

# Active Teaching & Learning

A focus on principles and practices of learner centered pedagogy as a teaching approach to achieve quality education



**BTC UGANDA**



MINISTRY OF  
EDUCATION, SCIENCES,  
TECHNOLOGY & SPORTS

THE BELGIAN  
DEVELOPMENT COOPERATION

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Active teaching, **Happy Learning**

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# INDEX

## 00 INTRODUCTION

Foreword .....	6
Types of knowledge.....	9
Structure of the ATL guide.....	13

## 01 APPROACH

<b>Foundations of ATL</b> .....	15
Learner-centred pedagogy .....	16
Rationales for learner-centred pedagogy .....	19
A spectrum of pedagogical approaches .....	20
<b>Assessment in ATL</b> .....	21
Assessment and evaluation .....	22
Objectives of assessment .....	22
Competencies.....	25
Assessment approaches.....	27
Quality of education .....	31

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## 02 METHODS

<b>Methods for ATL</b> .....	<b>33</b>
Problem-based learning .....	<b>34</b>
Project-based learning.....	<b>36</b>
Learning stations .....	<b>42</b>
Learning contracts .....	<b>47</b>
-----	
<b>Methods for assessment in ATL</b> .....	<b>51</b>
Summative assessment & Formative assessment .....	<b>51</b>
Norm referenced assessment & criterion referenced assessment .....	<b>52</b>
Formal assessment & informal assessment .....	<b>53</b>
Objective assessment & subjective assessment .....	<b>55</b>

## 03 TECHNIQUES

<b>Techniques for ATL</b> .....	<b>57</b>
Instructional approach to learning .....	<b>58</b>
Drill .....	<b>59</b>
Demonstration .....	<b>60</b>
Storytelling .....	<b>60</b>
Presentation .....	<b>62</b>
Group work .....	<b>64</b>
Shared writing.....	<b>66</b>
Simulation .....	<b>67</b>
Brainstorming.....	<b>68</b>
-----	
<b>Techniques for assessment in ATL</b> .....	<b>71</b>
Self-assessment.....	<b>71</b>
Peer-assessment.....	<b>72</b>
Classroom assessment .....	<b>73</b>

## 04 TOOLS

<b>Tools for ATL</b> .....	<b>76</b>
Charts & maps .....	<b>77</b>
Diagrams .....	<b>78</b>
Flashcards .....	<b>78</b>
Quiz .....	<b>78</b>
Images.....	<b>79</b>
Videos .....	<b>79</b>
Internet & social media.....	<b>80</b>
Low cost experiments.....	<b>81</b>
Roleplay .....	<b>82</b>
-----	
<b>Tools for assessment in ATL</b> .....	<b>83</b>
Student portfolio .....	<b>83</b>
Progress assessment portraits .....	<b>84</b>
Assessment rubrics.....	<b>85</b>
-----	
<b>References</b> .....	<b>90</b>



# Foreword

In an attempt to implement the Education for Development 2030 agenda, the Government of Uganda is working hand in hand with a large number of Education Development Partners through the Ministry of Education, Science Technology and Sports.

The success of such activities, however, depends on the devotion and sincerity and, above all, on the appropriate skills of the beneficiary institutions implementing the programs. This, in turn, depends to a great extent on the provision of appropriate training for their staff.

The Teacher Instructor Education Training department, with support from the Belgian Development Agency, developed this guide to Active Teaching and Learning in the framework of the Teacher Training and Education project. The objective is to support teacher training colleges to create a teaching and practice-oriented learning environment, so as to improve the quality of teaching and learning in teacher education.

The rationale behind a training program for teacher educators on Active Teaching and Learning is that, as teacher trainees have a significant role to play in the sustained application of active teaching and learning in schools, it is imperative that they are exposed to its effective application during their training in teacher training institutions. Therefore, the strategy to use teacher educators as role models is essential. Moreover, it is crucial to build the capacity of teacher training Institutions to provide a meaningful context that allows teacher trainees to critically examine their own pedagogical beliefs and explore the application of Active Teaching and Learning in a constructivist learning environment.

In this guide, a general introduction to the essentials of Active Teaching and Learning is provided. As a start, teachers are challenged to reflect on what active teaching and learning is all about, followed by an introduction to the historical origins of Active Teaching and Learning in sub-Saharan Africa, the rationale for promotion of active teaching and learning and the challenges of applying active teaching and learning in the right perspective.

After the introduction, the guide provides an approach to the foundations of active teaching and learning and to the assessment for active teaching and learning. It then focuses on the methods, techniques and tools that can be used to promote active teaching and learning through use of IT4 Education resources, action research and reflective practice.

Under the supervision of the Ministry of Education, Science, Technology and Sports - Teacher Instructor Education Training Department, this guide was specifically designed to train all teacher educators in Business, Technical and Vocational Education and Training, Health Education and General Secondary Education.

Between August 2014 and August 2015, the content of this guide was piloted with about 300 Lecturers of five National Teachers' Colleges, three Instructors' Colleges and one Health Tutors' College. The initial training involved several face-to-face sessions, followed by the application of Active Teaching and Learning in lecture rooms. Additionally, continuous pedagogic support was provided by National Experts between each training session. This offered an opportunity for the authors to frequently refine the content in order to suit the requirements for training a teacher of the twenty-first century. This also offered the opportunity for the lecturers to participate in an Active Teaching and Learning portfolio competition leading to the award of a Certificate of Proficiency in Active Teaching and Learning by the Ministry of Education, Science, Technology and Sports.

The education sector highly appreciates the contribution of the stakeholders in education towards achieving access, equity and quality of education. This Active Teaching and Learning guide is timely and is one of the support mechanisms to already existing efforts in terms of policies, initiatives, reforms and innovations proposed for the continuous development of the colleges.



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# 00

# INTRODUCTION

The starting point and inspiration for this guide to Active Teaching and Learning is largely adopted from the UNESCO-IICBA modules on 'Fundamentals of Teacher Education Development'. Instead of introducing a ready-made package of training materials developed elsewhere or for other institutions, a team of education experts was organized to develop and contextualize an Active Teaching and Learning training package adapted to the needs of Teacher Training Institutions in Uganda.

The team included education experts and lecturers from Kyambogo and Makerere awarding universities, from the Teacher Instructor Education and Training department of the Ministry of Education, Sciences, Technology and Sports, as well as from other institutions. It also included mentor teachers from five national teacher colleges, three technical instructor colleges and one health tutors' college. Through the Uganda-Belgium Teacher Training Education project, technical guidance and financial assistance was facilitated by the Belgian Development Agency (BTC) and the Flemish Association for Development Cooperation and Technical Assistance (VVOB).

Following a formal validation process, the developed material was then handed over to Design without Borders to design the final product in a user-friendly and attractive way.

### **Objective of the guide to ATL**

The objective of this guide is to raise the quality of teaching and learning in teacher education by establishing a practice-oriented teaching and learning environment and exposing teacher trainers to effective applications of active teaching and learning methods, techniques and tools.

Moreover, it is crucial to build the capacity of teacher training institutions to provide a meaningful context that allows pre-service teachers to critically examine their own pedagogical beliefs and explore the application of active teaching and learning in a constructivist learning environment.

### **Continuous professional development**

Teacher professional development is more than attending a training. Many studies have shown that active participation in the learning process results in higher retention of learning.

Various studies have also highlighted that without a hands-on application period where trainees can apply the new knowledge in their own work, little will remain of the initial input. Therefore, when the objective is to promote ATL, an effective professional development program needs to foresee a period for supported follow-up practice where reflection activities involve evaluating one's actions and experiences, identifying gaps and successes and designing strategies for improvement.

Reflection deals with an individual self. When regular reflection becomes a habit, individuals become practitioners.

Reflective practice is a gateway to continuous professional growth because it helps the practitioner to learn from previous experiences and mistakes.

### **Three types of knowledge for teachers**

Combining subjects' Content Knowledge and sound Pedagogical Knowledge is essential to gain the Pedagogical Content Knowledge needed for effective teaching and learning.

Learner-centred pedagogy is a critical element in the development of teachers' Pedagogical Content Knowledge because student learning depends to a large extent on the teachers' ability to transform their subjects into lessons that their students can comprehend.

As students must first understand key terms and concepts, learner-centred pedagogy is a prerequisite to attain higher-order thinking skills for analysis and critique.

If student learning is the centre of the pedagogical endeavour, teachers need to learn how to bridge the divide between subject expertise and pedagogical expertise, so as to model Pedagogical Content Knowledge in their classes regardless of the subject.

**Content knowledge**

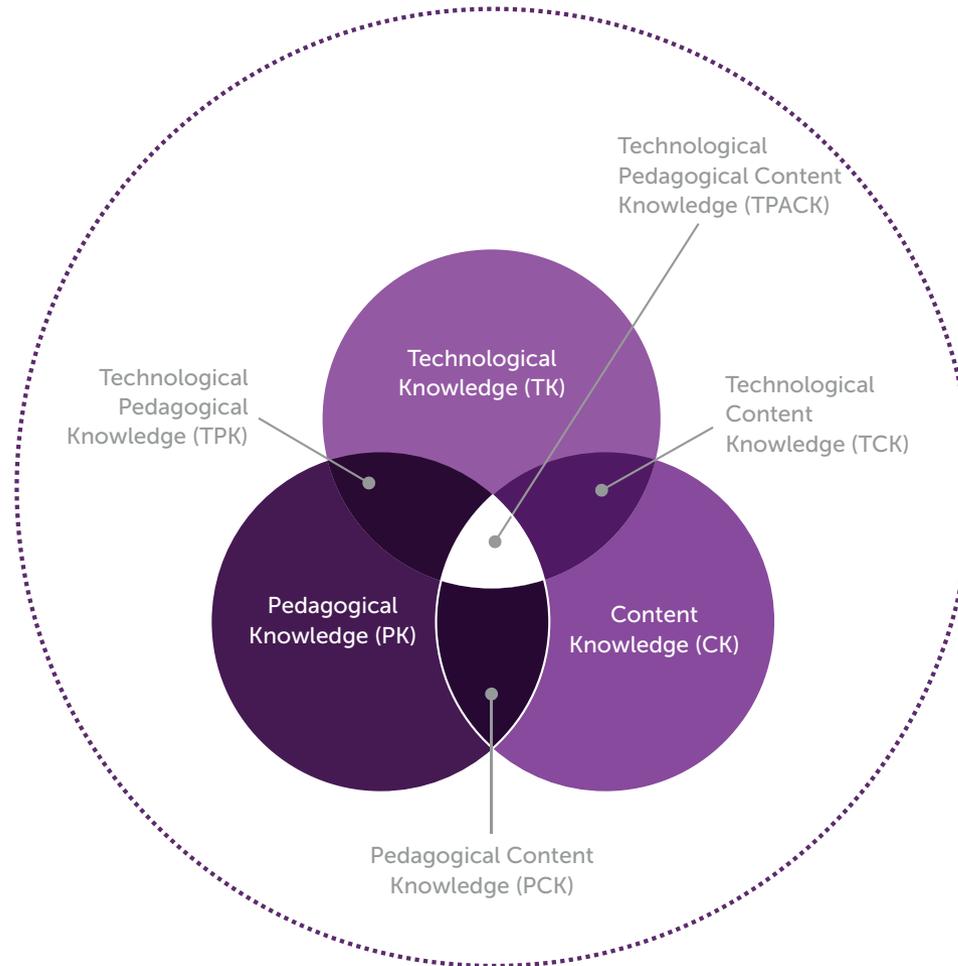
Knowledge of the content of the subject including factual information  
 Knowledge of how the subject is built up  
 Knowledge of processes of inquiry and verification, technical skills and procedures

**Pedagogical knowledge**

Knowledge of general teaching and assessment strategies  
 Knowledge of child development and theories of learning  
 Knowledge of classroom management, planning, and lesson structure  
 Knowledge of teaching and learning materials

**Technological knowledge**

Ability to use technical equipment such as computers, beamers, cameras, etc. as well as modern sources of information such as internet to access and disseminate knowledge.



However, to ensure quality of teaching and learning, teachers need to master a combination of knowledges:

### **Pedagogical Content Knowledge**

To know how to teach a particular subject, teachers need to master both content knowledge and pedagogical knowledge. They need to know the contents of the curriculum and to be able to choose the appropriate pedagogical strategies to teach particular topics.

### **Technological Pedagogical Content Knowledge**

In our modern, global world, however, teachers are also confronted with new ways to access and share information. Combining technological knowledge to content and pedagogical knowledges is therefore essential and requires developing sensitivity to the dynamic relationship between all these components of knowledge

As individual teachers, grade-level, school-specific factors, demographics, culture, and other factors make every situation unique, no single combination of content, pedagogy and technology will apply for every teacher, every course, or every view of teaching. The Technological Pedagogical Content Knowledge approach emphasises the new knowledge that lies at the intersection between each of them.

### **Reflective Practice**

Curriculum delivery is the major role of managers and academic staff of teacher training institutions.

As the central objective of active teaching and learning is to enhance the curriculum experience, direct and indirect, instructional strategies and methods linked to the core of the curriculum will be put into action, in order to convert the written curriculum into effective instruction.

For example, educational activities like field trips, conducting experiments, interacting with computer programs and other experiential learning form part of the modern repertoire of teaching.

Shifting from routine to creative ways of preparing, teaching and assessing learning, liberates and empowers learners by giving them the independence to search for knowledge, to use various problem-solving skills and to portray positive learning attitudes.

This shift requires teachers to engage in regular reflective practice moments, to consider a range of important instructional choices such as setting learning outcomes, designing appropriate activities, choosing relevant methods, techniques, tools and instructional media, organising proper classroom arrangement, preparing equipment and materials, etc.

**Forms and ways of reflection:****Critical thinking**

Also known as reflective thinking, critical thinking involves an in-depth self-assessment about teachers own practice, using questions and possible answers. This is done by teachers on a day to day basis. Much of what a teacher thinks goes unrecorded or undocumented. However, this thinking helps to guide the teacher in decision making about the teaching and learning process.

**Self-evaluation**

When doing self-evaluation, teachers write down brief but clear statements about the lesson delivery, its strengths and areas for improvement. Based on this self-evaluation, teachers can then develop strategies for the way forward.

**Peer observation and feedback**

This involves two or more people (e.g. co-teachers) that observe each other's lesson and engage in a constructive discussion about what was observed.

