Initial Primary Teacher Education

Education foundation studies

Module 2

Malawi Institute of Education

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Prepared and published by

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Foreword

Education is the lifeblood of the nation. It is a prerequisite for individual, community and national development. Education prepares learners to play their roles effectively to promote and sustain a country's socio-economic development. Parents or guardians desire that their children develop into adults with sound minds and healthy bodies through the acquisition of appropriate knowledge, skills and desirable attitudes to enable them to live productive and happy lives.

Education should, therefore, help learners to develop high standards of conduct, attitudes, judgment and a sense of responsibility. Student teachers have to be well prepared in order to be able to take this responsibility of teaching children effectively.

The provision of quality education is based on many factors and a good quality of teachers is one of them. Teachers play a central role because they are the key source of knowledge, responsible for facilitating the learning process and act as role models for the learners.

The function of initial teacher education in Malawi is to prepare student teachers in their aspiration of becoming teachers of high quality. This is achieved by helping the student teachers to acquire the right knowledge, skills and competences to enable them to effectively teach children. In view of this, the Initial Primary Teacher Education curriculum has been reviewed to ensure that student teachers who graduate from this programme are well trained and prepared for their profession.

The process and implementation of this review has been guided by the Teacher Education Philosophy which states as follows:

'To produce a reflective, autonomous, lifelong learning teacher, able to display moral values and embrace learners' diversity.'

It is therefore hoped that Teacher Training Colleges will find this curriculum effective in helping the student teachers to build a solid foundation in their teaching profession.

Executive Director
Malawi Institute of Education

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Contents

Introduction

The purpose of primary teacher education is to produce and continually develop competent and responsive teachers who effectively deliver quality education to all learners under prevailing conditions and demands in primary schools and promote their desire for life-long learning. IPTE endeavors to educate teachers in sufficient numbers, continually develop their professionalism so that they are able to effectively and efficiently deliver quality and relevant education to primary school learners.

National goals for primary teacher education

The national goals of primary teacher education in Malawi are to produce teachers who are:

- academically well-grounded and professionally competent
- flexible and capable of adapting to the changing needs and environment of the Malawian society
- capable of adhering to and maintaining the ethics of the teaching profession imaginative in adapting, creating and utilising locally available resources suitable for the needs of their learners.

Rationale

Foundation studies will equip student teachers with the necessary knowledge, skills and attitudes to carry out their role of facilitating learning of the primary school child. To teach effectively, student teachers must study the origins and development of the primary school curriculum and understand their role in its implementation through appropriate management of the teaching, learning and assessment processes at school level.

Teacher education philosophy

The following has been the guiding principle during the design, development and implementation of the IPTE curriculum.

To produce a reflective, autonomous, lifelong learning teacher, able to display moral values and embrace learners' diversity has been designed.

IPTE programme structure

The duration of the teacher education is two years. The general outlook of the two years is as follows:

Year 1			Year 2		
Term 1	**Term 2**	**Term 3**	**Term 1**	**Term 2**	**Term 3**
In college, learning subject content with a special focus on methods for lower classes	In college, learning subject content with special focus on methods for upper classes	Out in teaching practice schools, practising teaching mainly in the lower classes	Out win teaching practise schools, practising teaching mainly in the upper classes	In college, with special emphasis on reflection, inclusion and further practice on teaching methods	In college, with special emphasis on subject content, policies and frameworks

Unique features

The features of the reviewed curriculum are as follows:

- The curriculum design is based on reflective and practice principles.
- Early grade teaching methodologies are distinct.
- The delivery of the subject content follows the modular approach.
- Student teachers will be allowed to practise teaching both in the lower classes (Standards 1 to 4) as well as in upper classes (Standards 5-8).
- Cross cutting issues such as Assessment for Learning, Information Communication Technology, Inclusive Education and Critical Thinking are integrated.

IPTE subject matrix

The new curriculum has adopted the reflective practitioner model of teacher education which connects practice and theory and integrates content and pedagogy in teaching and learning. In this structure, student-teachers will be in college for two terms of year 1 and be in primary schools for teaching practice in the third term of first year and first term of the second year. Student teachers will be back to colleges in terms 2 and 3 of year 2 to continue learning subject content, reflecting on their experiences of teaching practice and then wind up their studies.

This curriculum is designed in a modular structure and contains eleven subjects. These are Chichewa, English, Mathematics, Education Foundation Studies, Agriculture, Social Studies, Life Skills, Science and Technology, Expressive Arts, Religious Studies and Human Ecology. In this modular design, a set of topics forms a module in a subject. A module consists of 40 hours contact time.

Summary of topics for the term and time allocation

Term 1		
Topic	**Allocated time in hours**	**Core element**

TOPIC 1 Child development and learning in upper primary

Time: 3 hours

Introduction

In term one, you learnt about child development in lower primary, which focused on relating the abilities of learners in lower primary to stages of child development. You also looked at factors that influence child development and the importance of such knowledge to the teacher. In this topic you will analyse the specific characteristics and abilities of learners in upper primary and their implications for teaching, learning and assessment. Specifically, you will also be expected to reflect on your own learning experiences when you were in standards 5 – 8. Lastly, you will discuss the learning needs of learners in upper primary and how you can address them. This knowledge will help you to be an effective teacher when teaching learners in upper primary.

Success criteria

By the end of this topic you will analyse specific characteristics and abilities of standard 5-8 learners and their implications for teaching, learning.

Background information

Human development refers to certain changes that occur in human beings from conception to death. The term applies to changes that appear in orderly ways and remain for a reasonably long period. Human development can be divided into physical, social, emotional and cognitive development. Table 1 shows descriptions the four aspects of human development:

Table 1 Human development aspects

Aspect of Development	Characteristics	Implication on learning
1 Physical development	1 Changes in the body in size, weight, length amd height	When the body grows, different parts grow within it eg limbs, the brain, which is critical in the learning process.
2 Social development	2 Changes in the way an individual relates to others.	Children who go to school already socialised in the lower classes may find school life easier since they will be able to mix with others.
3 Emotional development	3 Changes in individual's personality and emotional understanding.	To ensure successful learning, one needs to master his or her emotions to ensure healthy relationships with peers and teachers, hence successful education.
4 Cognitive development	4 Changes in thinking	4. As learners grow physically, they also grow intellectually, unless there are physical defects at birth, resulting in mental retardation. Good nutrition enhances intellectual growth, hence success at school.
5 Moral development	Changes in ablility to judge right or wrong	As learners grow, they all will be able to treat others fairly as they interact in the process of learning

Most changes during human development refer to growth and maturation. "Maturation refers to changes that occur naturally and spontaneously and that are to a large extent programmed" (Woolfolk, et al., 2009). Growth, on the other hand refers to an increase in size, weight or degree of intellectual capacity.

