Differentiation in instruction to address different learning styles.

### 3.3 Lesson plan template

View the lesson plan template for lower secondary education and get an overview of all its necessary components to be considered prior to teaching. Note that the structure of a lesson plan is determined by the demands of the curriculum of a specific context. It is therefore necessary to observe that this lesson plan can be modified to suit a context.



# ASSESSMENT AND EVALUATION OF THE TEACHING AND LEARNING PROCESS

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# 1 INTRODUCTION TO ASSESSMENT AND EVALUATION

*As we teach, it is important to assess and evaluate the teaching and learning process to ensure learning objectives are achieved. Assessment plays an enormous role in the teaching-learning process. It helps teachers and learners to improve teaching and learning, this is a continuous process and a periodic exercise.*

## 1.1 Definition of assessment

Assessment in teaching and learning has been defined in various ways by different authors. In general, assessment is defined as any systematic procedures for collecting, reviewing and using information about learners, so as to make improvement where necessary. This means that assessment is the process of identifying, gathering and interpreting information about learners' learning. In general, assessment is an ongoing interactive process, in which the teacher and learner are involved.



All definitions of assessment point to the fact that assessment is a process by which the teacher gather information about the effectiveness of teaching and learning and the appropriateness of the course or curriculum being implemented. It is more than simply giving marks or grades although that may be a part of it. Assessment plays a crucial role in the education process because it guides teachers on the choice of learning tasks and the approaches to such tasks. Assessment also guides on which aspects of the curriculum need reviewing.

### Function and purpose of assessment

The central purpose of assessment is to provide information on learners' achievement and progress and set the direction for an on-going improvement in the teaching/learning process. Some key functions of assessment include the following:

- to identify learners' current performance
- to aid learning
- for review, transfer and certification
- to check on the overall efficacy of the teaching/learning program
- to determine any particular learners' stage of development
- to gain information about learners' specific instructional needs
- to identify any concepts or procedures which may need to be re-taught or reviewed



- to motivate and direct learning
- to provide feedback to learners on their performance

### 1.1.1 Formative vs. summative assessment

It is important that teachers use different types of assessment in their classroom in order to promote learning. There is so much more to assessments than delivering an end-of-unit exam or preparing for any other test. Assessments help shape the learning process at all points and give insights into a learner's learning. In light of this, it is important for teachers to understand the difference between two types of assessment: formative assessment and summative assessment.

#### Formative assessment

Formative assessment is carried out throughout a course or project to aid learning. Only because learners made it to the end of a unit test, does not mean they have mastered the skills, so formative assessment is not about assigning grades to learners.

Formative assessments help teachers understand a learner's learning while they teach and adjust their teaching strategies accordingly. It helps teachers to track how knowledge is growing and changing in learners in real-time. Some examples of formative assessment include:

- student portfolios;
- class discussions;
- regular quizzes;
- virtual classroom tools as Mentimeter ([www.mentimeter.com](http://www.mentimeter.com)).

#### Summative assessment

Summative assessment is generally carried out at the end of the course or project, semester or unit. It is evaluative and primarily used to assign learners a course grade. Typically summative assessment occurs at the end of an educational activity and is designed to judge the learner's overall performance.



Summative assessment can also be engaging for learners and useful for your teaching. Try creating assessments that differ from the standard tests, like recording a podcast, writing a script or short play or develop an independent study project. No matter what type of summative assessment you give your students, keep some best practices in mind:

- keep it real-world and relevant;

- make questions clear and instructions easy to follow;
- give a rubric so learners know what is expected of them.

### 1.1.2 Assessment for learning

Since the turn of the 21st century, emphasis is on 'Assessment for learning. Assessment for learning focusses on the learners and emphasizes assessment as a process of metacognition (knowledge of one's own thought processes) for learners. It emerges from the idea that learning is not just a matter of transferring ideas from someone who is knowledgeable to someone who is not, but is an active process of cognitive restructuring that occurs when individuals interact with new ideas. Within this view of learning, learners are the critical connectors between assessment and learning.



For learners to be actively engaged in creating their own understanding, they must learn to be critical assessors who make sense of information, relate it to prior knowledge, and use it for new learning. Assessment for learning focusses on the explicit fostering of learners' capacity over time to be their own best assessors. Teachers need to start by presenting and modelling external, structured opportunities for learners to assess themselves.