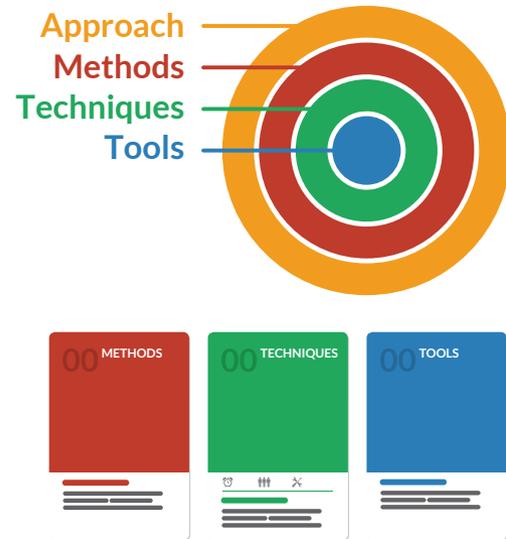
**Journal Writing**

A Reflective Journal is a written record of events and critical incidents based on the teacher's thoughts, ideas and experiences. Teachers may, for instance, document challenging situations during lesson or assessment preparation and delivery. Teachers define questions that will guide them to improve their teaching practice.

**Action Research**

Action research is a way of identifying practical solutions to solve an existing problem or to improve a system. Its particular feature is that the persons who face the problem are involved in the research process itself.

Teachers need to carry out action research in their day-to-day practice in order to have a deeper understanding of the curriculum, the learners, teaching methods, techniques and approaches, resources, etc.



*This Active Teaching and Learning Guide is made up of four main chapters; Approach, Methods, Techniques and Tools. Additionally, three sets of cards for classroom use complement the Methods, Techniques and Tools chapters.*

### STRUCTURE OF THE ACTIVE TEACHING AND LEARNING GUIDE

This guide describes the underlying conceptual approach to student-centred active teaching and learning, as well as how assessment can be organized in this approach.

It also introduces a series of methods, techniques and tools that facilitate the effective preparation and delivery of the active instructional process. The methods, techniques and tools introduced in this guide, belong to the constructivist approach.

An **approach** is a viewpoint towards teaching. It provides philosophy to the whole process of instruction.

**Methods** are organised, orderly, systematic and well planned procedures aimed at facilitating and enhancing students' learning. In this guide, we introduce the methods of problem-based learning, contract work, learning stations and project-based learning, which have their origins in inquiry-based learning, differentiated instruction and inter-disciplinarity.

**Techniques** such as demonstration, storytelling, etc. enable teachers and learners to put the chosen method of teaching or assessment into practice.

**Tools** such as flashcards, maps, roleplay, videos etc. facilitate the implementation of the techniques.

# 01

## APPROACH

Teachers have a key role to play in helping learners to develop the knowledge, skills and attitudes necessary for the 21st century. Learning is affected by a student's ability and attitude, as well as by access to information and resources at school, at home and in their living environment. However, teacher quality has been shown to be the 'single most important school variable influencing student achievement'. Teachers' qualifications, experience, knowledge of subject areas and pedagogical skills influence students' learning in profound ways.

### **FOUNDATIONS OF ACTIVE TEACHING AND LEARNING**

Improving the quality of instruction depends to a large extent on the training and support provided to teachers during pre-service training and throughout their career. For this reason, today's policy makers increasingly focus on improving how teachers teach rather than increasing the quantity of schools and the number of teachers.

Many reforms are geared to enable teachers to move away from standard 'learning by rote' methods, and to develop, research and reflect on alternatives that encourage students' inquiry and critical thinking skills.

As it introduces a new interpretation of quality teaching, turning towards learner-centred pedagogy has significant implications for pre-service and in-service teacher education policies.

To anchor, institutionalise and disseminate learner-centred education, policy makers must ensure that teachers understand its underlying concepts.

Teachers also need to be equipped with the technological, pedagogical and content knowledge enabling them to constantly adapt their teaching methods to different learners, subjects and contexts.

To develop teachers' competencies, teachers must understand why these inquiry-oriented skills are encouraged for students' and teachers. They also need to learn how they can modify their teaching methods to promote lifelong learning and student success.

Different terminology is often employed to describe this approach. Terms such as inquiry pedagogy, participatory teaching, student friendly, constructivist strategy, etc. are different ways to describe a pedagogical approach that focuses on the role of the student in an active learning process.

### LEARNER-CENTRED PEDAGOGY

Learner-centred pedagogy 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 learner-centred pedagogy, engaging students to think critically about problems prevails over the transmission models where teachers are the central source of knowledge, engaging students mainly through rote memorisation. This approach defends the view that continuous, competency-based assessment provides more useful information about student learning than summative tests.

### Constructivism

Learner-centred pedagogy 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 John Dewey, Jean Piaget, and Lev Vygotsky 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.'



*Jean Piaget*

*John Dewey*

*Lev Vygotsky*

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.

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From this perspective, lessons should encourage learners to draw upon, connect, and analyse their prior knowledge and experiences through self-discovery and interaction with other learners and with the teacher.

**Learner-centred pedagogy and critical inquiry**

To promote critical thinking, self-evaluation, and the integration of knowledge across traditional subject areas, teachers need to foster students' individual capacities to inquire and reflect. This can be done through a range of activities such as group work, brain storming, research of information in libraries or through the Internet, project-based learning, etc.

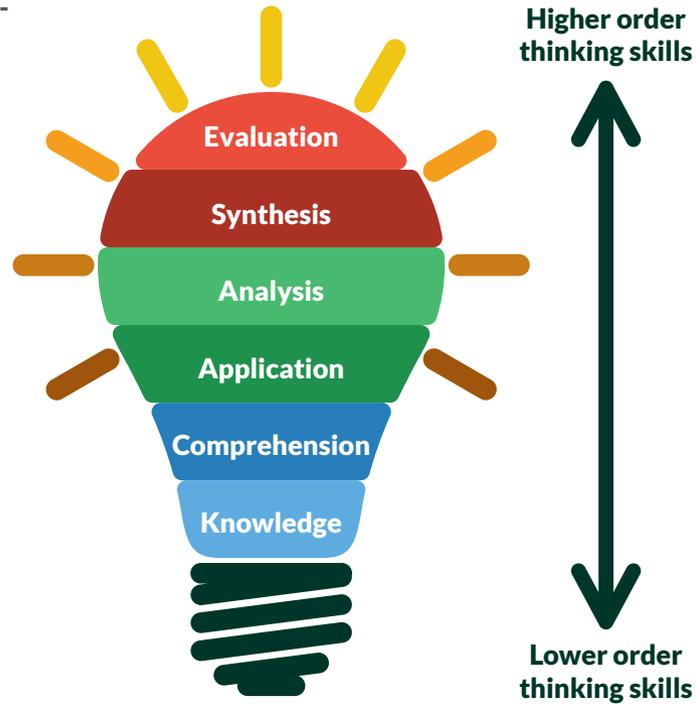
To direct attention to specific processes or concerns, educators sometimes refer to student-centred pedagogy, child-centred pedagogy, critical thinking pedagogy, inquiry pedagogy or discovery-based teaching. In this guide reference is made to learner centred pedagogy as an overarching term to describe the principles and methods common to all these constructivist oriented perspectives, while also recognising that there are differences among them.

**Learner-centred pedagogy as differentiated instruction**

Differentiated instruction ensures that what and how a learner learns, and how the learning is demonstrated, match each learner's interests, readiness to learn, and preferred mode of learning.

Teachers can apply differentiated instruction through content, process, product and learning environment.

To ensure that all learners remain engaged throughout the lesson, the teacher may differentiate the content by designing activities for groups of learners that cover different areas of Bloom's Taxonomy.

**BLOOM'S TAXONOMY -  
The cognitive domain**

Bloom's taxonomy is a classification of the learning objectives into hierarchical levels of complexity and specificity in the cognitive, affective and sensory domains.

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.

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### **RATIONALES FOR PROMOTION OF LEARNER- CENTRED PEDAGOGY**

During the colonial period, sub-Saharan education systems were characterized by unequal enrolment and curricula tailored to the needs of mission societies and colonial administration. In the first decades after independence, and based on the desire to break with their colonial past, former colonies modified the structure and content of their formal education. Some countries reformed the contents of the curricula, the language of instruction and the methods of instruction.

In this context, studies on sub-Saharan African teachers' perspectives and practices showed that learner-centred pedagogy is considered one of the best ways for learners to become active participants of the global economy.

However, although an increased number of African educators start to appreciate the benefits of learner-centred pedagogy, this approach has generally not been adequately integrated into the teacher training curricula.

Policymakers and teacher educators should therefore reasonably support teachers' acquisition of, and familiarity with, learner-centred pedagogy.

There are three main rationales for the promotion of learner centred pedagogy:

#### **Cognitive and psychological rationales**

Research shows that learner centred pedagogy fosters understanding, memorisation and problem-solving abilities (mental cognitive processes) and helps to canalise emotions, motivation, and interpersonal relationships (psychological factors).

#### **Political rationale**

In addition to the content of the lessons, the way teachers teach contributes to learners' political socialisation and engagement in democratic processes. The relationship between learners and teachers and the opportunities for learners to express their views in the classroom are influential in developing democratic views and of civic engagement.

#### **Economic rationale**

To become and remain competitive in the complex global economy of the 21st century, countries need to equip youth with new sets of skills. Today, memorisation of facts is no longer sufficient. Learners need to learn how to communicate effectively, how to inquire for information beyond their immediate community, and solve problems arising in rapidly changing environments.

#### **Challenges**

Learner-centred pedagogy is based on the notion that knowledge can be constructed by both learners and teachers. By challenging the authority of the teacher as 'the' person in the classroom who possesses knowledge, it may engender cultural resistance.

There are also a number of practical issues affecting the proper implementation of learner-centred pedagogy, such as overcrowded classrooms, overloaded curricula, language issues, lack of teaching materials, etc.

Therefore, school-based pedagogic support, conditions of teaching, medium of instruction and examinations modes need to be considered by education managers for learner centred pedagogy to be effective.

Finally, teachers often master their subject (academic contents) but lack expertise in teaching methods (pedagogy) or ICT skills (technological knowledge). All components need to be addressed by teacher trainers and policymakers

**A SPECTRUM OF PEDAGOGICAL APPROACHES**

To promote quality teaching and learning, one does not need to rigidly divide learner-centred from teacher-centred approaches.

In the spectrum of pedagogical approaches, teachers change their practice throughout the different modules of a course, or even in a single lesson in order to choose the specific approaches that will best serve the lesson objectives. In one single lesson for instance, some direct teacher-led instruction may be followed by inquiry-based activities. It remains up to the teachers' professional judgment to find the best ways to guide learning.

Although it may be valuable for policymakers to assess the extent to which teachers are using learner-centred pedagogy, such assessments should not focus on a rigid inventory of methods and techniques that teachers must use to receive high marks from school inspectors. Instead, continuous formative assessments for teachers and students would be more consistent with the values of learner-centred pedagogy.

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It is important to remember that there is no such thing as the best method, technique or tool. Instead, there are many good ways of teaching and learning.

### **ASSESSMENT IN ACTIVE TEACHING AND LEARNING**

Assessment is one of the major challenges teachers face during the process of curriculum implementation.

In traditional education, assessment is mainly considered as a tool for grading and promotion from one grade to another. Consequently, teachers' classroom behaviour and students' learning attitudes are determined by examination results, where teachers focus on covering the curriculum and students' main efforts are geared to pass exams.

The fundamental question assessment should answer, however, is whether learners have achieved what they are supposed to achieve through the educational experience they have been exposed to. The primary role of assessment is therefore to measure whether the learners have achieved the ultimate goal of the curriculum, i.e. learning to learn, and acquiring critical thinking, research, analysis, communication and other lifelong skills.

Assessment is an integral part of both the learning and the teaching processes. It helps teachers to determine their students' learning progress as well as to evaluate their own teaching methods and approaches. As such, assessment is a critical element for educators and policymakers to design effective strategies for quality education, and for students, parents and the general public to measure the effectiveness of educational services.

Active teaching and learning methods are gradually being integrated, focusing on learners' different capacities, needs and learning conditions. Through active teaching and learning, the aim is to create autonomous learners who are given responsibility and self-direction. Therefore, an assessment approach is needed that matches with these goals. With a broad, holistic, process-oriented and competence-based assessment approach, assessment and evaluation will be in line with the demands of the 21st century society. This approach uses methods, tools and techniques that reveal what learners can do and emphasize their strengths.

This assessment approach works well in learner-centred classrooms as they are based on the idea that students can evaluate their own progress and learn from the evaluation process. This approach is characterised by a formative dialogue where assessment of learning, assessment as learning and assessment for learning are included.

The objectives of this section are that by the end, teachers will be able to assess active teaching and learning in a broad, holistic and competencies-based approach, using appropriate assessment techniques and tools.

### **Assessment and evaluation**

Assessment is often mistakenly understood as synonymous to evaluation. A better understanding of the meanings of assessment and of evaluation helps to know why, when and how they should be carried out.

Appropriate assessment and evaluation are crucial tools needed by educators to enhance the quality of education. Teachers need therefore to develop a correct perception of the concepts of assessment and evaluation, especially in relation to quality of education, and more so when implementing active teaching and learning.

### **ASSESSMENT**

The term assessment refers to a systematic process of designing, collecting, interpreting and using information about the knowledge, skills, attitudes and values of a learner or group of learners. In other words, it is a process by which an individual or group's performance is judged through observing, monitoring and documenting the desirable change in the learners' behaviour. It is carried out by a teacher or by the learners themselves (self-assessment or peer-assessment) appraises progress and measures the performance of learners, schools or education systems.

**Evaluation** grades the skills or knowledge of learners at a specific point in time. It focuses on marks and judges the level of learners' performance,

### **OBJECTIVES OF ASSESSMENT**

The main purpose of assessment is to provide information on the learners' progress and to orient the continuous improvement of the teaching and learning processes.

Assessment guides learners in their acquisition of knowledge, skills, attitudes and values. It gauges students' learning and development and should be used to design appropriate teaching and learning programs.

Information gathered through assessments is used for a variety of objectives:

- to describe learners' learning, to identify and diagnose learning problems, and to plan further teaching and learning accordingly
- to motivate learners by providing goals or targets, by clarifying the nature of learning tasks, and by letting learners, and their teachers, know how they are progressing
- to make learners understand their own learning styles, and learn how to better learn
- to provide guidance to select further courses or vocational options
- to certify that individuals have reached a certain level of competence.

**Forms of assessment**

An assessment can be oral, written, practical or observational. It can be applied one-to-one, or in small or large groups.