Some of the principles of human development are that:

Children develop at different rates

This principle implies that teachers should expect diversity among their learners in all areas of development. For example, some learners will understand academic concepts easier than others will due to differences in brain development or social experiences from home or through

peers. When the teacher is aware of diversity, he/she finds ways of managing the class for effective learning. For instance, during group work, learners of different intellectual capacity can be mixed in order to ensure maximum learning.

Child development is relatively orderly

Human beings develop orderly certain capabilities before others, for instance, a child crawls before standing; similarly, at school, addition is learnt before multiplication. The implication is that when a teacher knows the level at which a learner is cognitively, physically, socially developed, it would be easier to plan appropriate activities, resulting in effective teaching and learning.

Child development takes place gradually

This principle alerts teachers to remember that learners have problems in the learning process. It is therefore necessary for teachers to have patience in order to guide them through until they manage to achieve the particular challenge such as failure to read and write.

Characteristics of learners in upper primary

In child development, the cognitive development is important to learning. According to Piaget's theory of cognitive development, the child develops concrete operational element. At this stage, the learner engages in hands on thinking and recognises the logical stability of the physical world. The following are the characteristics of learners in upper primary:

Ability to solve conservation problems

Piaget indicates that learner's ability to solve conservation problems depends on an understanding of basic aspects of reasoning that something stays the same in quantity even though its appearance changes. It is the understanding that redistributing material does not affect its mass, number, volume or length.

The ability to classify things

Piaget indicates that learners at this stage are able to identify the properties of categories, to relate categories or classes to one another and to use the categorical information to solve problems. Learners are able to group objects according to dimensions that they share. They are also able to subgroup hierarchically so that each new grouping will include all previous subgroups

The ability to seriate things

Learners develop the ability to arrange items along quantifiable dimension, such as height or weight. The ability to conserve, classify, and seriating at this stage means that a learner has finally developed a complete and very logical system of thinking. At this stage, learners can imagine different things and

arrangements. However at this stage children are not yet able to reason about hypothetical, abstract problems involving many factors at once. Teaching learners the knowledge of concrete-operational thinking will be helpful to them. In the lower primary, learners move towards concrete-operational stage and later classes they develop concrete operation but not fully.

Task

Task Analysing specific characteristics and abilities of standard 5-8 learners and their implications for teaching and learning

In this task, you will look at characteristics of learners in upper primary and their implication to teaching and learning.

Activity 1 Reflecting on your characteristics of learners in upper primary (10 minutes)

1 Reflect on the characteristics of learners in upper primary in relation to your own school life?
2 Share the reflections with a peer.
3 Discuss the experiences in plenary.

Activity 2 Discussing specific characteristics of learners in upper primary (1hour 50 minutes)

1 Observe a lesson at a nearby school in any upper class
2 Identify the characteristics of the learners
3 Relate the characteristics with those in the concrete operational stage?
4 Share with the others in plenary.

Activity 3 Examining factors that influence child development in upper primary (1 hour)

1 Research on the internet factors that influence child development in upper primary
2 Discuss in plenary

Activity 4 Relating abilities of standard 5-8 learners to stages of child development (40 minutes)

By the time children reach the concrete-operational stage of cognitive development, they have some operations and strategies that they are able to employ. Considering these new skills:

1 Discuss how you might go about teaching a child at this stage:
   - a social studies lesson about the history of Malawi.
   - the importance of the six food groups of nutrition?
2 Share your findings to the whole class in a plenary.

Activity 5 Discussing how teachers can address the needs of learners in upper primary (20 minutes)

1 Identify the learning needs of learners who are in upper primary.
2 Discuss how a teacher can address the learning needs identified.

3 Present your work to the whole class in plenary.

Tips

- Use TALULAR to ensure lesson effectiveness.
- In activity 4 you can also use topics from other learning areas
- Activity 5 requires that you brainstorm the list of special needs learners first, before you find out how teachers assist them.

Summary

This topic has introduced you to an analysis of specific characteristics and abilities of learners in upper primary and their implications for teaching and learning. You reflected on your own learning experiences when you were in standards 5 – 8 and discussed their characteristics. You also related the abilities of lower primary learners to stages of child development. Lastly, you discussed the learning needs of learners in upper primary for example, retarded mental development and early maturity: and how you can address them.

Reflection and assessment

Self-assessment

Describe the characteristics of learner with concrete- operational thinking.

Topic assessment

Relate the principles of human development to the process of learning in upper primary.

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TOPIC 2 Teaching skills for upper primary

Time 3 hours

Introduction

As of now you are familiar with teaching skills for lower primary which you learnt in term one. You have the knowledge on their importance and how to use them in the process of teaching and learning in order to achieve the success criteria. The focus was on the young ones who need time and special way of delivering lessons for them to understand the concepts. In this topic, you will discuss teaching skills focusing on the upper primary. The way you will handle upper primary will be different as you will teach older children and the concepts will be more complex than before. Therefore, you need thorough preparation before starting teaching.

Success criteria

By the end of this topic, you must be able to compare and contrast the use of teaching skills in lower and upper primary.

Background information

Teaching in upper primary requires thorough lesson preparation for it to be effective as activities can be complex and challenging because learners at this stage are more critical. They begin to think logically and solve problems based on concrete situations. Therefore, teaching skills should be of the level of the learners. For example, when using the skill of questioning there is need to use more thought provoking questions in relation to logical thinking which learners in upper primary develop at this stage. This topic will help you to know how to use different teaching skills in the upper primary in relation to leaners' level of cognitive development.

Task

Task Comparing and contrasting the use of teaching skills in lower and upper primary

Teachers use teaching skills differently in lower and upper primary due to learners' differences in their levels of development. In this task you will identify the similarities and differences of the teaching skills used.