**The five principles for 'Assessment for Learning' include:**

- The active involvement of learners in their own learning
- The provision of effective feedback to learners
- Adjusting teaching to take account of the results of assessment
- Recognition of the profound influence assessment has on learner's motivation and self-esteem
- The need for learners to be able to assess themselves and understand how to improve

### 1.1.3 Assessment vs. Evaluation

While assessment focuses on the learning and teaching processes and outcomes, and provides information for improving them, evaluation focuses on grading the quality of learner's outputs. Evaluation is therefore described as the structured interpretation and giving of meaning to results. It looks at original objectives and makes a comparison with what was accomplished. An evaluation can be used as a final review to gauge the quality of instruction. It is always product-oriented. This means that the main question is: "What's been learned?"

Following are a few steps involved in the process of evaluation:

### **1. Identifying and defining general objectives**

In the evaluation process, the first step is to determine what to evaluate and so to set down educational objectives.

### **2. Selecting teaching points**

The next step in the process of evaluation is to select teaching points through which the objectives can be realised. Once the objectives are set up, the next step is to decide the content (curriculum, syllabus, course) to help in the realisation of objectives.

### **3. Planning suitable teaching and learning activities**

Thirdly, the teacher will have to plan the learning activities to be provided to the learners and, at the same time, bear in mind the objectives as well as teaching points.

### **4. Evaluating**

The teacher observes and measures the changes in the behaviour of learners through testing.

### **5. Using the results as feedback**

The last, but not the least, important step in the evaluation process is the use of results as feedback. If the teacher, after testing the learners, finds that the objectives have not been realized to a great extent, she/he will use the results in reconsidering the objectives and in organizing the learning activities.

## 2 CLASS ASSESSMENT TOOLS

*There is no shortage of class assessment tools for teachers to make use of. Many assessment tools are available to help teachers design classroom instruction and enable their learners to improve the process of learning.*

### 2.1 Assessment rubrics



A rubric is an assessment tool used to clearly state what is expected from the learner. It contains a coherent set of criteria (dimensions on which performance is rated), matched with descriptors (tasks or skills being measured) and levels of performance expected (rating scale).

Rubrics can be used for pre-assessment to clarify expectations and grading methods, for assessment to help evaluators focused and objectively assess the learners on the pre-defined expectations and for post-assessment to give learners a clear explanation of their results. Assessment becomes more objective, consistent, defensible and efficient. Rubrics support learners' self-reflection and self-assessment as well as communication between teacher and learners.

#### Steps and resources

1. Define the assessment criteria and levels of quality, preferably with the learners.
2. Give time to learners to practice and understand the use of the rubric.
3. Once learners are familiar with the tool, use it for self, peer or teacher assessment.
4. Based on the results of self, peer or teacher assessment, teacher gives feedback and guides the learners to improve their work.

#### Tips

- Use few criteria to keep the rubric user-friendly.
- Rubrics developed in cooperation with learners, increase their acceptance of assessment

## 2.2 Student portfolio



A student portfolio is a systematic collection of learner work and related material that depicts a learner's activities, accomplishments and achievements in one or more subjects. Portfolios allow for competence-based assessment by measuring the learner's growth and development. Learners develop a sense of ownership about their portfolios and understand where they made progress and where improvement is needed. Contents of a learner's portfolio may vary with the level of the learner and the types of assignments given in class. Some examples are:

- Learner's work (assignments, assessments, evaluations, score sheets, sample products, attendance sheets).
- Reflections, teacher observations, conference records, progress reports, worksheets, artefacts (poems, letter, reading logs and audio /videotape recordings, photos, sketches).

### Steps and resources

1. Decide together on the portfolio content, such as samples of learner's work, reflections, teacher observations and conference records, and agree on timelines.
2. Develop assessment criteria and procedures to keep track of the learners' progress.
3. Plan for formal learner-teacher conferences as well as informal meetings in which progress is reviewed and discussed, and reflection encouraged.

### Tip

Ask your learners to develop their portfolio online (E-portfolio) using **Padlet** ([www.padlet.com](http://www.padlet.com)). Padlet is an application where learners can easily create a virtual pin board to hold resources and to showcase their work.

## 2.3 Self - assessment



Learners become better learners when they deliberately think about what they are learning and how they are learning it. In this kind of reflection, learners step back from the learning process to reflect on their learning strategies and their progress as learners. This encourages learners to become independent learners and increases their motivation.

Self-assessment is a meaningful exercise that helps learners to critique their own work and form judgments about their strengths and weaknesses. It also informs the teacher about learners' thoughts on their progress, and gives the teacher feedback on how learners are internalising the course material.