Assessment focuses on each step of a given task (analytic view) as well as on the progress of the complete performance (holistic view). For example, assessment will analyse progress through the several steps of a construction task (research, design, materials selection, etc.) as well as the final achievement (finished building).

The degree of formality may also vary, from one in which an individual responds to a series of prompts under controlled conditions within a limited time-frame, to a situation over an extended period of time.

### Objectives of evaluation

The main purpose of evaluation is to check which learning outcomes have been achieved and to decide whether the learner can proceed to the following level of studies or obtain a diploma, degree or other qualification. Evaluation focuses on grades and may reflect classroom components other than competencies and mastery levels (attendance, conduct, etc.).

### Differences between assessment and evaluation

Evaluation focuses on grading the quantity and quality of learner's outputs.

Assessment focuses on the learning and teaching processes and outcomes, and provides information for improving them. Assessment is an interactive process between learners and teachers, informing the latter on how well their students are learning what they are teaching.

The information is used by educators to make changes in the learning environment, and is shared with students to assist them in improving their learning and study habits. This information is learner-centred, course-based and usually not graded.

Dimension of Difference	Assessment	Evaluation
Content: timing, primary purpose	Formative: ongoing, to improve learning	Summative: final, to gauge quality
Orientation: focus of measurement	Process-oriented: how learning is going	Product-oriented: what's been learned
Findings: uses thereof	Diagnostic: identify areas for improvement	Judgmental: arrive at an overall grade/score

## COMPETENCIES

In many education systems, evaluation focuses on knowledge that is universally accepted as important. Can students read? Can they compute? Do they have an understanding of basic scientific concepts? This focus, however should not lead to neglecting the skills and attributes (values, attitudes, aspiration, motivation, self-concept, socialisation and other life skills) that are needed to become a well-grounded and competent individual.

Knowledge is the information that you know, including theories, facts and procedures, and the ability to apply this information in different situations. For example, you may be familiar with different communication styles, you may know the steps to plan a project or be well versed in strategies for evaluating success.

A skill is about doing something well. It is usually developed through training and practice. You could for instance become a skilled dancer by practicing particular dancing styles, or become skilled at being safe in the workplace by practicing safety drills at school. In active teaching and learning, skills are

the ability to choose and perform the right technique at the right time.

An attribute is an inherent attitude or value, often expressed through the way one thinks, does and feels. You may for instance have the ability to stay calm and positive in stressing circumstances, or show a 'can-do' attitude, able to try new things, ask for new assignments and demonstrate initiative in your work.

Knowledge, skills and attributes are the three elements that together constitute competence. A communication competency can for instance be developed by learning about different communication styles, practicing writing and listening skills, and enhancing the attributes that help you to keep calm under pressure.

Competencies are described in ways that are:

- Observable
- Measurable
- Linked to the workplace, academic environment and other life experiences
- Transferable
- Based on performance

Therefore, in order to define the relevant teaching and learning methods, and before developing the adapted activities and materials, it is important to determine which competencies learners shall acquire, i.e. the knowledge, skills and attitudes to be addressed.

### Deep learning and surface learning

Active teaching and learning aims at stimulating deep learning and building learning competencies, where:

- Self-direction and cooperative learning go together
- Self-critique and self-reflection are stimulated
- Problems are explored and understood via open tasks
- A climate of amazement is generated
- Thinking out of the box and in different perspectives allows addressing different aspects of life.

Surface Learning	Deep learning
Routine memorisation of facts and procedures.	Ideas are related to previous knowledge and experience.
Only focuses on basic knowledge and basic skills.	Addresses numerous competencies and complex situations.
Learning is fragmented, it happens for one time and in one subject.	Learning is continuous and can be applied to diverse settings and situations.
Knowledge and skills are used limitedly and there is little retention.	Knowledge and skills are used in various situations and over time.

## ASSESSMENT APPROACHES

Skill-based assessments gauge one or several skills in different contexts, e.g. reading skills in a foreign language.

Competencies-based assessment gauges the ability of learners to complete a series of structured tasks; it has the sufficient degree of complexity to engage learners in problem-solving strategies. It addresses situations that are authentic, relevant and make sense. It leads to deep understanding, which can be applied in different situations.

As rapid and detailed feedback is a key component of active teaching and learning, assessment should be addressed at the very early stages of course design. The majority of learners recognise that the single most important factor for effective learning is getting quick response on their assignments.

Learning takes place when learners have a chance to submit an early version of their work, get supportive feedback and criticism, and then submit a final revised version. Learners improve and are engaged when they receive feedback (and opportunities to use it) on realistic tasks situated at the heart of learning goals and of real-world demands.

## 01

**Authentic assessment** presents learners with real-world challenges and is often based on performance. Learners are asked to apply and demonstrate the competencies they have acquired in whatever way they find appropriate. Examples of authentic assessment include simulations and role plays.

- It involves pulling together a number of different ideas from the subject matter.
- It often involves different activities, i.e. writing and calculation
- It usually results in a finished product: an essay, a lesson plan, or a problem set for others to solve.

### Benefits

- Authentic assessment is fairer and less discriminatory because, as it gauges a broad range of skills in different situations, it increases access to further education and opportunities for success.
- Learners have the possibility to demonstrate that they 'know how to' rather than just 'know about it'.
- The methods are usually more realistic and relevant, involving role plays, simulations and work placements. Students develop a better understanding of how their specific skills and knowledge can be applied both inside and outside the academic environment.
- It is an effective strategy to facilitate 'deep' rather than 'surface' learning.
- It is usually formative and as such is more likely to facilitate effective, well-motivated student learning.

When learners are not informed and genuinely don't know what they are doing wrong, it can lead to frustration and a loss of interest in the subject. Providing timely and constructive feedback allows misunderstandings to be detected and cleared up, and improvements to be made where necessary. This process helps learners' to maintain their motivation and to remain actively engaged in their learning.

**Activities**

- Are built around topics or issues of interest to the students
- Refer to real-world contexts and situations
- Involve multiple steps requiring use of knowledge and skills rather than simple repetition (construction of knowledge)
- Seek for quality in learners' products or performances
- Include criteria and standards that are clearly communicated to the learners
- Include interaction between the assessor (teacher or peers) and the person assessed
- Also include moments for self-assessment and self-correction.

**02 Broad and holistic assessment**

Broad assessment, also referred to as holistic assessment, means looking at the whole person. Asking the question of what we want our learners to achieve, and what education should produce, broad assessment looks into the total personality:

- Is emotionally healthy and self-aware
- Has an explorative attitude
- Is social and cooperative
- Understands the surrounding world
- Is expressive and communicative
- Is self-directed and entrepreneurial
- Is creative
- Networks with others

Broad assessment, has more than one assessment focus: it uses different viewpoints and should involve several assessment moments, several assessors, techniques and tools. It encourages diversified outcomes, where learners can demonstrate their individuality rather than striving for a single, correct answer. Broad assessment does not disadvantage any particular individual or group of learners, and accommodates creativity, originality and cooperation. Learners' portfolios are a good instrument for broad assessment as they offer a detailed picture of achievements and of the learning process itself, while also enhancing self-reflection, self-evaluation, self-direction and active use of feedback. In this context, a student portfolio is an important tool to really understand what learners know and can do.

### 03 Positive talent-based assessment

Talent-based assessment is grounded on the recognition that all individuals have strengths and weaknesses. It adopts a positive approach to education. By assessing an individual's performance across a range of skills, a more balanced and reliable assessment is obtained as it provides learners with a range of opportunities to demonstrate how much (positive), rather than how little (negative) they understand.

A person with a fixed mind-set thinks this way:

- 'They will not make a fool out of me!'
- 'When do I look smart?'

A person with a growth mind-set thinks this way:

- 'Don't worry about looking stupid, you can become smarter: keep on learning'
- 'When do I feel smart?'

Growth mind-set	Fixed mind-set
I love challenges	Persist obstacles
Effort is considered part of the game	Open to feedback
Inspired by the success of others	Running from challenges
Giving up easily	Effort is considered useless
Ignoring useful feedback	Feeling threatened by success of others
High performance (in a world view of free will and possibilities)	Reaching their upper limit very fast (in a world view of determination)

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"Everybody needs affirmation"  
(Abraham Maslow).

The Pygmalion effect shows how expectations affect performance. Higher expectations of the teacher about the learner or of the learners themselves, lead to increased performance.

## 04 Participatory assessment

Learners' development may be assessed in various ways. Apart from the teachers and the learners themselves, parents, guardians, members of the community can assess progress. Assessment conducted through the participation of the concerned persons is called participatory assessment. In participatory assessment, the role of the learners is more dominant than the role of the teacher or the assessor. The more we involve the learners in the assessment the better results we get: they will be reminded about their success and failures and at the same time it creates a cordial environment.

The following techniques can be applied in participatory assessment:

- Arrange a debate - it will enhance the learner's skill in speaking, hearing, analysing, reasoning etc.
- Arrange a question & answer group competition – it will create enthusiasm among learners
- The learners themselves would check out their exercise books. As a result they would be more confident

During assessment, involve students in the assessment process. Let them:

- Give as much information as possible about criteria and procedures
- Participate in decision-making on assessment moments and the criteria
- Participate in self-reflection, self-evaluation, co-evaluation, and peer-evaluation
- Share their self-assessments with others (for example in learner-involved parent/teacher conferences) or tell (well-prepared) the stories of their own success (or failure)

### Continuous assessment

Continuous assessment is a way to record pupil's levels of achievement without using examinations. It involves keeping records of pupils' performance in nearly everything they do during the learning process. These records build up into a much more complete and reliable view of the learners' profiles and progress than a single examination. Progressive records help obtaining a composite assessment mark and a fair judgment of what a learner can or cannot do.

### Conclusion

As shown above, it is important to use a variety of forms and types of assessment.

For some learners, written work is difficult, so too much reliance on it will put them at a disadvantage. Similarly, particular activities or topics will inspire excellent performance in some learners and frustrate others.

Including a variety of types of assessments will ensure that learners are provided with ample opportunities to demonstrate their abilities and that teachers have the information they need to construct a complete, balanced assessment of each learner.

With alternative assessment, learners have an opportunity to actively appraise themselves and one another. Learners who are used to traditional teacher-centred classrooms might need time to adjust to this new role, and might doubt that their peers can provide feedback that will enhance their learning. However, studies show that, as they gradually experience the benefits of alternative assessments for their own learning, learners soon appreciate them.

Teachers need to prepare students for the use of alternative assessments and allow time to teach them how to use them, so that alternative assessment will make an effective contribution to the learning process.

Tips for introducing alternative assessment:

- Introduce alternative assessment gradually while continuing to use more traditional forms of assessment
- Test the checklists and rubrics yourself before using them in class
- Create a supportive classroom environment in which students feel comfortable with one another
- Explain the rationales for using alternative assessments
- Engage students in a discussion about assessment. Elicit their thoughts on the values and limitations of traditional forms of assessment and help them see how alternative forms of assessment can enhance evaluation of what learners can do
- Give students guidance on how to reflect on and assess their own performance and the one of others

As students find the benefits of self and peer evaluation, the teacher can expand the amount of alternative assessment used in the classroom. It is recommended for the teacher to start small, so as not to be overwhelmed by work and new tools

### QUALITY OF EDUCATION

In defining quality of education, it is important to choose which of its many aspects and purposes will be the focus of attention.

Questions regarding quality may be posed about any important aspect of an education system: infrastructure, school buildings, administration, teacher training, educational materials, teaching, student achievements, etc. All these elements are interrelated and a serious deficit in one is likely to have implications for quality in others. The holistic understanding of quality of education embraces all the components that facilitate and enhance the teaching and learning processes, such as education standards, effectiveness, efficiency, relevance, friendliness, vibrancy and related aspects. It also focuses on the acquisition of relevant competencies and the adaptability of learners to the world of work.

Quality of education is the fundamental determinant of access, enrolment, retention and achievement of any education system. Quality refers to the desired characteristics of learners (healthy, motivated), processes (competent teachers, active pedagogies), content (relevant curricula) and systems (good governance and equitable resource allocation), among others.

In current reform proposals worldwide, the focus is on the outcomes of education. As purposes or objectives of education are matters of choice, they are based on values.

In Uganda, the education system is anchored on the need to promote education for national integration and development which, among others, entails fostering learners' cognitive, moral, and social development; promoting social cohesion and nation building; and preparation for the world of work.

It is therefore important to align teaching and assessment approaches, methods, techniques and tools to suit the broader goals, aims and objectives of Uganda's education system at all levels. If this is not done, the quality of education will be compromised.

## Questions

**01** | As explained in the Introduction, today's teachers are required to master not only their subject (content knowledge) and the ways to teach it (pedagogical knowledge). They must also be able to find the ever-changing information that is available worldwide via the Internet (technological knowledge).

- Reflecting upon your personal abilities and experiences, which one of these knowledge areas are you more at ease with? Which one should you endeavour to reinforce?
- Which combination of knowledges should a teacher master to ensure quality of education in our modern world?

**02** | Constructivism is a theory suggesting that 'learning to learn' is a process where knowledge is generated by the interaction of new information with the learner's prior knowledge and prior experiences. Which one of the below statements corresponds to a constructivist approach? :

- All students learn on demand the same thing at the same time, in a "one-size-fits-all" approach.
- Learners create new knowledge and meaning by exploring new ideas and experiences, generating hypotheses and solving real life problems.

# 02

## METHODS

A method is an organised, orderly, systematic, and well-planned procedure aimed at facilitating and enhancing students' learning.

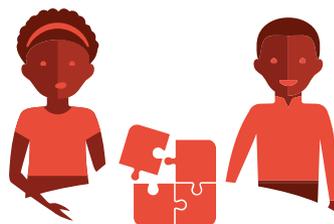
A method considers the abilities, needs, and interests of the learners and is employed to achieve certain aims of instruction. To make it an effective instrument, it should be presented with a certain amount of efficiency and ease. More so, the teaching method aims to achieve greater teaching and learning 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.

In this guide we introduce the methods of problem based learning, contractwork, learning stations and project-based learning, differentiated instruction and inter-disciplinarily. We also look into different methods to assess learners.

One must 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.

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## 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. It 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.

Problem-based learning is learner-centred and makes a fundamental shift from a focus on teaching to a focus on learning. The process is aimed at using the power of authentic problem solving to engage learners and enhance their learning and motivation.

### Foundations

Problem-based learning is rooted in the experiential learning tradition. This method promotes learning involvement in which problems are used to encourage learners to actively engage in the learning process rather than relying on the information provided by the teacher.