Activity 1 Observing a lesson in lower and upper primary focusing on teaching skills (1 hour 50 minutes)

1 Observe lessons at demonstration school or nearby school from

lower and upper primary focusing on teaching skills
2 Compare and contrast the lessons in lower and upper primary focusing on teaching skills.
3 Analyse the results by focusing on the differences. Use the table below to record your analysis of the observation.
4 Share your observations in plenary

Teaching skill	Observation in lower primary	Observation in upper primary
Planning		
Introduction		
Explanation		
Illustration		
Questioning		
Reinforcement		
Variation		
Closure		
Class management		
Chalkboard use		

Activity 2 Analysing implications of each teaching skill for teaching in upper classes (50mins)

1 Analyse implications of using each teaching skill for teaching in upper classes.
2 Share observations in plenary.

Activity 3 Practising the use of teaching skills in upper primary (2 hour)

1 Identify one lesson for any learning area from standard five to standard eight.
2 Practise teaching the lesson focusing on teaching skills in the upper primary.
3 Discuss the observations made on the use of the teaching skills.
4 Analyse implications of each teaching skill for teaching in upper classes.

Tips

- Include learners with diverse needs –in lesson presentations
- These tasks can be done outside normal class time
- Let students teach lessons from different learning areas
- For activity 2 you could use recorded videos of lesson presentation or you can take a class to nearby school

Summary

In conclusion, teaching can be challenging if teachers are not prepared on how to use teaching skills. Learners in upper primary are more critical therefore; you need to show your expertise on how to deliver lessons. Remember that all teaching skills are used in one lesson concurrently. A teacher's action during lesson delivery requires taking into account of changing situations many of which are surprises. Teachers' effectiveness in the classroom depends on how well they modify and adapt their skills in the course of learning and teaching. Teaching skills can be successful if you have the knowledge of the content teaching, learning and

assessment, methods, resources and learners abilities.

Reflection and assessment Self-assessment

Develop a lesson to be taught in upper primary class from any subject focusing on teaching skills and micro-teach the lesson. Ask your colleagues to assess the lesson and provide feedback in terms of successes and challenges.

Topic assessment

Using the knowledge that you gained in micro teaching, compare and contrast the use of teaching skills in lower and upper primary

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TOPIC 3 Teaching and learning methods for upper primary

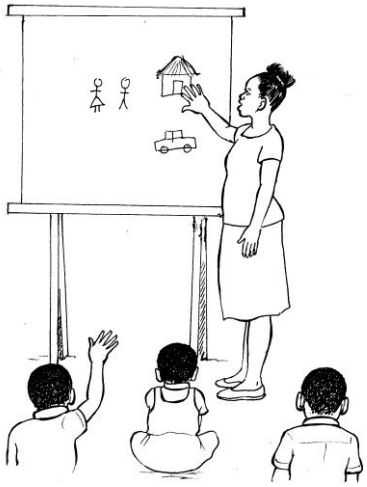
Time 5 hours

Introduction

In term one you learnt about the teaching and learning methods for lower primary. You practised using the methods during micro teaching. In this topic, you will learn about teaching and learning methods which you can use when teaching in upper primary. You will also relate the appropriateness of such methods to your knowledge about child development and learning needs of learners. The knowledge you will gain in this topic will help you to choose appropriate methods to be used for effective teaching and learning in upper primary.

Success criteria

By the end of this topic, you must be able to analyse teaching and learning methods and their appropriateness for teaching upper primary.



Background information

Teaching and learning methods are ways of presenting the content of the curriculum or ways of conducting instructional activities during the teaching and learning process. Teaching and learning methods that teachers use should always aim at promoting independent working and a sense of responsibility in learners. It requires the teacher to plan creatively in order to cater for learners of different abilities. This calls for use of learner centred approaches and critical thinking strategies. Learners in upper primary are in the category of late childhood and adolescent stage of development. In late childhood (7-12 years) and adolescent stage (+12 years) of development children are able to demonstrate use of logical thinking and systematic manipulation of symbols which are related to concrete objects Zanden, et. al., 2007.

Also, their thinking becomes less egocentric with an increased awareness of external events, and involves concrete references. In adolescent stage of development, learners are also able to use symbols related to abstract concepts. Furthermore, their thinking is systematic and they are able to formulate hypothesis and think about abstract relationships and concepts. Therefore, the methods

used at this level should take into account these characteristics.

This knowledge on child development should help the teacher to adapt instructions, teaching and learning methods to suit learner's development level. The teacher's role in this case is to facilitate a variety of experiences to learners. Therefore, teachers should always give learners the opportunity to explore and experiment for them to develop new understanding on concepts being taught. It should also be considered that concentration span of learners of this age range is high therefore challenging activities are essential if meaningful learning is to take place.

How to increase learner involvement in teaching and learning and implication for teaching

In order to make sure that learners have opportunities to explore and experiment in the process of teaching and learning, teachers need to:

- make sure that groups of learners with different abilities are formed
- use hands on experiences to help learners to understand concepts.
- use real objects such as visual aids or models for easy understanding.
- use familiar examples for more complex ideas
- give opportunities to learners to tackle tasks that are increasing in level of difficult to facilitate understanding of new concepts with previous knowledge.
- present problems that require logical and critical thinking for learners.
- make sure that they always prepare adequately before they go to class to teach in order to achieve increased learner involvement.

Task

Task Analysing the appropriateness of teaching and learning methods for teaching upper primary

At the beginning of this term, you looked at characteristics of learners in upper primary, their learning needs and how you can address their learning needs.

In this task, you will reflect on the methods of lower primary and relate them to the methods used in upper primary. You will also look at the learning needs of upper primary and think of ways of addressing them

Activity 1 Relating the appropriateness of methods for upper primary to knowledge about child development and learning needs of learners in upper primary (1 hour)

1 Analyse teachers' guides and learners' books of different subjects for Standards 5-8, and find out which teaching and learning methods have been included in these books.
2 Relate the appropriateness of methods for upper primary to

knowledge about child development and learning needs of learners in upper primary.

3 Discuss your findings in groups.

4 Report to the whole class.

Activity 2 Demonstrating (Lecturer) teaching and learning methods for upper primary (30 minutes)

1 Observe a lesson to be presented by your lecturer.

2 Record your observations using the table below.

3 Discuss your observations with your lecturer using the recorded observations from your table.

4 Consolidate by focusing on appropriateness use of the methods using the appendix.

Stage of lesson	Teachers activities	Learners activities	Methods used
Introduction			
Development of the lesson			
Conclusion			

Activity 3 Observing a lesson in upper primary with a focus on teaching methods (2 hour)

1 Observe lessons in upper primary at demonstration or any other nearby school.

2 Record your observations in the checklist below.

Stage of lesson	Methods used	Clear instructions		Procedure followed		Remarks	Other methods which could be used
		Yes	No	Yes	No		
Introduction							
Developmental steps							
Conclusion							

3 Evaluate the lesson observed focusing on methods used in introduction, development and conclusion.

4 Share your discussions in plenary.

Activity 4 Conducting micro-teaching with focus on teaching and learning methods in upper primary (2 hour)

1 Prepare a short (mini lesson) lesson in a subject of your choice. Use not less than four methods in your lesson for any class from Standards 5-8.