### Execution

- Provide clear targets and criteria against which learners can measure their own performance.
- Guide learners in defining their own personal and achievable short-term learning goals.
- Guide the learners to ensure they provide sufficient evidence to support their self-assessment, in line with the set criteria or rubric.
- Allow time for learners to share their self-assessments with a peer or in a small group.
- Repeat the self-assessment exercise several times until learners are familiarised with it.

### Tips

Weaker learners tend to mark themselves up with the self-assessment technique. To tackle this issue self-assessment can be accompanied by a form of peer-assessment.

## 2.4 Peer - assessment



One way for learners to internalise the characteristics of quality work is by evaluating the work of their peers. Peer-assessment involves learners reciprocally evaluating each other's work. To do this, they must have a clear understanding of what they are looking for in their peers' work. Evaluating peers' work enhances the evaluators' own learning and self-confidence. Peer-assessment empowers learners to take responsibility and manage their own learning and develop life-long assessment skills. It also enhances learners' learning through knowledge sharing and encourages them to engage with course material more deeply.

### Execution

- Identify activities for which learners might benefit from peer feedback.
- Design guidelines or rubrics with clearly defined tasks for the reviewer.
- During in-class peer review sessions, give directions and time limits and discuss with learners the rubrics' criteria.

### Tip

Consider having learners evaluate anonymous assignments for more objective feedback.

## 3 REFLECTIVE PRACTICE

*Reflection is about critically examining oneself, and it is a facet of effective teachers. It is a critical element of professional growth. Reflective practice involves the teacher asking questions about the teaching and learning process like. This topic will provide insights in the essential elements of reflective practice.*

### 3.1 Definition of reflective practice

Reflective practice is the ability to reflect on your own actions in order to engage in a process of continuous learning. It is a way of studying your own experiences to improve the way you teach. It is very useful for teachers who want to carry on professional learning throughout their teaching career. The act of reflection is a great way to increase confidence and become a more proactive and qualified professional.

**Examining your own practice is one of the best ways to improve it.** ”

All teachers, just as any other professional, have a duty of care to enhance their skills and knowledge via a process of continuous reflective practice, as it is an integral part of maintaining professional status.

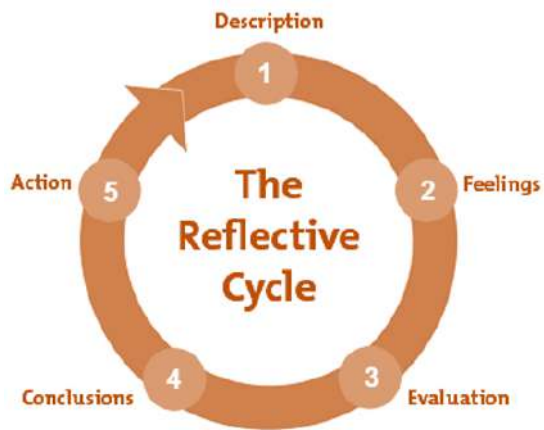
A teacher should be able to observe her/his behaviour, feelings, thoughts, skills, attitudes, biases from an objective viewpoint. It offers teachers a more thorough understanding of dilemmas in their classroom and promotes new ways of thinking. Some of the functionalities of reflective practice are the following:

- It can help teachers recognize and continue good practices.
- It can make teachers become aware of aspects of current practices that could be improved.
- It can help teachers identify areas that require considerable attention.

### 3.2 The reflective cycle

Graham Gibbs, a sociologist and psychologist, developed a tool for reflective practice, called 'Reflective Cycle'. It is a circle model which is structured in phases and breaks down the experience, allowing you to reflect upon an experiences as it happened. This tool allows you to better your performance as it is happening, as well as improving it for the future.





*Figure: Gibbs' Reflective Cycle*

### 1. Description

The first step of the Reflective Cycle is to describe the learning process in detail. It is important to ask yourself the questions:

- What happened and who was there?
- What did you do?
- What was the result?

### 2. Feelings

Reflect upon what was thought and felt during the process. It is important to ask the questions:

- How did you feel before the process?
- What did you feel while it was taking place?
- How were you feeling afterwards?
- How do you think the other participants felt?

### 3. Evaluation

Thirdly, it is important to evaluate the experience. Ask yourself the following questions:

- What was successful during the activity and why?
- What didn't go well?
- What did you contribute?
- How did others contribute?