Its characteristics include:

- Complex, real world situations that do not have one 'right' answer.
- Learners work in teams to confront the problem to identify learning gaps and to develop viable solutions.
- Learners gain new information through self-directed learning.
- Teacher acts as a facilitator.
- Problems lead to the development of problem-solving capabilities.



Nr	Steps	Teacher's role	Learners role
1	Find a problem	Facilitates the learners in searching or presenting the problem	Search for a problem in the community
2	Organise ideas and knowledge on the problem	Facilitates, mentors, and coaches	Investigate the problem and generate ideas and knowledge from various sources
3	Analyse the ideas and knowledge obtained from various sources	Mentors and coaches (poses questions for critical thinking)	Analyse the problem into components and hypothesise
4	Assign responsibilities to groups	Mentors and coaches (poses questions for critical thinking)	Perform in groups by discussing, evaluating, organising ideas and knowledge into tentative hypotheses
5	Perform in groups	Mentors and coaches (poses questions for critical thinking)	Research, refine and summarise ideas for presentation
6	Present findings	Mentors and coaches (poses questions for critical thinking)	Group convenes and reports on the findings
7	Integrate group findings	Models, guide and coaches to support the learners	Integrate the findings (new information) and construct potential solution
8	Present solutions to the problem	Facilitates	Present the findings and working solution to the class/school/ community/public



## Project-based learning

This method refers to learners designing, planning, and carrying out an extended project that produces a publicly exhibited output such as a product, publication, presentation or service. It is related to inquiry-based learning, and problem-based learning. The distinctive feature of project-based learning is the publicly exhibited final product.

Digital technology makes it easier than ever before for learners to conduct serious research, produce high-quality work, keep a record of the entire process, and share their creations with the world.

Well-designed projects ask learners to: Tackle problems and issues important to people beyond the classroom.

Actively engage in their learning and make choices during the project. Projects enhance learners' choice and creativity while still demanding mastery of essential content. Learners and teachers interact as co-learners more than in the traditional learner-teacher relationship.

Demonstrate in tangible ways that they learned key concepts and skills. Projects provide opportunities for learners to produce observable evidence that they have mastered rigorous curricular standards as they apply their learning and solve the problem at hand. Projects and exhibitions also provide extensive evidence of process work and self-directed learning.

### FOUNDATIONS

The three keys to successful projects are exhibition, multiple drafts and critique.

#### 01 Exhibition

When learners know that the work they are creating in a project will be displayed publicly, this changes the nature of the project from the moment they start working – because they know they will need to literally 'stand by' their work, under scrutiny and questioning from family, friends, and total strangers.

This inspires a level of ambition and commitment much greater than is fuelled by the incentive of 'getting good marks'. In addition, learners' families, as well as other people from the local community, get to see what is going on in the school, providing an opportunity to strengthen the relationship between the school and community.

#### 02 Multiple drafts

The case for giving learners time to make multiple drafts of their work is hard to refute – the trouble is that it's difficult to make time for more than one draft, which is one reason why it is so important to produce a realistic project timeline when you are designing your project. Multiple drafts are also valuable for personalising assessment, because they provide you with the means to assess, not only a learner's final product, but also the extent to which they have improved their work since the first draft. This can be valuable for all learners, but it is particularly helpful for learners with special educational needs, and learners for whom English is not a first language.

### 03 Critique

Is especially effective when learners are critiquing each other's drafts, rather than just handing in drafts to a teacher.

Formal critique sessions give learners the opportunity to learn from each other's work and from each other's feedback in a structured, safe context. This can include critique of the process ('how I made this thing') as well as product ('the thing I made'). Critique sessions can become lessons in their own right, because they provide the opportunity for teachers to introduce concepts and skills at a point when learners will be eager to learn them. Equally importantly, they bring learners' misconceptions about the project to the surface, so that the group can respond to them.

**How to do a project**

Define the goal of the project

Learners need to think of something they feel passionate about. It is essential that they are excited about an idea. If not, the project won't be much fun, and the quality of the work will suffer.

The final outcome of a project, which might be a product (a machine), a performance (a theatre piece) or a service (a lesson for younger learners), creates a focus for the project and gives it a purpose from day one.

**Design the project**

Decide what you want your learners to learn, and plan 'backwards' from there. 'Backwards planning' is a very simple way of working.

To begin, write down everything that you expect your learners to learn from doing this project. This could include all kinds of things: knowledge of course-specific content, 'generic' skills like working in teams and critiquing drafts, specialist skills (which could range from statistical analysis to carving wood), and personal attributes such as self-confidence.

Once you have your list of 'learning goals', decide how you will be able to tell whether or not a learner has internalised each item on the list. Once this is done, you have the project's learning outcomes and a plan for assessing them. This will help you to guide the learners in designing their projects. Also, don't forget to think about how and where the work will be exhibited.

**Tune the project**

Once learners have planned their project, it's time to have a 'project tuning' session. This means presenting your plans to a group of colleagues, who will give you constructive feedback, come up with ideas that you haven't thought of, and warn you of potential problems that you may not have anticipated. It is also very helpful to invite learners to be part of the tuning – they will have insights into the process of doing a project from their perspective, which may take you by surprise.

**Do the project**

How you introduce a project to your learners can have a dramatic effect on how that project progresses, all the way through to the exhibition. There are many ways to begin a project: one is to start by giving your learners space to talk about what they are concerned about and interested in, and then talking about how the project can speak to these concerns and interests. You can also begin with a more formal project 'hook' – an event that is unmistakably different from your day-to-day classes, which introduces the product, the theme, or the essential questions of the project.

The most important thing is to convey your own passion for the project. Other teachers begin with a learner discussion of the project's theme or essential question. This can be sparked by film or television clips.

Show your learners a model of the type of product they will be creating (set clear expectations).

The actual project will most likely differ from the timeline you had originally created but this doesn't need to be a bad thing – in fact, lots of adjustments that happen to projects are improvements – but it means you need to have strategies for keeping track of how everyone's doing every step of the way. Don't be afraid to adjust your design once the project is going. When the project is over, you'll be very glad to have copies (or photos) of your learners' drafts – both because the record will be useful to your current learners, and because you will be able to show the drafts to future learners as models of project work.

### **Exhibit the project**

Once you've secured a venue and made time in the schedule for learners to develop and run a promotional campaign, you can start thinking about the event itself. The best way to organise an exhibition is to start by thinking about what 'roles' everyone will play. Here are some examples of roles you might assign:

- Learner organisational team: make sure AV equipment is working, make sure event starts on time, go-to people for last-minute crises.
- Learner front-of-house: greet the audience and manage the crowd.
- Learner presenters: stand by their work in order to explain it and answer questions
- Teacher: getting to know the parents.
- Audience: looking at everybody's work, asking questions, providing constructive feedback.

On the day of the exhibition the teacher plays a minor role. It's important that the learners take ownership of the event – it is all about their work, and they should be in charge of it. The exhibition is a celebration of the project, not necessarily an assessment event. For some projects, however, assessment can be part of the exhibition. Exhibitions also offer a great opportunity to connect with parents.

### **Benefits**

Today, teachers around the world are designing projects for their learners because they ignite a shared passion for learning in both learners and staff; they foster a wide range of skills (such as time management, collaboration, and problem solving) that learners will need at college, university, and in the workplace. They can be tailored to suit learners with a wide range of abilities and learning needs. In addition, teachers who are frustrated by narrow standardised tests are finding that learners can acquire the curriculum content they need through projects. Public exhibition is a tremendously powerful motivator for both learners and teachers.

**Challenges**

- Assessment can be challenging, as projects mostly go beyond the boundaries of subject disciplines.
- The implementation of projects takes time and often has to be organised in extra-curricular activities.
- If learners are not highly motivated and lose interest, there is a risk of little learning to take place. Learners have to commit and take responsibility.

**Tips**

The six A's constitute a powerful list of features that are present in high-quality classroom projects. Many teachers use these six factors as a quality check during the project design process.

**Authenticity**

- Projects designed with authenticity infuse learners' work with purpose and passion by connecting project work to real-world issues that learners care about.

**Academic rigor**

- Projects with academic rigor challenge learners to fully engage their minds by mastering content standards and using professional-level thinking skills.

**Adult connections**

- Projects that incorporate adult connections support and inspire learners through the meaningful involvement of adults beyond the classroom.

**Active exploration**

- Projects with active exploration engage the bodies and minds of learners through hands-on, field-based work.

**Applied learning**

- Projects that integrate applied learning push learners to use their learning right away and to practice important skills demanded by the workplace.

**Assessment practices**

- Projects with quality assessment practices provide opportunities for learners to receive relevant feedback during and after their project work.

Examples of techniques that can be used in combination with project-based learning methods:

- Brainstorming
- Group work
- Simulation
- Role play

**Assessment of Project Based Learning**

Assessment of project-based learning focuses on both the learners and the teacher:

**Diagnostic assessment**

- to determine learners experience about what is to be learnt
- formative evaluation
- focus on experiential sharing, interest to group work, interpersonal relationship and development of expected competencies

**Summative assessment**

- development of expected competencies, creativity and innovativeness

Learners are evaluated on the achievement of expected learning competences and active participation in the entire learning process. The teacher assesses learners on experiential sharing, interest to group work, interpersonal relationship, and development of expected competences.

On the other hand, learners assess the teacher on learners' participation, on teacher-learners relationship, and the quality of mentorship the learners receive from the teacher, the organisation of the learning environment and the teaching style the teacher uses.

Areas for assessing the learners	1	2	3	4	5
Being able to apply learnt competences					
Ability to use past experiences to enrich the lesson					
Interest to work with others in a group (group work)					
Interpersonal relationship with other learners and teacher					
Innovativeness and creativity of the learner					

Areas for assessing the teacher	1	2	3	4	5
Relevance of content					
Experiential sharing during the lesson					
Appropriateness and variation of the learning methods used					
Effective use and relevance of learning resources					
Condition of the physical learning environment					
Gender responsiveness					
Time management					
Teacher-learner and learner-learner interaction/ relationship					

**Key: 5-excellent, 4-very good, 3-good, 2-fair and 1-weak**



## 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.

Learning stations are purposefully designed to include the most effective strategies for increasing learning opportunities for all learners. The fundamental objective of all tasks at learning stations is to promote the use, elaboration, and application of concepts to advance learner understanding. Learning stations encourage active participation, collaboration, and opportunities for extended reading, writing and speaking.

### **Differentiated instruction**

In differentiated instruction, teachers respond to learners’ readiness, instructional needs, interests and learning preferences and provide opportunities for learners to work in varied instructional formats. A classroom that utilises differentiated instruction is a learner-responsive, teacher-facilitated classroom where all learners have the opportunity to meet curriculum foundation objectives.

### **Foundations**

Different activities in different learning stations, addressing different learning needs is a form of differentiated instruction. This is a process of ensuring that a learner learns how she or he learns and demonstrates what he or she has learnt. This matches with the learner’s readiness level, interest, and preferred mode of learning.

**Teachers can differentiate through four ways:****01 Through content**

The content of lessons may be differentiated based on what learners already know.. Some learners may be completely unfamiliar with the concepts of a particular lesson, some may have partial mastery of the content or display mistaken ideas about the content, and other learners may show mastery of the content before the lesson begins. The teacher can then differentiate the content by designing activities for groups of learners that cover different areas of Bloom's Taxonomy.

When teachers differentiate content, they may adapt what they want the learners to learn or how the learners will gain access to the knowledge, understanding, and skills. This does not mean that educators are varying learner objectives or lowering performance standards for learners. They just present lesson content in different ways, for different learners by using different ways of presenting information at a level appropriate for each individual learner.

Learners could have a choice to work in pairs, groups, or individually, but all learners are working towards the same standards and objectives.

**02 Through process**

The process of how the material in a lesson is internalised may be differentiated for learners based on their learning styles, taking into account what standards of performance are required for the age level. This stage of differentiation allows learners to learn based either on what method is easiest for them to acquire knowledge, or what may challenge them most: some learners may prefer to read about a topic (or may require practice in reading), and others may prefer to listen (or require practice in listening), or acquire knowledge by manipulating objects associated with the content. Information may be presented in multiple ways by the teacher, and may be based on any available methods or materials. Many teachers use multiple areas of learners' intelligence to provide learning opportunities. Differentiating by process refers to how a learner comes to understand and assimilate facts, concepts and skills.

### 03 **Through product**

The product is essentially what the learner produces at the end of the lesson to demonstrate the mastery of the content: tests, evaluations, projects, reports, or other activities. Based on learners' skill levels and educational standards, teachers may assign learners to complete activities that demonstrate mastery of an educational concept (writing a report), or in a method the learner prefers (composing an original song about the content, or building a 3-dimensional object that explains mastery of concepts in the lesson or unit). The product is an integral component of the differentiated model, as the preparation of the assessments will primarily determine both the 'what' and 'how' instruction will be delivered.

When an educator differentiates by product or performance, they are affording learners various ways of demonstrating what they have learned from the lesson or unit. This is done by using menu unit sheets, choice boards or open-ended lists of final product options, meant to allow learners to show what they learned based on their learning preferences, interests and strengths.

### 04 **Through learning environment**

Differentiating through environment is important as it creates the conditions for optimal learning to take place. The learning environment includes the physical layout of the classroom, the way that the teacher uses the space, environmental elements and sensitivities including lighting, as well as the overall atmosphere of the classroom. The teacher's goal is to create an environment that is positive, structured and supportive for each learner. The physical environment should be a place that is flexible with varied types of furniture and arrangements, and areas for quiet individual work as well as areas for group work and collaboration. This supports a variety of ways to engage in flexible and dynamic learning. Teachers should pay attention to the classroom environment. They should employ classroom management techniques that support a safe and supportive learning environment.

**Execution**

Designing a lesson using learning stations can be complex. It is therefore important that teachers allow themselves time to determine the overall learning objective of the lesson. There are several key steps to transform a classroom from whole class teacher-centred instruction, to learner-centred learning stations:

**Preparation**

- Pre-assessment of learning needs, interests, abilities, etc. of learners.
- Development of the learning stations starting from different learning objectives for each station.

**Implementation**

- Instruction in the whole class setting: introduction to the different learning stations and timing, highlighting the content, process, product or learning environment.
- Assign learners in different groups and learning stations.
- Learners start in different learning stations.
- The teacher then moves to assist learners in the different learning stations.