2 Use the table below to record the observations.

3 Together with your lecturer, evaluate the presented lessons using the observation checklist below:

Stage of the lesson	**Methods used**	**Clear instructions**		**Procedure followed**		**Degree of learner involvement**					**Comment**
		Yes	No	Yes	No	EX	G	S	NI	F	
Introduction											
Developmental steps											
Conclusion											

Key: EX: Excellent G: Good S: Satisfactory NI: Needs improvement F: Fail

Tips

- Students may also be given assignments in advance readiness for presentations
- Make sure you consider gender and diverse needs of learners as you plan for your lessons
- Each member in the group must take part in lesson preparation and presentation.
- Methods of teaching and learning should not only be explained to the students but demonstrated on how to use them in a lesson using subjects and topics from primary school syllabus.
- Choose methods to be demonstrated from the appendix.

Summary

In this topic, you have learnt about teaching and learning methods that you can use when teaching in upper primary. You have observed how different methods are used effectively. You have also practiced teaching using some of the methods like debate, K-W-L and predicting from terms. Furthermore, you have also evaluated the effective use of the methods using different appraisal guide. This knowledge has helped you to choose appropriate methods for learners at the stage of late childhood and adolescence so that these learners can participate actively and develop an understanding of the concepts being taught.

Reflection and assessment
Self-assessment

Analyse teacher's guides and learners books of standards 5-8 for different subjects. Choose the topics and suggest other methods that could be used in the chosen topics. Give reasons for choosing that particular method.

Topic assessment

1 Examine topics in the primary school syllabus in different subjects that would suit the use of the following teaching and learning methods. Give reasons for choosing such topics.
   - ball bearing
   - jigsaw
   - debate
   - card collection and clustering

2 How would you ensure that learners of diverse needs are considered when using the methods**?**

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Appendix 1

Some of the teaching and learning methods for upper primary

K-W-L (Know-Want to Know-Learn)

K-W-L activity can be used to structure a whole lesson. It asks learners to think of what they already know about the topic of the lesson, raise questions about it, and find answers to those questions.

Group size

Six to sixty or more learners

Time required

45 minutes to multiple periods.

Procedure

1 Begin by naming the topic, and asking learners to think of what they already know about it. It helps to have learners list their ideas, and to share their ideas with a partner before they answer.

2 Create a K-W-L chart on the chalk board or on chart paper.

K (What I know	W (What I want to know)	L (what I have learnt)

3 Ask the learners to call out what they know about the topic. Write their ideas in the column marked '**What do we know?'** You may organise their thoughts into categories, as you receive them.

4 Now ask learners to think of questions they have about the topic. They may begin by reviewing what they know, and finding areas where their knowledge is incomplete. Write their questions on the chart in the column marked '**What do we want to Know?'** Feel free to add some of your own.

5 The learners should now read the text (or listen to a lecture, or do some other kind of investigation). They are reminded to look for answers to their questions, and for any new ideas they did not anticipate.

6 The learners report the things they learned from the text. First they report answers they found to their questions, and then they report any other interesting or important ideas they discovered. The teacher records these on the chart in the column labelled, '**What did we learn?'**

7 The teacher goes through the second column with learners on "what they want to learn" and ask if the points were learned. If some point were not tackled during the lesson, the teacher can either respond to the questions, tell learners if they have responses or tell learners when the question will be answered**.**

Strengths of the method

- it assists learners to develop critical thinking skills
- it encourages learners to ask vital questions
- learners are able to reflect on the lesson
- learners are given the opportunity to argue and contribute during knowledge building
- it promotes learners to think about questions to ask
- it helps learners to think about what they would like to learn
- it promotes investigative skills in learners

Challenges

- it may not benefit learners if not well structured

Tips for K –W- L method

- This method can be used for a whole topic even if the topic covers several periods in the week. Therefore, remember to use the 'L' (what did they learn) part of the method the day you finish the topic.

Quick write

Quick-write is a brief written reflection on a topic.

Group size Any size.

Time required: The quick-write can be done in five to ten minutes. It can be used at the beginning, in the middle, or at the end of a lesson.

Procedure

1 Tell the learners you want them to write very briefly about a topic you will give them. They are to write without stopping during the allotted time.
2 State the topic.
3 Time the learners as they write. (It may help to give them an extra minute.)
4 Learners may keep the papers in their journals, or you may collect them to use in assessing your lesson.

Strengths of the method

- it keeps learners active as they write down ideas on paper
- it enhances writing skills
- it promotes reflective skills

Challenges

- learners may miss some ideas as thought are aired in a hurry

Predicting from terms

Predicting from terms procedure is used in the anticipation phase of a lesson to encourage the learners to think along the lines of a text they are about to hear or read.

Group size

Predicting from terms is carried out in pairs. There can be an unlimited number of pairs within a classroom. It can also be done individually

Resources

Predicting from Terms requires a chalk board on which to write the terms. Terms can also be written on

cards or reading boards and get displayed for learners,

Time required: It should be done quickly: five or six minutes at the most.

Procedure

1 Before the class begins, the teacher chooses five or six terms from the text that point to key concepts, important events, or main characters.
2 The teacher writes the terms on the chalk board and tells the learners these terms will appeal in the story or the text. The teacher names the genre or style of writing they are about to hear, and may explain how the genre will constrain the kind of events or information they should expect.

Strengths of the method

- it provoked critical thinking in learners
- it motivates learners to learn as they compare their prior knowledge with the new knowledge

Challenges

- shortage of resources eg books

Predicting from terms (another version)

1 The teacher writes terms on the chalkboard and tell learners that the terms are from a text, story or case study.
2 The teacher asks the learners to write a story by using the provided terms
3 Learners write the story
4 Teacher asks some learners to read the developed stories
5 Teacher asks learners to read the real story from the book
6 Ask some questions from the story they have read

Strengths of the method

- it promotes creativity in learners
- helps learners to develop writing skills
- it arouses learners curiosity before reading the story

Field trip/Educational visit

Field trip involves learners working outside the confines of the classroom to gain practical experience and knowledge through firsthand observation. It can be observational, where learners observe the teacher carrying out activities, or participatory where a teacher prepares activities for learners to do individually or in groups, under supervision or independently using resources in the field. A variety of learning and teaching processes involved include: observation and description of what is in the field, research and problem solving. For example, a teacher may take learners to a nearby pond, to observe the life cycle of mosquitoes in Science and Technology; or take learners to a nearby main road to observe road users in Social and Environmental Studies. In order to provide

opportunities for meaningful learning, it is very important that a field trip is integrated in classroom activities. For instance, key questions for investigation in the field should emerge from previous tasks and the findings in the field should be used to inform subsequent work.