### 4. Conclusion

Once the experience has been evaluated, you can start drawing conclusion about what happened. Ask yourself the following questions:

- If you were faced with the same situation again, what would you do differently.
- What skills do you need to develop, so that you can handle this type of situation better?

## **5. Action**

You should now have some possible actions to deal with similar situations more effectively in the future. Once you have a plan and identified the areas you will work on, commit to taking action and make sure to review progress.



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# INSTRUCTIONAL MATERIALS

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# 1 CONCEPT OF INSTRUCTIONAL MATERIALS

*Instructional materials, also known as Teaching and Learning Materials (TLM), are a vital component of the teaching and learning process. When used well, they can support learning and aid a learner in concretizing a learning experience and make learning more exciting, interesting and interactive. This subtopic will introduce you the concept of instructional materials and its importance in teaching and learning.*

## 1.1 Introduction to teaching and learning materials

Instructional Materials or Teaching and Learning Materials are resources that a teacher may use in teaching and learning situations to help achieve desired learning objectives and to facilitate the teaching and learning process. Broadly, the term refers to a spectrum of educational materials that teachers use in the classroom to achieve specific learning objectives. These include the lectures, readings, textbooks, multimedia components, and other resources.

The best instructional materials are aligned with all other elements in the course, including the learning objectives, assessments, and activities. Ideally, the teaching and learning materials will be tailored to the content in which they are being used, to the learners in whose class they are being used, and the teacher.



Instructional materials can be classified by type; including audio, visual and audio-visual resources.

### Audio media

These are teaching and learning materials that appeal to the auditory sense. For example: podcasts, telephones, radios, records and record players, storytelling, etc.

## **Visual media**

These are materials that appeal to the sense of sight (eyes). For example: images, real objects, charts, flip charts, chalk boards and whiteboard, projected aids, etc.

## **Audio-visual media**

These are teaching and learning materials that have the capacity to appeal to both auditory and sight senses. For example: television, educational videos, etc.

## **1.2 Purpose of teaching and learning materials**

Teaching materials come in many shapes and sizes, but they all have in common the ability to support learning. The purpose and importance of teaching and learning materials is to make lessons interesting, learning easy and enable teachers to easily express concepts.

### **Learning support**

Learning materials can significantly increase learners' achievement by supporting learning. For example, an educational video may provide a learner with new insights and an appealing worksheet may provide the learner with new opportunities to practice a new skill gained in class. This process aids in the learning process by allowing the learner to explore the knowledge independently as well as providing repetition. Learning materials, regardless of what kind, all have some function in student learning.

### **Lesson structure**

Teaching and learning materials can also add important structure to lesson planning and the delivery of instruction. Learning materials act as a guide for both the teacher and the learner. They can provide a valuable routine in the teaching and learning process. For example, by providing a summarizing poster or video after each topic.

### **Differentiation of instruction**

In addition to supporting learning more generally, teaching and learning materials can assist teachers in the differentiation of instruction. Differentiation of instruction is the tailoring of lessons and instruction to the different learning styles and capacities within your classroom. Learning materials such as worksheets, videos, group activity instructions, or any other, all allow teachers to modify them to best activate each individual learner's needs or learning style, for example by using different media.

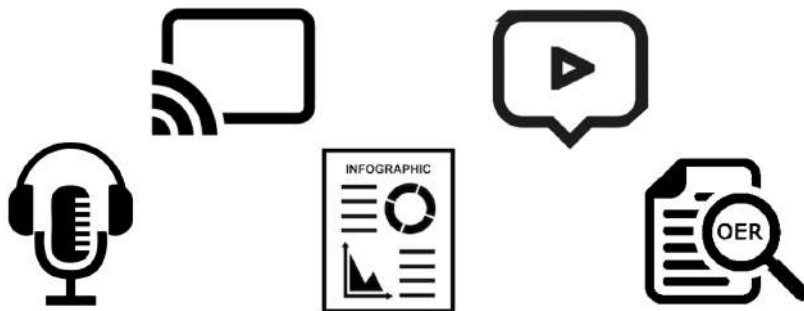
## 2 TYPES OF INSTRUCTIONAL MATERIALS

*There are many types or categories of resources that teachers can use to support the teaching and learning process. Some resources are more traditional, others are more innovative. This subtopic reviews and introduces different types of teaching and learning materials which any teacher can start using tomorrow. Because a successful integration is more than just getting the tools into your classroom, every tool is accompanied with suggestions on how to engage your learners and enrich your lessons.*

### 2.1 Traditional and innovative resources

There is an endless list of Teaching and Learning Materials. The ones we are most familiar with are traditional resources. These may include any textbooks and workbooks used in the classroom. For example, language arts classrooms almost always have literature textbooks, writing textbooks, and even vocabulary and spelling workbooks. More innovative materials may include charts, maps, videos, images, diagrams and flashcards. These instructional materials were, among others, widely discussed in the subtopic on Tools for Active Teaching and Learning.