- The teacher interacts with learners to assess language, social and academic skill levels.
- Teacher provides feedback on and reinforces positive behaviours.
- The teacher encourages the use of a constructive dialogue within the different groups and problem solving thinking.
- The teacher facilitates participatory debriefing sessions in a whole class setting.

Examples of techniques and tools that can be used in combination with learning stations:

- Group Work
- Brainstorming
- Presentations
- Demonstration
- Simulation

**Assessment of Learning stations**

To understand how learners learn and what they learn in learning stations, pre- assessment and on-task assessments are essential. This provides feedback for teacher and learners. Pre-assessment guides the preparation of the learning stations by addressing learners' strengths and needs, learning styles, interests and levels of prior knowledge. It can be informal or diagnostic and provides qualitative feedback.

Learners can be grouped according to commonalities found in pre- assessment results

On-task assessment is the process of gathering information and assessing learning outcomes in the different learning stations. The teacher asks questions, observes what learners are doing and facilitates class discussion at the end of the activity.

The teacher also gives assistance to the learners by providing clear instructions and providing feedback to learners on their performance

### **Benefits**

- Learners participate in activities that help them see curriculum subjects in real-time and hands-on ways.
- Working both independently and in small groups, learners have time and space to learn about a subject in a more in-depth fashion.
- A learning station is governed by rules that learners are well aware of and requires them to be responsible and accountable for their own learning.
- The power of a learning station lies in the fact that learners who 'didn't get it the first time', or need information presented in a different light, receive more individualised lesson than in a whole-class setting.

- Learning stations provide time for the teacher to spend time with learners individually or in small groups, helping learners learn curriculum.

Supporting learning in learning stations will lead to the development of important values such as fairness, harmony, inclusion and academic excellence. Fairness is achieved when all learners receive the assistance they need for success. Harmony is evidenced when classrooms support all learners' learning and mutual assistance is valued. Inclusion means that all learners have access to and a voice in social and academic opportunities. Academic excellence is achieved by linking content standards to activity-centre tasks and providing the assistance necessary for each learner to achieve his or her full potential.

### **Tips**

In a classroom where the teaching theory is based on differentiated instruction, learners should feel welcomed and safe. The teacher and learners collaborate for mutual growth and success. All instructions are clearly stated in a way that learners easily understand. Learners are aware of the classroom rules and know routines and procedures.

There is a procedure for all activities completed in the classroom. These should promote minimal noise, minimise unnecessary movement, encourage on-task behaviour, have a plan for those who finish early, and promote independent work and responsibility.

- Create manageable groups
- Allocate adequate time for each activity
- Prepare the learning stations thoroughly
- Clarify tasks at the beginning
- Make sure that individual learners complete all the tasks in the learning stations
- Continuously give feedback
- Allow time for whole-class participatory debriefing sessions.



## 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. They also permit the teacher to take advantage of the motivation within individual learners.

The use of learning contracts allows the learner to structure his or her learning and to be an active participant in the process of education. A learning contract provides a useful mechanism for reassuring both parties about whether a planned piece of work will meet the requirements of a course or module.

Therefore, learning contracts provide a means for negotiating reconciliation between these external needs and expectations and the learner's internal need and interests.

### Foundations

Learning contracts are a popular and valuable component of self-managed learning, and they can provide an effective supportive structure for individualised learning and assessment in a wide range of circumstances. While they are particularly useful for work-based learning, and for the development of skills and competencies, they are also of value in structuring research projects or agreeing individualised portfolios of traditional academic study.

All learning contracts share the following characteristics:

- The learner has a voice in setting up the contract.
- A learning plan
- An agreement between the learner and someone who will help them, i.e. a tutor, trainer, coach or mentor.

Effective learning contracts also incorporate these additional features: they are formal, written agreements which set out clear learning objectives, how learning will be achieved and how it will be evaluated. They provide a wide range of choice, which enhances the learner's motivation and commitment.

### Execution

The following process (next page) can be applied for the creation and execution of a learning contract for both the teacher and learner:

Developing a learning contract

### **01 Identifying what content will be learned**

First of all the learning needs have to be determined. A learning need is the gap between where one is now and where one wants to be in regard to a particular set of competencies. Learning needs can be identified by self-assessment or through the evaluation and assessments the teacher has made concerning the learner. It also helps to make a lists of competencies that learners and teachers feel need to be acquired. This makes it easier to assess the gap between where the learners stands and where he needs to go. Each of the learning needs diagnosed should be translated into a learning objective which should describe what learners will learn, not what they will do.

### **02 Specifying learning resources, methods and strategies**

This involves a description of how one proposes to go about accomplishing each objective. Plan and identify the material and human resources and the strategies (techniques, tools) for the various learning experiences

### **03 Specifying target dates for completion**

These should be realistic dates, unless there are institutional or other deadlines

### **04 Specifying evidence of accomplishment.**

Describe what evidence will be collected to indicate the degree to which each objective has been achieved by:

- Selecting specific tasks to be evaluated; it is not necessary to evaluate every task.
- Providing a combination of teacher-selected tasks and learner-selected tasks;
- Use rubrics created by the teacher or the learner that incorporate neatness, thoughtfulness, accuracy of information, originality (if appropriate) etc.

**05 Specify how the evidence will be validated**

After specifying the criteria, one should indicate the means proposed for verifying the evidence according to these criteria. For example, if one produces a paper, who will read it and what are their qualifications? Will they express their judgements by rating scales, descriptive reports, or evaluative memos? How will they communicate those judgements? If one is attempting to improve a professional skill, is there someone at the place of employment who can judge one's accomplishments?

**06 Carrying out the contract**

With steps 1-5 accomplished, the learner can now simply do what the contract calls for. Don't hesitate to revise or renegotiate the contract as you go along.

**07 Evaluating your learning**

When the contract is completed, the learner will want to get some assurance that she or he has in fact learned what s/he set out to learn. The teacher should plan a feedback session to go over the work presented by the learner.

Examples of techniques and tools that can be used in combination with contract work:

- Brainstorming
- Presentation and demonstration
- Role-play
- Simulation
- Rubrics

Assessment strategies should reflect:

**The learning objectives**

- Definable and measurable criteria
- Standards of learner performance

**Challenges**

- May be challenging to create for learners who are used to lecture or exam types of courses. Hence needs to be carefully introduced.
- Not suitable for content that learner is totally unfamiliar with.
- May require modification during contract progress
- Not all learners come to class with a desire to be challenged by striving to achieve given goals.

It is therefore fundamental to develop challenging learning environments and to let learners set their own goals that challenge them through development of contracts.

**Tips**

- Demonstrate the importance of the subject matter.
- Have them work collaboratively with the teacher in the development process.
- Make learners accountable for their work and display it for external audiences.
- Contracts reduce the anxiety level of learners by having them focus on tasks, instead of worrying about specific grades on specific assignments.
- Overall the teacher's goal should be to help learners to understand the importance of the content of the course and then to design methods to help them meet challenging goals. It is well accepted that expectations of high levels of work will result in higher level of work.

There are many forms that the contract can take, but the following represents a general example:

**1. Learner name and details**

This is where any information about the learner is captured

**2. Course name and level**

This is where expectations of the piece of work is listed

**3. Outcomes to be addressed**

They may not be expressed as outcomes, but this is where the learner puts the course requirements about the piece of work.

**4. Form of submission**

It could be a project, a portfolio, a video of practice, an object the learner has made, a computer program etc. If the tutor signs the form, she or he is agreeing that a submission of this type will be acceptable.

**5. Outline of submission**

This is the tricky bit as this is where the learner sets out her or his intentions for the submission. It is a statement of the learner's solution to the problem, 'how am I going to produce evidence that I can meet these outcomes?'

**6. Resources and assistance**

This is where the learner can request input from the tutor, such as looking over a draft, or providing copies of some material not in the library, or an introduction to an interviewee. This section is also the place to clarify complicating issues, such as collaborative work in a small group, and how marks are to be apportioned.

**7. Signatures**

The contract is not worth anything until it has been agreed and signed by both learner and teacher. Both the learner and the teacher keep a copy of the completed work,

## Methods of assessment

### SUMMATIVE ASSESSMENT AND FORMATIVE ASSESSMENT

At some point, most teachers are required to give a report on student learning at the end of a particular unit or on a particular project. Students also want and need to know how well they have done. This kind of assessment, done after the fact, is called summative assessment.

**Summative assessment** is generally carried out at the end of a course or project. In an educational setting, summative assessments are typically used to assign students a course grade. Summative assessments are evaluative. Some of the most well-known and widely discussed examples of summative assessments are the standardized tests, usually in math, reading, writing, and science.

Other examples of summative assessments include:

- End-of-unit or chapter tests
- End-of-term or semester tests
- Standardized tests that are used for the purposes of school accountability, college admissions, or end-of-course evaluation.

- Culminating demonstration of learning or other forms of 'performance assessment', such as portfolios of student work that are collected over time and evaluated by teachers or capstone projects that students work on over extended periods of time and that they present and defend at the conclusion of a school year or their high school education.

**Formative assessment** is generally carried out before (= diagnostic) or throughout a course or project. Formative assessment, also referred to as educative assessment, is used to aid learning. In an educational setting, formative assessment might be a teacher (or peer) or the learner, providing feedback on learner's work, and is not necessarily used for grading purposes. Formative assessments are a diagnostic and give learners feedback on how well they understand the information and on what they need to improve, while helping educators to better design instruction.

Assessment becomes even more relevant when students become involved in their own assessment. Students who take an active role in developing the scoring criteria, self-evaluation, and goal setting are able to accept that the assessment adequately measures their learning.

### Characteristics of formative assessment

- Setting targets (when possible with learners) that are really understood and are accompanied by appropriate guidance.
- Tasks are required for further learning.
- Feedback specifies improvement needs and provides advice for further (immediate) action via formative dialogue.
- Self-assessment on how well criteria for the lesson have been met and where they could be improved.

### Different strategies of formative assessment:

- Gauging student needs, such as examining student work, brainstorming, etc.
- Encouraging self-direction, such as self-assessment, peer feedback, and cooperative grouping.
- Monitoring progress, such as informal observations, anecdotal notes, and learning logs.
- Checking for understanding, such as journals, interviews and informal questioning.

Summative and formative assessments are often referred to in a learning context as the assessment **OF** learning and assessment **FOR** learning respectively.

Assessment of learning is generally summative in nature and intended to measure learning outcomes and report those outcomes to students, parents and administrators. It generally occurs at the conclusion of a class, course, semester or school year. Assessment for learning is generally formative in nature and is used by teachers to consider approaches to teaching and the next steps for individual learners and the class.

### **NORM-REFERENCED AND CRITERION-REFERENCED ASSESSMENT**

**Norm-referenced assessment** makes judgments on how well the individual did in relation to others who took the test. It is often used in conjunction with the curve of 'normal distribution', which assumes that a few will do exceptionally well, a few will do badly and the majority will peak in the middle, normally judged as average.

The IQ test is the best-known example of norm-referenced assessment. Norm-referenced assessment can put a certain strain on the relationships between learners. How can learners learn to cooperate in a professional context when the hidden message of the curriculum is to mistrust their fellow learners? This type of assessment often involves multiple-choice and short-answer questions. It is difficult to assess some kinds of competencies, such as analysing and interpreting information to present a reasonable explanation of the causes of a war, to conduct and report on a science experiment, to do an art project; a research paper; or to engage in serious discussion.

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The IQ test is the best-known example of norm-referenced assessment.

Many entrance tests to prestigious schools or universities are norm-referenced, permitting a fixed proportion of students to pass. 'Passing' in this context means being accepted into the school or university rather than having an explicit level of ability. This means that standards may vary from year to year, depending on the quality of the students that year.

In contrast, criterion-referenced assessment does not vary from year to year (unless the criteria changes).

**Criterion-referenced assessment**

Students are measured against identified standards or criteria of achievement rather than being ranked against each other. When assessment is carried out this way, the quality of achievement is not dependent on how well others in the year have performed, but on how well the individual student performed as measured against specific criteria and standards. It is often, but not always, used to establish a person's competence (whether he or she can do something).

**Example of criterion-referenced assessment in Business, Technical and Vocational Education and Training(BTVET)**

- Tasks based competencies with a focus on 'outcomes': the assessment must allow for clear demonstration of outcomes of learner's performance.

This is best done under conditions as close as possible to real-life conditions. Evidence must be collected to show that a candidate has met every single performance criterion.

- A collection of evidence to demonstrate that a learner can perform or behave according to specific standards.

- Workplace Performance is arguably the best method to collect reliable and authentic evidence of a learner's actual competencies. This is because the assessment context is set under actual work conditions that require demonstration of actual occupational competencies and maximizes the degree of realism in the assessment process.

**FORMAL AND INFORMAL ASSESSMENTS**

Formal assessments are planned, systematic attempts by the teacher to ascertain what students have learned.

Typically, formal assessments are used in combination with goals and objectives set forth at the beginning of a lesson or the school year. Formal assessments are also different from informal assessments in that students can prepare ahead of time for them.

All formal assessments have standardised methods of administering the tests. They also have a formal method of grading as well as interpreting those grades thereby allowing the teacher to assess the performance or the level of skill of a learner quite concisely.

**Performance assessment** is a form of formal assessment that focuses on demonstration. For example, giving oral presentations, completing physical assessments in physical education (PE) classes, performing experiments in a lab, or dissecting activities in anatomy classes fall under this category.

The performance of students on formal assessment enables teachers to know instantly where the learners stand in comparison to each other and also in relation to the instructions given by them. Assessment tools help in motivating the learners to get higher scores in order to be rewarded for their performance, while such rewards encourage them to improve in the future.

**Informal assessment** does not contribute to a student's final grade and occurs in a more casual manner. These are assessments that result from teachers' spontaneous day-to-day observations of how students behave and perform in class.

When teachers conduct informal assessments, they don't necessarily have a specific agenda in mind, but are more likely to learn different things about students as they proceed through the school day naturally.

These types of assessments offer important insight into a student's misconceptions and abilities (or inabilities) that might not be represented accurately through other formal assessments. These assessment tools can judge and evaluate students' performance and skill levels without making use of standardised tests and scoring patterns. There are no standardised tools to measure or evaluate the performances in these assessment tools. The best examples of informal assessments are projects, experiments and presentations given by learners in classrooms and other platforms.

Informal assessment may include observation, inventories, checklists, rating scales, rubrics, performance and portfolio assessments, participation, peer and self-evaluation, and discussion. Informal assessment can include special activities such as group or individual projects, experiments, oral presentations, demonstrations, or performances.