Field trip does not have to take place far away from the school; school premises, surrounding places and communities are ideal considering costs associated with distant field trip. A teacher needs to survey the environment to see what opportunities it offers for educational purposes.

Rationale
For learners to learn from firsthand experience through observation and application of ideas generated in the classroom

What stage of lesson? Lesson development
How long? This depends on the nature of the task, and teacher's careful planning is very important to ensure effective use of the available time. Learners' after school time may also be utilized apart from the subject's slots on the timetable.

What is required? This is determined by the tasks to be done.

Procedure
1 Be clear on the actual purpose of the field trip
2 Set tasks to be done in the field and allocate time to each activity
3 Pre-visit field trip location and pre-test the tasks to assess practical feasibility
4 Ensure that all necessary materials to be used are available
5 Brief learners about the objectives of field trip and also what activities they are supposed to do
6 If the field trip is within the school premises, the lesson can commence in the classroom and take the learners out at an appropriate time. Alternatively, the teacher can travel with the learners to the field trip site, and undertake the lesson.
7 Supervise learners and ensure that they are observing carefully and taking down notes, where possible
8 Provide opportunities for learners to ask questions
9 Discuss the information gathered from field trip

Strengths of field trip
- it enables learners to gather first-hand information
- learners learn in an environment of real life situation
- learners develop and improve their observation, application, evaluation, reasoning and practical problem solving skills
- field trip provides a good link to learners' daily lives in their communities.

Challenges of field trip
- it demands a lot of time

- it requires a lot of arrangements and organisation
- may be prone to eventualities
- sometimes requires parental consent before learners can be taken out

Futures wheel

Futures Wheel is a structured brainstorming method used to organise thinking about future events, issues, trends, and strategies. A trend or event is placed in the middle of a piece of paper and then small spokes are drawn wheel-like from the centre. Primary impacts and consequences are written in circles of the first ring. Futures wheel is a very simple but powerful technique for drawing out people's opinions and ideas .It also leads to thinking about consequences, actions or issues for the future. In order to identify consequences ask: "If this happens, then what happens next?"

What stage of lesson? Any

How long? 20 minutes

What is required? Chalkboard, flip charts

Procedure

1 Write the name of a trend or event in the middle of a piece of paper as if it has already happened – it helps to focus on and imagine what this future looks like.
2 Think of and write primary impacts or consequences of this event/trend in separate ovals around the central oval and connect it to the centre with a single line.
3 Finish all primary impacts before moving onto secondary impacts
4 Next, identify the secondary impacts of each primary impact and write these in ovals and join them to the primary impacts with a double line (or you can use a different colour). This forms a second ring of the wheel.
5 Finish all secondary impacts before moving onto tertiary impacts
6 Continue this ripple effect, increasing the number of lines or colours used to join the ovals, until a useful picture of the implications of the event or trend is clear.

Strengths

- helps learners to think through how an issue may unfold or the consequences of an event or strategy thoroughly
- helps learners to critically think in a more complex manner
- helps learners to identify relationships and unintended consequences

Challenges

- it is a complex method
- it is limited by knowledge and perceptions of learners
- it requires that the learners should have some knowledge of the subject area before it is used.

Ball bearing

This method is used to make learners understanding and summarising a written text.

Procedure

1 Let learners form a circle and count 1- 2- 1- 2- 1 etc. Let the "2s" form a second, inner circle which is surrounded by the "1s", the outer circle. Ask the learners of both circles to face each other in a way that each learner of the outer circle faces his peer in the inner circle.
2 Hand out a written text to each learner. Tell learners to read the text silently and to prepare an oral summary individually.
3 a) Let each learner of the inner circle present her/his summary of the text to the partner in the outer circle (without looking at the text, just telling what was kept in mind). b) In a second step, let each learner of the outer circle complement the summary (no discussion allowed, just summarising complementary information).
4 Let the inner circle move two, three or four learners clockwise to a new partner in the outer circle.
5 Let each learner in the outer circle give the summary (as captured during the previous pair situation) to the new partner and let the learner in the inner circle complement.
6 repeat the procedure (step 3 to 5) if you think it is necessary for all learners to understand the text thoroughly.
7 Consolidate the activity by either asking questions or asking some learners to summarise

Strengths

- every learner is actively involved in the lesson
- it promotes reading and comprehension skills among learners
- it also promotes critical thinking skills as learners summarise main points
- learners skills of listening, speaking and summary writing are promoted

Challenges

- it may not benefit the learner if he/she does not know how to read

Tips for the method

When you are dealing with large classes, you can take the learners outside the classroom and form several circles to make sure every learner is accommodated. Do not be afraid to use this method outside; in the beginning it may of course be chaotic, but later learners will get used and enjoy the activities while learning with no problem.

Workstations/Bus stop

Work stations refer to different spots of the classroom on which a sequence of tasks are presented for learners to discuss in groups. Questions, tasks or texts can be written on pieces of paper set at each station, or on charts

posted on walls or written on the chalkboard. Different groups of learners work for a few minutes at different stations and rotate until all groups have worked at all stations.

What is it for?
To get learners to discuss and respond to a set of questions that leads to learning of specific knowledge or skills

What stage of lesson? During lesson development

How long? Not more than 20 minutes

What is required? Space, chart papers or ordinary papers, chalkboard, texts which could be discussed

Procedure

1 Identify a topic, concept or an issue that can be analysed from several different perspectives eg
English lesson: verb tenses:
Station: 1 writing sentences using simple past tense
Station 2: writing sentences using past progressive/continuous tense
Station 3: writing sentences using past perfect tense
Station 4: writing sentence past perfect progressive/continuous tense
2 Post questions for each station, group learners and direct them to different stations. Let groups know how much time they have to work at a station.
3 Upon arrival at the station, each group discusses and writes comments for the question posed at the station then moves to the next station. The teacher should monitor progress as groups rotate. When groups return to their starting points, they should be given the chance to synthesise responses contributed by other groups.
4 Selected or volunteer groups should make a presentation to the class

Strengths of the method

- it promotes team building, fosters debate, and encourages consensus as learners work together to present group member's ideas at the different stations.
- learners are actively involved in the lesson

Challenges

- it requires adequate space.