In addition to these resources and to help you find your way in the endless possibilities of instructional materials, this course provides you with five great and innovative teaching and learning tools which you can start using tomorrow.



### 2.2 Podcasts

A podcast is a set of audio recordings. Podcasting allows content to be broadcast and distributed via audio files over the internet. The recordings work a lot like TV or radio series, except that people listen to them on demand and they are not a real time broadcast. Users can stream podcasts online or can download them to a personal device for easy listening offline.





## Good practice

Go to <https://bit.ly/2VFC34h> and listen to a good practice of a podcasts.

## Tips to integrate podcasting in teaching and learning

- Create podcasts for learners and step them through assignments and projects or explain challenging concepts.
- Let learners collaborate on a class wide podcast that offers a living record of class activities, with every learner contributing reports over the year.
- Have learners create podcasts to debate topics, interview guest speakers or record collaborative conversations.

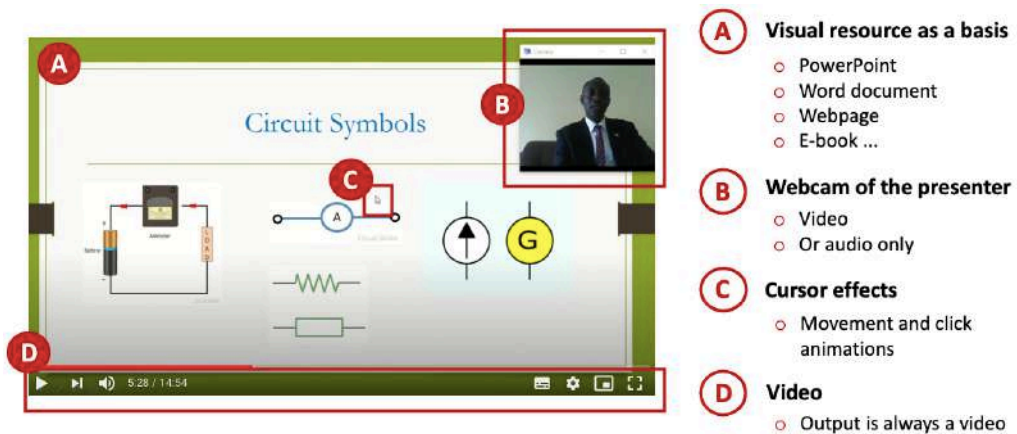
## Get into action

Go to [www.anchor.fm](http://www.anchor.fm) and start creating your own podcasts using the tool 'Anchor'

## 2.3 Screencast

A screencast is a digital video recording of what's happening on the teacher's computer monitor, usually containing audio narration. Common examples of screencasts are: tutorials, training videos, video lessons and recorded presentations. Screen casting is one of the most useful tools to use for digital storytelling.

### Features of a screencast



**A** Visual resource as a basis

- PowerPoint
- Word document
- Webpage
- E-book ...

**B** Webcam of the presenter

- Video
- Or audio only

**C** Cursor effects

- Movement and click animations

**D** Video

- Output is always a video

### Tips to use screen casting in teaching and learning

- Deliver attractive audio-visual learning resources to learners
- Provide audio-visual feedback to learners

### Get into action

Go to <https://atomisystems.com/download/> and start creating your own screencasts using the tool 'Active Presenter'.

## 2.4 Educational videos

An Educational Video is a video which presents educational material for a topic which is to be learned. The format may vary, but it always consists of moving visual media.

### Good practice

Watch the below good practice of an educational video:

Link to the video: <https://bit.ly/36HbsdM>

### Tips to use educational videos in teaching and learning

- Create educational animated videos to provide visual learning resources to learners
- Let learners create their own videos summarizing a topic, project, book report



### Get into action

Go to [www.powtoon.com](http://www.powtoon.com) and start creating your own educational videos using the tool 'Powtoon'.

## 2.5 Educational posters

An educational poster is a tool that enable visualization in the classroom to foster student learning. A great example is an educational poster in the format of an infographic. An infographic is a collection of imagery, charts, and minimal text that gives an easy-to-understand overview of a topic. As in the example below, infographics use striking, engaging visuals to communicate information quickly and clearly.