Some informal assessments may be drawn from typical classroom activities such as assignments, journals, essays, reports, literature discussion groups, or reading logs.

Other times, it will be difficult to show learner progress using actual work, so educators will need to keep notes or checklists to record their observations from student-teacher conferences or informal classroom interactions. Sometimes informal assessment is as simple as stopping during instruction to observe or to discuss with the learners how learning is progressing. Any of these types of assessment can be made more formal by specifying guidelines for what and how to do them, or they can be quite informal, letting students and teachers adjust to individual needs. In some situations, the teacher will want all learners to complete the same assessments; in others, assessments will be tailored to individual needs. All present good assessment opportunities.

## **OBJECTIVE AND SUBJECTIVE ASSESSMENTS**

**Objective** assessment relies on grades describing learners' work or performance. This is a form of questioning which has mostly a single correct answer. There are various types of objective questions, such as true/false answers, multiple-choice and matching questions. Objective assessment is well suited to the increasingly popular computerised or online assessment format.

**Subjective** assessment draws upon the instructor's professionally developed awareness of quality in academic or other work. This may be essential for assessing with validity, because some outcomes require sensitivity to context and thus cannot be assessed in a fixed way across contexts. This is a form of questioning which may have more than one correct answer (or more than one way of expressing the correct answer). Subjective questions include extended-response questions and essays. Objective assessment has the virtue of being reliable and the reputation of being fair, while subjective assessment is often assumed to be unstable or biased.

Hence, instructors often prefer to rely on objective assessment as a basis for grading. However some criteria of achievement, such as complex thinking and contextually-sensitive performance, cannot really be measured with validity by objective ratings; valid assessment of such qualities requires the developed subjective awareness of an experienced professional. The challenge is to give subjective assessments more reliability.

Some have argued that the distinction between objective and subjective assessments is neither useful nor accurate because, in reality, there is no such thing as "objective" assessment. In fact, all assessments are created with inherent biases built into decisions about relevant subject matter and content, as well as cultural (class, ethnic, and gender) biases.

## Questions

**01** The following attributes describe either 'problem-based' or 'project-based' learning.

- Involves real-world, fully authentic tasks and settings
- Is usually a short-term assignment
- Often multi-subject
- The outcome may be a solution expressed in writing or in a presentation
- More often single-subject, but can be multi subject
- Often uses case-studies or fictitious scenarios as 'ill-structured' problems
- Is usually lengthy (weeks or months)
- The outcome may be a product or a performance

Can you find which attribute corresponds to which method?

**02** In a music class, groups of learners could rotate between the following learning stations:

	Examples of learning stations	Examples of resources
Station 1	Listen to a piece of music; identify the instruments	music recorder
Station 2	Describe and draw the instruments	stationery
Station 3	Note and comment the lyrics	stationery
Station 4	Research the biography of the author	Internet or library
Station 5	Research the period when the music was developed	Internet or library
Station 6	Prepare a presentation of the findings	Computer, beamer, flipcharts

Which kind of learning stations could you use for the topic you are currently teaching?

**03** A learning contract is an agreement established between a student and a teacher. The contract defines concrete objectives for the student to reach.

It specifies the goals, the obligations of each party, the time frame for completion and the criteria that will be used to assess progress and completion.

- Why is it important for both the teacher and the student to agree on the terms of the contract?
- How are learning contracts contributing to students learning to learn?

# 03

## TECHNIQUES

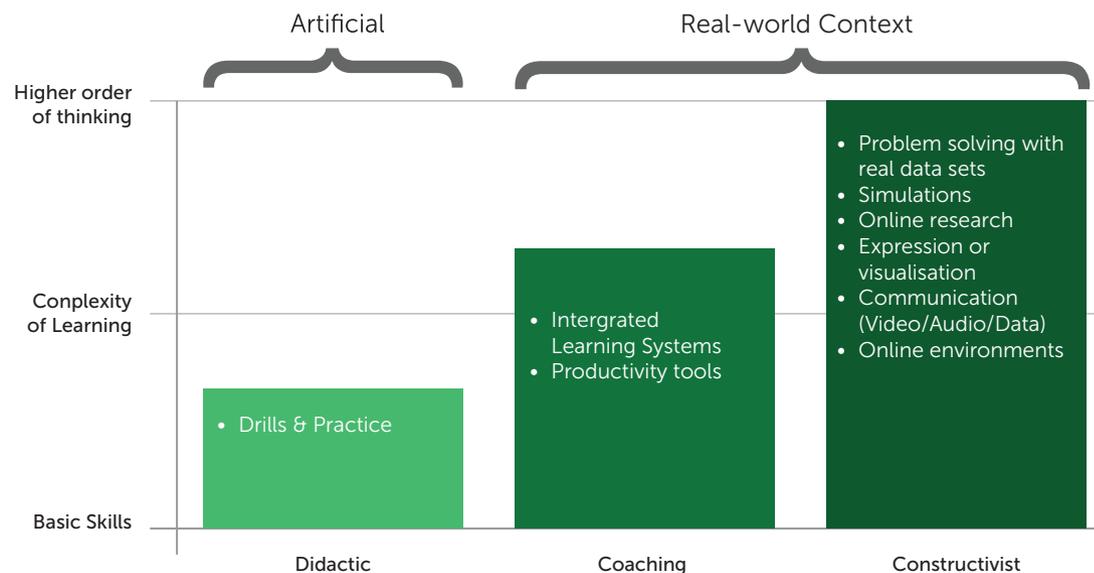
The objective of using different techniques is to engage tutors, instructors and teachers in the use and development of teaching and learning resources and in sharing these resources, not only with their colleagues, but also with their learners. Different techniques have different potentials to enhance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

### Introduction

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.

This graph puts different teaching and learning techniques and tools in a continuum representing the relation between the complexity of learning and the instructional approach to learning.

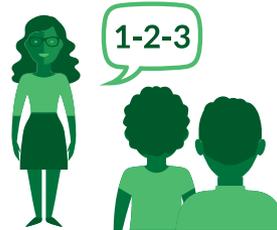
### Instructional approach to learning





## Instruction

This is 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.



### 01. Drill

**A drill** is a classroom technique to aid memorisation by way of spaced repetition. To enable knowledge retention and to support active participation of learners by question and answer, these kinds of practice and drill exercises can complement deep learning and understanding. Practice and drill in general promote the acquisition of knowledge or skills through repetitive practice. Even though there is some controversy on the educational purposes of practice and drill, it can be very powerful. In a classroom setting these kinds of exercises provide more time on task than a group lesson can. Apart from making memorisation more enjoyable, some practice and drill exercises can provide the learner with individualised practice. In some technology enhanced practice and drill exercises, learners can set their own pace and their answers and feedback received are private. Drill exercises can familiarise the learners with new concepts.



## 02. 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.



## 03. Storytelling

People like hearing stories, putting themselves in place of the characters and tell and re-tell stories. Stories are helpful in providing a clear understanding of abstract ideas such as honour, wisdom and courage. In cultures without written language, storytelling used to be the only way to convey society's culture, values and history. Stories can be used as instructional tools in form of parables, legends, fables, myths and real life experiences in an attempt to convey important information to the learners.

As every picture tells a story and as one image can tell more than thousand words, photo storytelling can give more body to a story. A photo story is a story made up by images, accompanied with written text, voice, motions, transitions and music, resulting in a rich product that can be used to express, share, describe and present a story.

After identifying ideas, a good photo story has a scenario guiding which images, photos, voice and music will be collected. The quality of a photo story depends in the first place on the quality of ideas and the message of the story rather than on technical aspects of the multimedia product:

- Identify ideas
- Design scenario
- Collect data  
(images, photos, narrative voice, music)
- Develop the photo story
- Share, present, publish the photo story

### **Educational purpose**

Storytelling can be used to present or demonstrate processes, to introduce ideas, to challenge learners, or to explain and illustrate abstract concepts. It promotes creativity and critical thinking.

**Benefits**

- Promotes confidence, fluency in speech, listening, reading and writing skills among learners
- Stimulates learners' critical and independent thinking, logical reasoning
- Develops the imaginative skills of the learners and increases their capacity for inquiry
- Boosts the teacher-learner relationship and makes the instructional process lively and interesting
- Improves learners' communication skills both verbally and non-verbally
- Makes learning real by helping learners to understand abstract concepts
- Provides learners with opportunities to transfer learning
- Increases deeper understanding of concepts and retention of information because stories aid memory to capture the attention and interest of the learners during the instructional process
- Promotes a significant reading culture

**Challenges**

- It may be challenging to identify relevant stories to use during particular lessons
- If storytelling is not well employed, it may turn into mere entertainment, thereby wasting learners' time
- Some learners need to open up to share stories and to participate in shared writing activities

**The Art of storytelling**

- The story selected should be relevant to the concepts to be learnt
- Thorough preparation of the lesson is very important to ensure that the selected story fits naturally with the prepared content
- There is need to be dramatic and apply appropriate gestures, facial expressions, posture, movement, tone of voice and pace
- Change your voice to represent the voice of the character(s) in the story
- Make the story relatively short by leaving out unnecessary details and unimportant comments

- Avoid mannerisms such as tossing a piece of chalk as you tell the story because it may distract the listeners
- Design relevant questions about the story so as to check on the level of learners' comprehension about the story
- Provide a conducive platform to help learners relate and link the experiences in the story with what they are learning



## 04. Presentation

Presentation is a technique in which content is delivered through oral, visual and audio-visual channels that allow for teacher-learner interaction. Presentations can be done by teachers or learners to support delivery of a specific message, actively involving learners in knowledge construction.

There are oral, audio and visual presentation and demonstration tools that can support the speaker as well as the participants with visual information which complements the talk. Flipcharts and manila paper can be used during a presentation at any time, as they do not require electricity. Presentation is amongst the most common and popular technologically-enhanced instructional designs. Presentation software and online tools can support direct instruction and teaching methodologies.

Teachers use presentation software to create visually oriented presentations that can be displayed using a projector.

Most presentations are presented in a linear way to the learner. A good presentation takes the learner by the hand to go through an amount of knowledge and to construct knowledge in an interactive process between the presenter and the audience.

The learners can also design and give presentations themselves. This can be done individually or in groups (group work).

Teacher and learners assess the level of achievement. The teachers gives feedback to the learners on the skills applied. Teacher and learners link the skill to future skills.

### Benefits

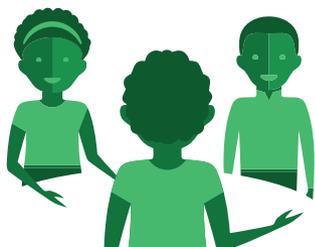
- Enables teacher and learners to prepare, develop and assess the session together
- Teacher supports, supervises, works with learners (in groups or individuals) to practice skill(s)
- Supports development of orderliness in learners as they follow instructions while highlighting critical steps
- Develops learners' competencies and confidence building, and gives them hands-on experience
- Links theory and practice, helps learners to develop observational and manipulative skills, accuracy and precision.
- Develops learners' oral, visual, hearing and tactic senses during the learning process, and reinforce their memory retention
- Familiarises learners with the instruction contents, materials and resources

**Challenges**

- Requires time to prepare meaningful presentations
- Requires appropriate instructional materials and resources
- Has the risk to slide into teacher-centeredness: the use of presentation software can result in information overload, leading to tiring and time consuming lesson activities. Learners can become passive during the presentation
- The visual aspects of the presentation may become more important than the content or the learning activities as some teachers pay more attention to the look of the presentation rather than to its contents or to the active involvement of all learners

**Tips**

- Plan for presentations and the resources needed ahead of time
- Study the curriculum with learners, and seek for their skills/educational expectations to ensure relevance of presentations to learners' educational needs
- Consider distributing hand-outs to help learners to follow the presentation.
- Allow time for reflection and consider using pause points which enable learners to review, take their time to absorb information and to self-assess their understanding.
- To increase the efficiency of a presentation and avoid passive learning allow time for interaction during the presentation.



## 05. Groupwork

Groupwork is a technique in which all participants are collectively involved in a shared process of constructing knowledge and applying skills. It is a collaborative and participatory learner-centred approach. It stimulates in-depth learners' knowledge and 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, the size of the class and available space. Groupwork motivates learners to think creatively and teaches them how to discuss and reach consensus.

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.

In addition, group work provides an opportunity for learners to obtain a deeper understanding of the material, and improve their motivation to understand both the learning goals and the learning processes. By encouraging interaction and discussion among peers, learners improve their thinking skills.

Each group selects a leader, a secretary a time keeper. During the activity, the group will discuss a problem. The analysis requires discussion and agreement on the working definition of, and possible solution for the problem.

### Process

- Organise same size groups taking into account gender balance, topics of interest, learners' abilities, etc.
- Establish ground rules: for participation and evaluation and monitoring of group progress. Assessment criteria must be clear and directly related to the assignment and the process. Consider whether learners will receive individual or group grades.
- Monitor and supervise: the teacher establishes ground rules, facilitates, guides, explains and suggests strategies. The teacher also encourages performance and conflict resolution.
- Share group work results: the learners present their group work and receive feedback.
- Assess and consolidate the learning outcomes. Allow learners to assess their own performance and that of the group members.

**Benefits**

- Group work helps learners develop collaboration skills, allowing them to tackle more complex problems than they could on their own. It enables delegation of roles and responsibilities, sharing of diverse perspectives, reaching consensus, holding one another accountable, establishing a shared identity with other group members and developing their own voice and perspectives in relation to peers.
- Depending on the purpose and nature of the activity, group work can also help to develop transferable skills, such as study skills, communication skills, critical thinking, teamwork and problem solving skills.
- The learning is self-directed by learners.

**Challenges**

- Group work can be time-consuming as it relies on the learners' preparation and willingness to participate.
- It can lead to a dominant few controlling the floor, disintegration into off-task activities or social conversations, or frustration of participants when there are significantly different levels of knowledge and skills.

**Tips**

- Guide learners to integrate the course material with their real life experiences.
- Set clear activities and agree on ground-rules for group work
- Use small group sessions to build flexibility into the overall course (e.g. give learners choices of topics and formats) and use more experienced learners to explain some concepts.
- Understand expected learner behaviour: as learners share ideas, conflicts may arise. Some conflict is desirable allowing learners to disagree and argue about ideas, to learn how to reach consensus. Try to get the group to resolve the conflict before intervening.
- Group leadership is important for effectiveness of the group. However, ensure shyer learners are not overpowered by dominant ones. Give the dominant learners instructions to explain and include slower learners.
- The teacher plays the role of guide, mentor, coach or facilitator.
- Time management in task execution is important.