Making a stand

Rationale
Encouraging learners to decide and justify their decisions; getting a quick overview on different opinions in a group

Procedure

1 Decide on a question on which learners are supposed to take a stand. Write it on the board. Examples: Should we have afternoon classes in this school? *Boys and girls should not learn together, do you agree or disagree?*

2 Write possible answers to the question on posters or paper: Yes-Partly-No; or: Yes-I'm not sure-No. Fix the posters or papers to the walls, leaving enough space in between them.
3 Ask learners to walk towards the poster/paper that corresponds to their opinion.
4 Optionally: Ask some learners of each group to explain and justify their decision in public

Strengths
- learners are given an opportunity to express their views freely

Challenges
- shy learners may not take part in in the lesson

Debate

With learners in third grade and up, it is often useful to follow the Discussion Web activity with a **Debate**. The purpose of the debate is not to declare winners and losers, but to allow learners some opportunity to practise making claims and defending them with reasons, even when others defend different claims. Working with claims, reasons, and arguments; debating ideas without attacking people—these are key elements in critical thinking. Debate helps learners to think critically about important social issues, and to determine the relative importance of arguments and counter arguments. A debate is effective when the topic involves values, feelings, attitudes, and awareness. A good debate should be able to exhaust the main points on an issue for learners to be well informed in making decisions.

Group size Debates are done with the whole class.

Resources The debate requires no resources.

Time required The activity can be conducted in 20 to 30 minutes.

This is more dynamic activity, based on constructive contradiction. The learner is forced to find arguments on both sides, which means they will think critically and reach a conclusion that they will have to support. This means they will have to confront their own beliefs and entertain arguments against them.

Procedure
1 Prepare a binary question. To have a debate, you need a *binary question*—that is, a question that has a yes/no answer. The teacher thinks of a question that will truly divide the learners' opinions, and puts the question on the chalk board for all to see. (If you are not sure the question will divide the learners roughly equally, ask for a show of hands on each side of the issue before proceeding with the debate). Examples of debate topics: Money is the most important thing in life; The younger generation knows best; Television does children more harm than good; which is better, to

be at a co-education institution or single sex institution?

2 The learners think about the question and discuss it freely. They may first jot down their response on a piece of paper, and after two minutes share their answer with a partner in order to stimulate more ideas.
3 The teacher asks learners to divide up. Those who believe one answer to the question is Right should go stand along the wall on one side of the room; those who think the other is right should stand along the wall on the other side. Those who are truly undecided (that is, after thinking about it, they believe both sides are partially right or neither side is right) should stand along the middle wall.
4 The teacher explains the two ground rules:
   a. Learners must not be rude to each other. (The teacher may have to explain and demonstrate what this means.)
   b. If learners hear an argument that makes them want to change their minds, they should walk to the other side (or to the middle).
5 The learners on each side have three or four minutes to decide *why* they are on that side. Then the teacher asks them with a sentence that states their position. The teacher asks the learners on each side to appoint someone to say that sentence.
6 One person from each side (including the undecided group) states that group's position.
7 Now anyone on any team may say things (counter-arguments or rebuttals) in response to what the other team has said, or more reasons in support of their own side.
8 The teacher monitors the activity to make sure the tone stays away from negative attacks. The teacher asks for clarification. He offers an idea or two as necessary from the devil's advocate position. He changes sides. He encourages the learners to change sides if they are persuaded to.
9 When the debate has proceeded 10 or 15 minutes, the teacher asks each side to summarize what they have said. (Concluding remarks)
10 The teacher "debriefs" the debate by reviewing the ideas and arguments that came to light. Or she may ask each learner to write an argumentative essay, writing down what she believes about the issue and why.

Other ways of going about it

1 In some cases, the teacher can choose to moderate the debate as a leader. At the end the teacher can give a summary of the main points raised.
2 Learners may also stage a debate for the whole school, or for the larger community. This can open up further discussion on important issues in wider contexts outside the classroom

Strengths

- it motivates learners to learn
- it helps learners to develop skills of listening and speaking
- it learners to develop courage in speaking at a public
- it helps learners to develop opinions and defend them

Challenges

- if not well managed it may get out of hand and lose its value as a lesson
- it requires thorough preparation for it to succeed

Tips

As the debate proceeds, you can model the behaviour of changing sides with a pantomime: by looking thoughtful for a moment after someone offers a good argument, and moving to the other side.

Jigsaw

The jigsaw is a cooperative learning method that makes learners dependent on each other to succeed. It breaks classes into groups and breaks assignments into pieces that the group assembles to complete the (jigsaw) puzzle. As learners work in small groups, each group member is assigned to specialise on some aspect of a topic of study. After reading about their area of specialisation, the members from different groups meet to discuss their topic, and then return to their original groups and take turns teaching their topics to their original group members. The method teaches learners to cooperate, solve problems, listen to others, speak/ make a presentation and think reflectively. The method requires some prior work from the teacher, who must prepare task sheets in advance of the lesson.

Group size At least nine learners, up to ninety. The Jigsaw method can be used in classes of nine to ninety learners. Home groups are best kept to four members. Expert groups may also be kept to four or five members. That means when you are doing a Jigsaw you may have more learners in each home group than the number of expert groups, you will need to randomly assign the "extra" learners to different expert groups so that the sizes of the expert groups may remain balanced. If the number of learners in the class requires it, you may have more than one of each expert group.

Procedure

For an effective jigsaw, the following stages should be followed:

1 Define the topic for class discussion
2 Divide the class into groups of 4-5 learners each, depending on the size of the class. These groups are called *jigsaw groups.* Assign a number (1 to 5) to learners in each jigsaw group. Choose a leader for each jigsaw group. In the case of a very large class, the teacher can have more than one expert team on the same task to ensure that all learners are adequately involve.

3 Assign each learner/number a topic in which he/she will become an expert. The topics should be subtopics of the main topic
4 Rearrange the learners into specialist groups based on their assigned numbers and topics. For example, all number one learners from the jigsaw groups will form their own group. These new groups are called *specialist groups*. Choose a leader for the specialist groups
5 Provide the specialist groups with the materials and resources necessary to learn about their topics. They should not have access to materials by the other specialists
6 Give them time to study and become familiar with their material. Specialists should discuss their topic, ensuring each group member understands the information
7 Reassemble the original jigsaw groups
8 Allow the Specialists to teach what they have learned to the rest of the group. Encourage others in the group to ask questions for clarification
9 Take turns until all specialists have presented their new material
10 Give an assessment activity at the end to check learners' understanding

Strengths

- all learners are actively involved in the lesson
- a large amount of work may be covered within limited time

Challenges

- it requires adequate preparation, enough resources and thorough monitoring

Tip

The questions that will guide the "experts" discussions must be prepared in advance. They may be written on the chalk board. The learners may be given material to read—but they may also be told a story, given a lecture, or engaged in some other stimulating experience. The number of subtopics should match with the number of expert groups. If the class is very big, the teacher can assign two expert groups to same (one) task (same subtopic).