View the below good practice of an infographic

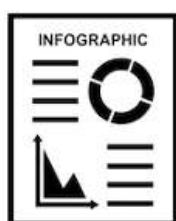


Tips to use educational posters in teaching and learning

- Create appealing learning resources and assignments
- Create infographics to explain and illustrate difficult concepts
- Create classroom poster on essential learning content to decorate the classroom
- Create newsletters to share class information with learners, the school and parents

Get into action

Go to [www.canva.com](http://www.canva.com) and start creating your own educational posters using the tool 'Canva'. Other similar great tools to create your own educational posters are 'Piktochart' [www.piktochart.com](http://www.piktochart.com) and 'Infogram' [www.infogram](http://www.infogram)



## 2.6 Open Educational Resources (OERs)

Open Educational Resources (OERs) are a fantastic type of instructional material because they are free to reuse, adapt, and share. Moreover, they have been created and curated by educational professionals. OERs might take the form of lesson plans, quizzes, online articles, digital media, databases, simulations, and much more. OERs can be found in large collections or through search engines and may range from individual images to entire courses.

### Key points of OERs

- Adaptation and redistribution of learning resources is allowed
- Learning materials are open to all
- Learning materials are released in an open license
- Learning materials available in any format (video, text, etc.)

### Tips for integrating OERs in teaching and learning

- Find an OER that will help support course or unit-level objectives
- Assess the quality of the OER
- Eliminate extraneous content within the OER
- Remix the OER with other educational materials, if applicable

### Overview of the best OER platforms

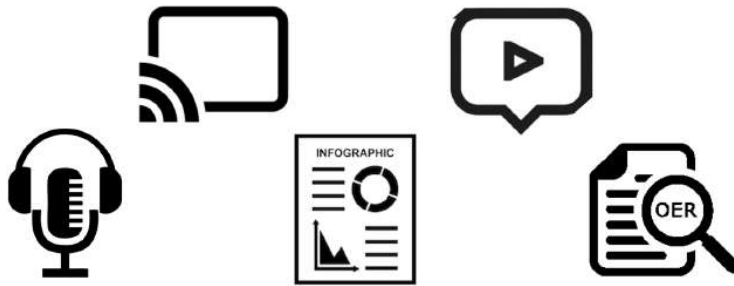
- TTE Sandbox: One Stop Portal for Distance Learning:  
<https://padlet.com/teachertraininguganda/Sandbox>
- Khan Academy  
<https://www.khanacademy.org/>
- TED  
<https://www.ted.com/>
- OpenLearn Create  
<https://www.open.edu/openlearncreate/>
- OER Commons  
<https://www.oercommons.org/>
- TeacherTube  
<https://www.teachertube.com/>

### 3 CHOOSING INSTRUCTIONAL MATERIALS

As reflected in the previous subtopic, there are many types of resources that teachers can use to support the teaching and learning process. Teaching and learning materials can come in many different shapes, sizes and formats. No one tool is better than another in enhancing learning, as there are different factors to consider when selecting appropriate teaching and learning materials. This subtopic introduces you to the main factors to consider when selecting instructional materials.

#### 3.1 Integrating instructional materials

As teachers, it is essential that we become familiar with the type of instructional materials, which can be used in any teaching/ learning situation; from podcasting to screencasting and from infographics to engaging videos, among others.



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#### Reflection point

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- Which of the newly introduced tools/formats to create instructional materials inspired you the most? Why?
  - How would you integrate it in one of your lessons?  
*Tip: think about a specific topic and learning objective.*
-

## 3.2 Factors to consider when selecting instructional materials

Instructional materials provide the basis for what learners will experience and learn. They hold the power to either engage or demotivate learners. Therefore, instructional materials must be carefully planned, selected, organized, refined, and used.

### **Key factors to consider when selecting instructional materials:**

#### Take into consideration individual needs and learning styles:

Choose materials that present information in a variety of ways. Using mixed media (text, video, images, real world examples, graphs, etc.) make information more interesting and address learners' different learning styles.

#### Make sure the materials support learning objectives:

Provide a wide range of materials that will enrich and support the curriculum and course objectives. The instructional materials should reinforce and supplement, not substitute for, the teacher's teaching efforts.

#### Make the materials clear and accessible:

Make sure learners have sufficient background knowledge to comprehend the learning materials.



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