## 06. Shared Writing

Stories and other texts such as guidelines, instructions, pamphlets, concept notes etc. can be developed through a process of shared writing. Shared writing is a process where participants develop ideas and write together. The focus is on the process of composing text, sharing thoughts and ideas. The final outcome goes beyond a text written by an individual. This technique enables teachers to make the writing process concrete and visible to learners.

### **Educational purpose**

Shared writing can be used to analyse processes, as it enables learners to break down processes in logical steps. Shared writing is at the same time a tool to synthesise, enabling learners to present and demonstrate abstract concepts.

### **Process**

#### **01 Demonstration**

The teacher shows the learners how to write a particular text using a specific style, giving a commentary on what is being done during the demonstration and giving reasons for whatever is being done.

Practice/rehearse every sentence orally before writing, discuss with the learners about the choice of vocabulary, words' order etc. with an emphasis that composition requires reflection.

Draw the attention of learners to the features of punctuation and how they affect any text as you write the sentence. Read out loud the written sentence to check how it flows and correct any errors.

#### **02 Scribing**

It is important to involve learners in the process of word choice and composition. Rehearse the re-writing and re-reading activities. Also scribe the learners' suggestions and share the running commentary with them.

#### **03 Supported writing**

Learners are put in pairs. Distribute manila cards and markers. Give instructions for a sentence to be written. In pairs, learners rehearse the re-writing and re-reading exercises, then hold up the manila for everybody to see. Then decide how much more shared work is still necessary for learners in that particular lesson. Once learners have been provided with enough skills through the shared writing lesson, they can move to independent writing exercises.



## 07. Simulation

**Simulation** is the creation of a realistic environment using a real life situations or occupational experiences. It is the presentation of a problem, event, situation or object as it appears in real life. Simulation can take many forms including role-play, models and games. It involves learners acting out a situation as it happens in reality. The learners will be able to express their feelings, perceptions, actions and experiences in the learning process.

### Educational purpose

- It allows for the analysis of complex phenomena, objects and events.
- Through interacting with a simulation, by changing inputs and customising, learners can observe different regimes of one phenomenon in order to draw a conclusion.
- Identify problems and solutions.
- By manipulating different factors of a system, learners can get insight in the system and identify or forecast problems and provide possible solutions.
- Explain complex processes: teachers can use simulations to illustrate how things work, for learners to get a better insight and understanding.
- Consolidate: after knowledge input, simulations can be used to apply and consolidate theory.

### Benefits

- A simulation is a powerful and important technique because it provides a way in which alternative designs can be evaluated without having to experiment on a real system, which may be costly, time-consuming or simply impractical to do.
- Enhances motivation, interest and the learner's active engagement which promotes deep learning.
- Improves transfer of learning to other real life situations.
- Promotes development of communication and social skills

### Challenges

- Simulations can be costly in terms of required materials for the activities and logistics.
- If the actual real situation is not well portrayed, then simulation may not achieve the intended learning outcomes

### Tips

- Always make the simulation as near as possible to the real life situation for example if you are teaching road transport, use models of buses, taxis etc.
- Ensure that the instructions are clear



## 08. 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.

Every learner should feel free to say whatever comes to mind, any ideas or comments, no matter how unsophisticated or inappropriate without being criticised.

While speaking up, learners develop the ability to openly and constructively express their opinions and ideas about the problem case study.

### Educational purpose

Brainstorming can be used at various stages of a lesson to stimulate learners' individual thought as well as promote interpersonal skills. It also enhances peer support and fosters learner-centred practices that can promote quality teaching and learning. The technique is often used to start a lesson, but also as a consolidation exercise.

### Process

The starting point of every type of brainstorming session is a good question that evokes multiple responses or ideas, that is not limiting and that challenges learners to think creatively.

### Examples

#### 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, freely associated to the one already on the paper.
- The last two steps are repeated until the learners get back the original sheet of paper.
- The best ideas are highlighted.
- Highlighting is repeated until you get back the original sheet of paper.
- Select the best idea.

### Falling leaves

- Each participant notes ideas on a flash card and drops them on the floor.
- Each participant looks at the idea on the floor and will not drop the same idea.
- After a set time, or when there are no more ideas, the session is stopped.
- Related ideas are clustered and appropriate heading provided.

**Think, pair, share**

- Let each learner think through the task and develop a solution or idea without referring to another colleague/learner.
- Organise the class into pairs and let them share their ideas in the pairs and come up with an agreed or consensus solution for the task.
- Organise couples to pair up (make a group of four) and share their ideas and consequently also come up with consensus points on the task.
- In plenary, let each group of four present one idea to the whole class, until all groups are done.
- Give guidance to the whole class (corrections, clarifications) in relation to the ideas being discussed and the set objectives.
- Wrap up the presentation to consolidate learning.

**Benefits**

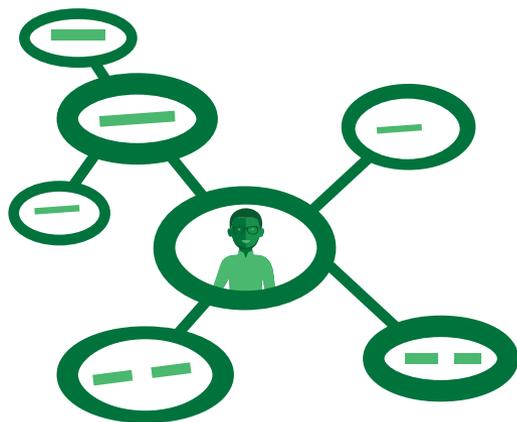
- Promotes participation by all learners, leading to better understanding and retention of material.
- Increases learners' enthusiasm for self-directed learning.
- Improves both the quantity and quality of learners' responses.
- Gives the teacher the opportunity to observe and supervise all the learners as they interact.
- Develops useful interpersonal skills such as communication, leadership, tolerance, respect for peers and other people's views, sharing of experiences, creativity, curiosity and confidence among others.
- Helps learners to master concepts and apply them to situations calling for complex application of independent and critical thinking skills.

**Challenges**

- Requires a high level of individual accountability of group members.
- If not properly supervised, it can disadvantage the introverts and learners with special educational needs
- Requires a high level of class control and organisation to avoid rowdiness.
- Can be time consuming and may not be suitable for large classes

**Tips**

- Evaluation and criticism during the activity is not allowed.
- Quantity is more important than quality.
- Unusual ideas are highly welcomed.
- Hitch hike on the ideas of others.
- Brainstorming requires a facilitator, brainstorming space and something on which to write, share and present ideas.



### Structuring brainstorming with mind mapping

A mind map is a diagram used to visually organise information. A mind map is often created around a single concept, drawn as an image in the centre of a blank landscape page, to which associated representations of ideas such as images, words and parts of words are added. Major ideas are connected directly to the central concept, and other ideas branch out from those. A mind map is often created through brainstorming activities and in interaction between a facilitator and a learner.

This is a tool with a visual form that offers an overview of a topic and its complex information, allowing learners to comprehend, create new ideas and build connections.

- Write the topic or question in the centre and circle it.
- Use a central concept or image (the image should depict the general theme of the map).
- Branch off the main ideas (key words) from the central image. Further ideas can be branched off from those key words
- Use one key word or symbol per line or branch.
- Colours can be used to depict themes and associations (note that anything that stands out on the page will stand out in your mind).
- Use arrows when you want to make connections within and across the branch pattern.
- Don't get stuck in one area - if you get stuck go to another
- Be creative and have fun

Self- and peer-assessment are processes where learners assess themselves or each other, by marking assignments or tests based on benchmarks. The practice can be employed to save teachers time. Moreover, these techniques improve learners' understanding of course materials as well as their metacognitive skills. Rubrics are often used in conjunction with self- and peer-assessment.

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## 09. Self-assessment

Students become better learners when they engage in deliberate thought about what they are learning and how they are learning it. In this kind of reflection, learners take a step back from the learning process to think about their learning strategies and their progress as learners. Such self-assessment encourages learners to become independent learners and can increase their motivation.

Goal setting is essential because learners can evaluate their progress more clearly when they have targets against which to measure their performance. In addition, learners' motivation to learn increases when they have self-defined, and therefore relevant, learning goals. To help learners develop realistic, short-term, attainable goals, instructors can use a framework like SMART goals.

**S** Specific  
**M** Measurable  
**A** Achievable  
**R** Realistic  
**T** Timely

Learners can share their self-assessment with a peer or in a small group, and compare their impressions with the initial instructions and other criteria such as test scores, teacher evaluations, and peers' opinions. This helps learners to be aware of their learning. It also informs the teacher about learners' thoughts on their progress, and gives the teacher feedback about the course content and the instruction efficiency.

Self-assessment provides teacher and learners with opportunities to reflect on their teaching and learning practices. It promotes lifelong learning by helping learners to evaluate their own achievements realistically and not to rely only on their teacher's assessment.

Self-assessment is very helpful in aiding learners to critique their own work and form judgments about their own strengths and weaknesses. Self-reflection and self-assessment are often used as a part of formative assessment, instead of summative assessments that requires certification by others.

Self-assessment is different from self-grading. Self-grading is giving marks by using criteria stipulated by others while self-assessment is a reflective process and also a reflection on the selection of criteria.

There is some evidence that weak learners tend to mark themselves up under systems of self-assessment. However, the ultimate responsibility always remains with the teacher, who moderates and has veto power if learners fail to provide sufficient evidence to support the grade they have awarded themselves. Also in practice, self-assessment may be accompanied by a form of peer assessment which is also likely to have a moderating influence on self-assessed marks.



## 10. Peer-assessment

One way for learners to internalise the characteristics of quality work is by evaluating the work of their peers. Peer-assessment is when learners themselves assess the work done by other learners. To do this, they must have a clear understanding of what they are looking for in their peers' work.

One way to make sure learners understand this type of assessment is to give them a practice session. The teacher provides a sample assignment. Then, as a group, the learners determine what should be assessed and which criteria should be used. Then the instructor distributes a sample of a completed assignment. Learners assess the work using the criteria they have developed, and determine how to convey feedback clearly to the fictitious person who completed the assignment.

Learners can also benefit from using rubrics or checklists to guide their assessments. At first these can be provided by the instructor; once the learners have more experience, they can develop them themselves.

The checklist asks the peer evaluator to comment primarily on the content and organisation of the essay. It helps the peer evaluator focus on these areas by asking questions about specific points, such as the presence of examples to support the ideas discussed.

For peer evaluation to work effectively, the learning environment in the classroom must be supportive. Learners must feel comfortable and trust one another in order to provide honest and constructive feedback. Teachers who use peer-assessment can help learners develop trust by forming them into small groups early in the semester and having them work in the same groups throughout the term. This allows them to become more comfortable with each other and to better peer feedback.



## 11. Classroom assessment

Very often, learning is not assessed until the end of a lesson unit. These forms of summative assessments (i.e. end of unit exams, standardised tests and final exams) are important and necessary. However, they should not be given until the teacher is assured of each learner's grasp of the subject matter. It is the teacher's responsibility to determine if individual learners have achieved the success criteria during the course of the lesson unit.

When individual learning needs are not met during the lesson unit, the learners' ability to perform well on a summative assessment is compromised. Formative classroom assessments are essential to ensure an equal opportunity to learn in a classroom set up, and to cater to the diverse learning groups present.

They are generally simple, non graded, integrated in-class activities, designed to give teacher and learners' useful feedback on the teaching and learning process as it is happening.

### Educational purposes

Classroom assessment helps teachers assess the level and pace of learning, asking three questions:

- What are the essential skills, knowledge and attitudes I am trying to teach?
- How can I find out whether learners are learning them?
- How can I help my learners learn better?

### Effective strategies for day-to-day assessment during the lesson:

#### Questioning

- Ask questions to assess learners' starting points
- Adapt learning and teaching activities to meet learners' needs.

#### Observing

- Watch and listen to learners' discussions
- Make planned observations of particular learners to develop a deeper understanding of their learning needs

#### Discussing

- Hold discussions with learners to assess understanding, to diagnose the reasons for any misunderstandings or misconceptions and to resolve difficulties within the lesson.
- Hold informed discussions to follow up earlier assessment and diagnosis, and to discuss targets and progress

#### Analysing

- Mark and assess written work with learners to identify common errors or misconceptions, and to guide learners on how they can improve and progress.
- Discuss with the learners their responses to the tasks to identify and correct errors and misconceptions, to assess their achievement against the learning objectives, to monitor their progress and to share with them how they can improve and what they need to do next.

**Checking learners' understanding**

- Conduct recall tests with planned or spontaneous questions to immediately assess with the learner their knowledge and speed of recall, involving, for example, addition, multiplication or spelling.
- Introduce brief review checks that draw upon what has been taught previously for learners and teachers to identify what might need revision, and to guide the lesson and future planning.

**Engaging learners in reviewing progress**

- Develop supported self- and peer-assessment, in which pairs or small groups of learners determine what they know and can do, what they still find challenging and the next steps for them.
- Develop independent self- and peer-assessment, in which learners identify their own achievements and progress and think about what they need to do to improve

**Benefits**

- Provides opportunities to check learners' learning on a daily basis
- Allow teacher and learners to determine the skills needed to achieve learning
- Creates opportunities for the teacher to adapt teaching to ensure success in achieving lesson objectives and targets
- Provides just-in-time feedback about the teaching and learning process;
- Requires less work to gather information about learning than traditional assignments (tests, papers, etc.)
- Encourages the understanding that teaching is an ongoing process of inquiry, experimentation and reflection
- Helps learners become better monitors of their own learning
- Helps learners to feel less anonymous, even in large courses
- Provides concrete evidence that the teacher cares about learning

**Challenges**

- Teachers complain they may not finish the syllabi if they sacrifice time to assess during the lessons
- Lack of training on how to use this formative classroom assessment successfully. Formative assessment is usually given low or no point value compared to a summative assessment, and learners may not take it seriously.

## Questions

- 01** Roleplay brings together a range of different skills. Learners need to design and structure a play, to impersonate characters, to communicate a clear message in their drama, etc. As a teacher: Which assessment technique would you use to ensure you capture all these elements?
- 02** In your own words, how would you explain the difference between a technique and a tool to:
- A junior teacher?
  - Your students?
  - The person in charge of teaching resources in your College?