Card collection and clustering

Card collection is a method that involves the use of cards to gather ideas from learners, especially where a diversity of answers is expected. Starting with a question, ideas are captured onto cards and later clustered based on similarities. Once the clusters are labeled, learners can prioritise or elaborate on them further. This method can be used with both small and large classes. Considering lack of resources in schools, cards could be made from scrap paper, old cardboard boxes, soap wrappers or any alternative locally available resources at and around the school.

Rationale: To collect and classify ideas from learners within a short time in order to make them visible for all learners

What stage of lesson? Any

How long? 10-15 Minutes
What is required? Chalkboard, pieces of paper

Procedure

1 Ask learners a question or write the question on the chalkboard or on a big piece of paper
2 Explain clearly that learners are required to think about the question and come up with some ideas.
3 Give three cards or pieces of paper and ask learners to write one idea, question, or answer in one or more key words on each card
4 Write a sample card first to make sure every learner understands and follows the example and remind them to write only *one idea* on the card.
5 Give learners time to think about the question and write their answers on the cards individually
6 Collect the cards and ask one or two learners to come in front and read out each card.
7 Cluster those that may belong together on a chart or on the board. Let the whole group assist the two learners in front
8 When all cards are put up, let the group make suggestions on possible headlines for the clusters
9 Ask the learners to comment on the result, which may involve reviewing and revising the clusters and their headlines again if needed

Other ways of going about it
For much younger children, instead of writing ideas, they can draw pictures to represent their ideas which can be clustered later on.

Strengths of the method

- every learner gets involved in the lesson

Challenges

- it requires adequate resources for it to work

TOPIC 4 Teaching and learning resources for upper primary

Time 4 hours

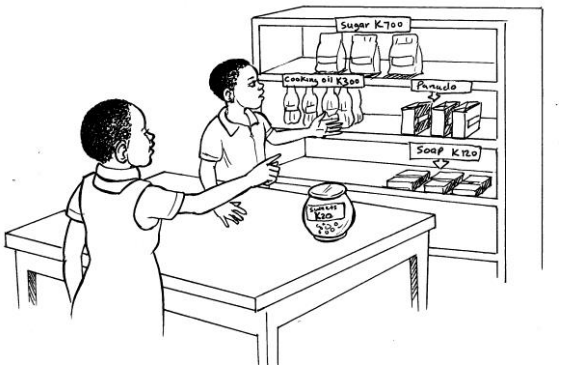
Introduction

In term 1, you learnt about teaching and learning resources in lower primary. You discussed different factors which affect lesson delivery if teaching and learning resources are not properly used. Learners in lower primary differ from those in upper primary in many ways. Upper primary learners can understand complex materials and can easily relate abstract concepts to their experiences. In this topic, you will reflect on how different resources can be used in teaching in upper primary. You will develop teaching and learning resources for upper primary and use them in micro lessons. This knowledge will assist you to develop an understanding of the resources you will require in teaching and learning of the upper primary, and how to use the lesson so as to maximise learning outcomes.

Success criteria

By the end of this topic, you must be able to:

- develop teaching, and learning resources for all learning areas for standards 5-8 using local environment- TALULAR
- use the teaching and learning resources in micro teaching and evaluate yourself



Background information

The type and nature of a lesson dictates the resources required for effective teaching and learning. Teachers need to be creative and innovative in identifying the resources for a particular topic. If real objects cannot be found in the local environment, improvisation would assist in the teaching and learning process. However, learning could be more effective when teachers use real objects.

Most learners in the upper primary school are of ages between 10 to 16 years. As you have already learnt, this is the time most of the children are experiencing pre- puberty and are in the adolescent stage. These learners are advanced in major aspects of child development. Characteristics like muscular coordination improvement, thinking in abstract terms; developing logical and systematic thinking make learners prefer to be independent and strive to be socially accepted.

These characteristics of learners create challenges to teachers in providing proper learning environment. Teachers find it difficult to develop suitable teaching and learning resources that can assist diverse learners' needs. Quist (2000) suggest that if teachers would like to improve the quality of activities and lessons, they need to know exactly what resources are available and where they could find them.

Upper classes require good and relevant resources for effective learning. Learners in upper classes need resources that will improve their manipulative skills, raise interest and curiosity. Teaching and learning resources aid different learning styles and varied intelligences learners are inclined to. Since individuals learn differently, it is important to relate the topics to learning styles and consider resources that would be used to promote learning.

Different teaching and learning resources for specific topics in upper primary

The nature and level of learners in upper primary makes them use relatively advanced and complex resources because they can understand them. Learners in upper primary are able to follow complex resources and interpret them accordingly. Teachers in the upper classes need to understand the level of learners and how best they can be assisted to learn.

The teacher needs to consider diversity in age, intellectual ability and learning styles as they plan for their materials that can be used in lesson delivery. Teaching resources are of different types as was discussed in topic 1. These assist learners as they learn through visual aids, audio aids and audio-visual aids. For instance, a teacher can make Auto Teller Machine (ATM) from a carton hanged on a wall. The carton should have openings for inserting an ATM card, and another opening as an outlet for cash. On the side of the carton, there should be digits written using a pental marker. This resource can be used in a Science and Technology lesson.

Interest centres and storage of teaching and learning resources

A good classroom environment needs to have things which can enhance learning. The things include good furniture, talking walls and interest centres. Interest centres are areas in the classroom which a teacher uses to encourage learners' activity and choice. These include science corner, nature table, expressive arts table, shopping corner and wall news board. The illustrations below show the different displays that could develop interest in learners.

Figure 1 Expressive arts display

Figure 2: Some models for learning

The science corner and nature table and classroom displays

While classroom walls may contain many displays like pictures or charts, there are other resources which are displayed in special facilities or places within the classroom. For upper primary classes, a nature table is a requirement. The corner where the nature table is placed may have other displays like, models from science or charts and pictures within that learning area or subject. The part that has scientific displays and the nature table is called the Science corner. This space is reserved for artificial but scientific objects and natural resources which are usually displayed on the nature table.