# 04

# TOOLS

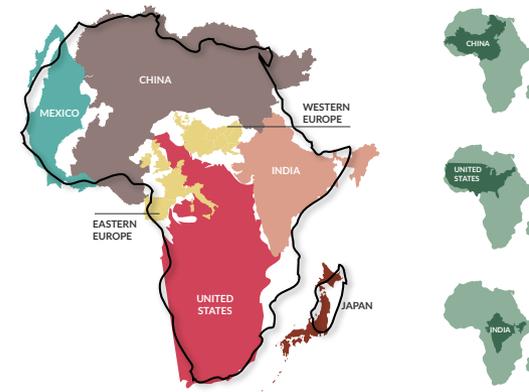
Tools should inspire teachers to reflect on teaching methodologies and learners' learning. Tools will not automatically change the teaching practice and the learning activity as it all depends on how teachers and learners use them. All tools have the potential to innovate and transform teaching and learning 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.

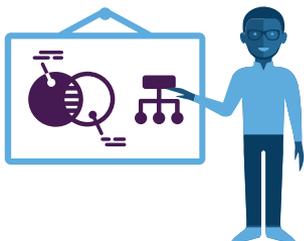


## 01. Charts & Maps

**Charts** are a graphical representation of data, represented by symbols such as bars, lines or slices. Charts are often used to ease understanding of data and the relationships between parts of the data. They are used in a wide variety of fields, and can be created by hand or by computer using a charting application. Four of the most common charts are histograms, pie charts, bar charts and line charts. A chart can be used to illustrate complex theoretical concepts or data. It can be included in a presentation or used as a reflection tool.

**Maps** are 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. It can be static (road map) or animated (weather forecast) before or after a demonstration or a simulation.





## 02. Diagrams

Diagrams are a two or three dimensional symbolic representation of information.

A popular diagram is the Venn diagram that shows all possible logical relations between a finite collection of sets and to illustrate simple set relationships.

**Venn diagram:**



## 03. 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.



## 04. 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.



## 05. Images

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

A digital photo story combines different media and combines images with written text, voice, motions, transitions and music. It results in a rich product that can be used to express, share, describe, present and tell a story.

Due to the availability of cheaper digital photo and video cameras, the amount of images has exploded and users have become producers of images and video. The growth of editing tools, and online photo and video sites has greatly improved the opportunity for the creation, distribution and education of potential learners.

### Educational purpose

- 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.
- The use of images in teaching and learning has benefits to support comprehension, retention, and application. It stimulates spatial intelligence and increases learners' motivation.
- With digital photo and video editing tools, both teachers and learners can easily produce their own photos or videos.
- Photo processing tools can be used to report on a trip, a visit or a meeting, to describe a phenomenon, a person or an event.
- Teachers can also engage learners in a visual story and encourage learners to solve presented problems.



## 06. Videos

Video is the recording, reproducing or broadcasting of 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 rewound at any time, teachers and learners can control the speed (e.g. slow motion) or repeat particular fragments as needed to provoke discussion and reflection.

With their smartphone or with a cheap video recorder, videos can be produced by teachers and learners to document an experiment, a roleplay, a class trip, etc. As learners are involved in acting or making the video, their motivation to participate, assess, and receive feedback increases.



## 07. Internet & Social media

The Internet is an electronic communications network that connects computer networks around the world.

**Social media** are the collection of online communications channels dedicated to community-based input, interaction, content-sharing and collaboration. Social media depend on mobile and web-based technologies to create highly interactive platforms through which individuals and communities share, co-create, discuss, and modify user-generated content. Some examples are Facebook, Pinterest, YouTube, Instagram, etc.

### Educational purpose

- Internet stimulates learners' engagement, and can facilitate learner-centred pedagogy.
- Social media extend cooperation, sharing, co-creation and discussion beyond the borders of the classroom.
- A tremendous increase in access to cheaper and portable mobile technology gives the Internet the potential to transform teaching and learning through unlimited access to educational resources and tools.
- Similarly, teachers can use the same tools for peer-to-peer collaboration and sharing.

Word processing applications have innovated the possibilities of writing. Word processing software allows users to compose text, cut and paste, highlight, revise (with track changes). Such functions support various teaching and learning activities.

Through internet, several Web2.0 tools can be used for shared writing. Popular ones are blogs, Wikis, Twitter and other online tools.

Blogs are interactive, allowing visitors to leave comments and message each other. In that sense, blogging can be seen as a form of social networking. A typical blog combines text, images, and links to other blogs, web pages, and other media related to its topic.



## 08. 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. In addition, developing one's own experiment material is likely to give more satisfaction than using a purchased set. Using low-cost materials poses fewer problems on costs, maintenance and the supply of spare parts.

### **Educational purpose**

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. Practical activities offer a motivating and engaging encounter with scientific, artistic or social sciences.

Through interacting with an experiment, by changing inputs and customising, learners can observe different aspects of one phenomenon in order to draw a conclusion. By manipulating different elements of a system, learners can get an insight of the system, identify or forecast problems and provide possible solutions. After knowledge input, experiments can be used to apply and consolidate theory.



## 09. Roleplay

### Process

- Warm up or ice breaker, review of previous lesson (depending on the group).
- Preparation and explanation of the activity by the facilitator.
- Create the dramatic situation and allow learners to volunteer.
- Provide different guidelines for the group that will play and those that observe
- Learners emotionally go through their roles as individuals and then run through it as a group.
- Give time to learners to practice the role play while others observe the action.
- Initiate debriefing (start with players followed by observer)
- Use leading questions focusing on issues related to the learning goals.
- Summarise the learning points.
- Reflect on the class feedback and note areas of improvement

### Benefits of roleplay

- Can bring difficult processes or concepts into life.
- Encourages learners to empathise with the position and feelings which are likely to be missed when using other techniques.
- Increases the learners' observation skills and deepens the learning of concepts in an active learning environment.
- Enables learners to place themselves in another person's shoes.
- Provides the opportunity for cognitive and psychomotor learning
- Allows for feedback on performance.
- Much of the learning comes from learners' feedback and perception during the reflection of the role play

### Challenges with roleplay

- It assumes cooperation of the learners for effective execution of activities.
- Participants have to get in a dramatic mood and shy learners may be more reluctant to participate.



## 10. Student Portfolio

A student portfolio is a systematic collection of student work and related material that depicts a learner's activities, accomplishments, and achievements in one or more school subjects. These collections help learners and teachers assess learner growth and development. They are an integrated part of education. It is essential that learners develop a sense of ownership about their portfolios so they can understand where they have made progress and where more work is needed. The main types of student's portfolio are process and product portfolios. A portfolio is also a good basis for teacher-student-parents' conferences.

### Educational purpose

In the quest for quality education, it is not only the methods, techniques and resources of ATL that are put to test, but also the approaches used in competence-based assessment to improve the quality of teaching and learning.

Methods of teaching and assessment keep shifting to suit new pedagogical developments. Portfolios can be used as tools for teaching, learning and assessment.

**Contents of student's portfolios** 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.)

### Process

**Step 1:** The teacher and the learner need to clearly identify the portfolio contents, which are samples of learner work, reflections, teacher observations, and conference records.

**Step 2:** The teacher should develop evaluation procedures for keeping track of the portfolio contents and for grading the portfolio.

### Step 3:

- The teacher needs a plan for holding portfolio conferences.
- These conferences are formal and informal meetings in which learners review their work and discuss their progress.
- These encourage reflective teaching and learning. These conferences are an essential part of the portfolio assessment process.

### Benefits

- Portfolio assessment emphasises what learners can do rather than what they cannot do.
- It emphasises evaluation of learners' progress, processes and performance over time.
- A process portfolio serves the purpose of classroom-level assessment on the part of

both the instructor and the learner.

- Portfolios require a variety of tasks adapted to different purposes and audiences, using different levels of language and different to assess performance.
- Demonstrates reflection about learning, including goal setting and self and peer assessment

#### Tips

- Student portfolios should be attractive and well organised.
- Learners should be encouraged to browse through their portfolios and share them with classmates.
- Portfolios should be of manageable size.
- Criteria for selecting content should be agreed upon by teacher and learner .
- Portfolios should be arranged in a systematic order.

In the teaching and learning process, assessment of learner performance and achievement helps to understand individual learner's progress.



## 11. Progress Assessment Portraits

A progress assesment portrait is developed to get a broad picture of the behaviour, strengths and weaknesses of a learner from the start to the end of a program. Both the learner and the teacher participate in making the portrait.

Portraits can also contain a learner's portfolio containing bio data, progress report, project journal entries, talents' book. They can also contain self-assessments, peer-assessment, and self-reflection.

#### Educational purpose

The purpose of student progress portraits is for learners to assess their values, interests, strengths and weaknesses, skills, and ultimately their identity (personal or professional) in a creative and graphic way.

#### Process

1. Instruct learners to select or create a picture, symbol, or graphic that represents their identity, values, skills, attitudes.
2. Allow time for reflection and discussion on these values, interests, skills and attitudes.

#### Benefits

- Student progress portraits can be used for (mostly self- and peer-) assessment of more complex and difficult to measure aspects of attitudes, values, interests, and identity.
- Student progress portraits can provide rich portraits of an individual's achievements, and progress.

#### Tips

- Create an open, informal, constructive environment, allowing learners to self-express, in an atmosphere where self-expression is appreciated and encouraged.
- Graphic organizers can help visualise the thinking process.



## 12. Assessment Rubrics

A rubric is an assessment tool for communicating expectations of quality. Development and use of rubrics increase reliability in subjective assessment.

### Educational purpose

Rubrics support learner self-reflection and self-assessment as well as communication between teacher and learners. They are a coherent set of criteria for learners' work that include descriptions of levels of performance. By sharing scoring rubrics with learners, they become aware of the expected standards and thus know what counts as quality work.

The set of criteria and standards of a rubric are typically linked to learning objectives that are used to assess or communicate about a product, performance, or process tasks.

Scoring rubrics include one or more dimensions on which performance is rated, definitions and/or examples that illustrate the attribute(s) being measured and a rating scale for each dimension. Dimensions are generally referred to as criteria, the rating scale as levels, and definitions as descriptors.

### Benefits

- The key advantage for teachers is that rubrics force clarification of success in the classroom, establishing clear benchmarks for learners' achievement.
- With rubrics, assessment becomes more objective, consistent and defensible.
- Time spent developing a grading rubric will be made up for in ease and speed in actual grading.

### Process

- Have learners look at models of "good" versus "not-so-good" work. A teacher could provide sample assignments of variable quality for learners to review.
- List the criteria to be used in the rubric and allow discussion of what counts as quality work. Asking for learner feedback during the creation of the list also allows the teacher to globally assess the learners' writing

experiences.

- Articulate gradations of quality. Hierarchical categories should concisely describe the levels of quality (ranging from bad to good). They can be based on the discussion of the good versus not-so-good work samples. Using a conservative number of gradations keeps the rubric user friendly while allowing for fluctuations that exist within the average range.
- Practice on models. Learners can test the rubrics on sample assignments provided by the instructor. This practice can build a learner's confidence by teaching them how the instructor would use the rubric on their papers. It can also facilitate learner/teacher agreement on the reliability of the rubric.
- Ask for self and peer assessment.
- Revise the work based on that feedback. As learners are working on their assignment, they can be stopped occasionally to do a self-assessment and then give and receive evaluations from their peers. Revisions should be based on the feedback they receive.

Use an even number of levels (usually 4 or 6) to distinguish between students who “got it” or “didn’t get it”.

Use an odd number of levels if you want to recognise an average performance.

Criteria should be:

- \* Observable and measurable
- \* Important and essential
- \* Distinct from other criteria
- \* Phrased in precise, unambiguous language

Teachers can cooperate with learners to name each level, e.g.:

- \* Novice / Apprentice / Practitioner / Expert
- \* Beginning / Developing / Accomplished / Exemplary

Rubrics serve a different role in different phases of assessment:

- \* During the pre-assessment phase, rubrics are used to clarify expectations and grading methods with learners. As a result, learners can perform a self-assessment prior to submission of their work
- \* During the assessment phase, rubrics help evaluators to remain focused on the pre- set standards of excellence and objectively assess the learner.
- \* During the post-assessment phase learners are given a scored rubric with a clear explanation of their grade. They are made aware of their weaknesses and strengths.

**Checklist for a good rubric**

<b>Rubric Categories</b>	<b>Do the categories reflect the major learning objectives?</b>
Levels	Are there distinct levels that are assigned names and point values?
Criteria	Are the descriptions clear? Are they on a continuum and allow for learners' growth?
Student-Friendly	Is the language clear and easy for students to understand?
Teacher-Friendly	Is it easy for the teacher to use?
Validity	Can the rubric be used to evaluate the work? Can it be used for assessing needs? Can students easily identify growth areas needed?

**Guide to make a rubric**

<b>Criteria</b>	<b>1</b>	<b>2</b>	<b>3</b>
	<b>Below</b>	<b>Approaching</b>	<b>Meeting</b>
Selection & Clarity of Criteria (rows)	Criteria being assessed are unclear, have significant overlap, or are not derived from appropriate standards for product/task and subject area	Criteria being assessed can be identified, but not all are clearly differentiated or derived from appropriate standards for product/task and subject area	All criteria are clear, distinct, and derived from appropriate standards for product/task and subject area
Distinction between Levels (columns)	Little or no distinction can be made between levels of achievement	Some distinction between levels is clear, but may be too narrow or too big of a jump	Each level is distinct and progresses in a clear and logical order
Quality of Writing	Writing is not understandable to all users of rubric, including learners; it has vague and unclear language which makes it difficult for different users to agree on a score	Writing is mostly understandable to all users of rubric, including learners; some language may cause confusion among different users	Writing is understandable to all users of rubric, including learners; it has clear, specific language that helps different users reliably agree on a score
Involvement of Learners in Rubric Development *	Learners are not involved in development of rubric	Learners discuss the wording and design of the rubric and offer feedback/input	Teachers and learners jointly construct rubric, using exemplars of the product or task
Use of Rubric to Communicate Expectations & Guide Learners	Rubric is not shared with learners	Rubric is shared with learners when the product/task is completed, and used only for evaluation of learner work	Rubric serves as a primary reference point from the beginning of work on the product/task, for discussion and guidance as well as evaluation of learner work

## Questions

- 01** Flashcards are tools that can be used to facilitate several techniques. For example, learners can use colour-coded flashcards to indicate their level of understanding during a drill.
- How would you use flashcards to make a presentation more dynamic?
- 02** Roleplay brings together a range of different skills. Learners need to design and structure a play, to impersonate characters, to communicate a clear message in their drama, etc. As a teacher:
- Which assessment tool would you use to ensure you capture all these elements?



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