A nature table can be made from simple materials by following the guidelines below:

1 Use four short poles or pillars of bricks to support the top part of the nature table. A flat board or carton or plaited grass makes the top flat surface. Display 3 to 6 specimen only with guiding questions for learners.
2 Nature table can also be made by suspending in the air of the science corner. Strings can tie the four corners of the rack of board. The ropes are then tied to the roof poles to suspend it.
3 However, the height of the nature table is dependent on the height of the shortest learners in that class. This is to make sure every learner has an access of the displays on the nature table.

Care of the science corner, nature table and classroom displays

- the science corner and nature table must always be kept clean by removing dust all the time
- remove decaying specimens and replace them with fresh specimens.
- have a variety of specimens. All specimens should be natural not artificial.
- avoid overcrowding specimens on the display
- learners can be assigned to clean and take care of the nature table

Use of information and communication technology in upper primary

Computer and networking technologies are becoming an important tool in our society. The Unlocking talent programme being introduced by the government in some primary schools is a way into the 21st technology for learning. Learners need to be given chance to use this technological advancement in their learning. By using ICT, learners in upper primary become inquisitive and develop manipulative skills further. Audio tapes with recorded tasks and or videos played on computer or video players add variety to everyday modes of teaching and learning. Learners become more interested as they interact with such resources which are electronic in nature. The advantage of using ICT is that learners can obtain a lot of information within a short time and there is flexibility as they interact with such resources.

Tasks

Task 1 Developing and using teaching and learning resources for upper primary

In this task, you will develop teaching and learning resources for upper primary.

Activity 1 Developing teaching and learning resource for standards 5 to 8 (1 hour)

1 Analyse any learning area for standards 5 to 8.
2 Identify a topic you would like to teach.
3 Think of other teaching and learning resources appropriate for the topic.
4 Develop the resources that you would use to teach the lesson you identified.
5 Collect resources within your local environment that can be used to make interest centres and talking walls.
6 Display the resources you have developed for gallery walk.

Activity 2 Analysing the quality of teaching and learning resources they developed (1hour)

1 Analyse the teaching and learning resources you developed in terms of their appropriateness and effectiveness in their use.
2 Share in plenary.

Task 2 Use the teaching and learning materials in micro teaching and evaluate yourself.

In this task, you are going to use the resources you developed in task 1.

Tips

- In task 1, the reflection should focus on the teaching and learning resources for upper primary you created. The reflection may include, the topic for which the teaching and learning resource was developed, the quality of the teaching and learning resource that was developed and how it could be improved.
- The appropriateness of the developed resource for teaching upper primary.
- The use of the developed resources.

Activity 1 Using teaching and learning resources during micro-teaching (1 hour)

1 Plan a micro lesson in which you can use the resource you developed in activity 1.
2 Use the plan and present a micro lesson.
3 Reflect on the quality, appropriateness and the use of teaching and learning resources developed.
4 Give and receive feedback to and from fellow student teachers

Tips

- Student teachers should model their classrooms with classroom displays and interest centres as they would in a primary school
- Student teachers should be encouraged to work in groups and share roles accordingly
- The task should be given enough time. part of the task will need time out of class period.
- Encourage students to consider diversity of learners
- You could consider assigning student teachers to different subjects as they develop sample classrooms.

Summary

In this topic, you learnt about what to consider when developing different teaching and learning resources in the upper primary school. The essence was to relate the preparation of the resources used in upper primary to those that are used in lower primary. Although the approaches may be the same, a number of factors have to be considered as you prepare resources for upper primary because most of the learners have different understanding of ideas and or concepts. The other reason is that within their developmental stages, they are able to understand abstract and complex concepts. When such concepts are represented through use of particular resources, learners understand the concepts concisely. Further learners develop critical thinking and problem solving skills

which are valuable later in life. Teachers need to understand facets that relate to age, intelligence and learning styles. Proper planning and preparation are therefore valuable to optimise learning in upper primary.

In addition, teachers are expected to integrate some information and communication technology which can assist learners in development of valuable skills and abilities which are later required in life. Since most learners in the upper primary are already inquisitive and curious to learning new concepts, using technology in their teaching and learning builds motivation and interest hence learning many skills and being able to apply in different scenarios. Resources used in teaching and learning need to be taken good care for sustainability. Other people may require the same resources for their lessons. If the resources are well taken care of, their life span is prolonged.

Reflection and assessment

Self-assessment

1 Discuss why a teacher in the upper primary require different skills in developing teaching and learning resources?
2 Describe the relationship between the learners' characteristics and resources they require in teaching and learning in upper primary.

Topic assessment

How can different teaching and learning resources support an inclusive upper primary class?

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TOPIC 5 Assessment

Time 2 hours

Introduction

Assessment is one of the key areas in the process of teaching and learning. It is difficult to know if the learners have understood the concepts if they have not been assessed. Therefore, it is important for the teacher to have knowledge on assessment in order to assist the learners properly. In this topic you will develop an understanding of the purposes of assessment in the teaching and learning process. You will also reflect on your experiences of being assessed as a learner and why you were assessed. In addition, you will be expected to identify modes of assessment and forms of assessment. The knowledge on assessment will help you to effectively assess learners in different learning areas.

Success criteria

By the end of this topic you will be able to:

- justify the purpose of assessment in the teaching and learning process
- describe the use of different types of assessment

Background information

Assessment is used in different ways and at different levels since it is an integral part of teaching and learning. Assessment is defined as a process of measuring the learner's behaviour (MIE, 2008). It involves identifying the level of a learner's knowledge and understanding of a topic.

Purposes of assessment

Teachers assess learners for several reasons including the following:

Diagnosis

Teachers can assess learners with the intention of finding out what learners already know, understand and can do. Learners are also assessed to find out if they are learning what is being taught.

Evaluation

Teachers use assessment to decide whether the teaching of a particular topic was effective or not. If teaching was not effective, they take actions such as re-teaching the lesson, or using new strategies in order to ensure that all learners are learning.

Guidance

Assessment can also be used in career guidance for learners. For instance, teachers can assist learners in deciding their future courses or career paths. Teachers can guide learners in choosing courses for tertiary education or career paths

based on their performances in schools.

Prediction
Assessment can be used to determine potential abilities of a learner and predict probable future successes whether in school or outside the school.

Selection
Teachers use assessment to determine which learners are suitable to be promoted or progress to a higher level of class.

Grading
Assessment is also used for determining marks or scores and grades for learners in order to rank them according to their performance. This is common with national examinations such as Malawi School Certificate of Education (MSCE) and Primary School Leaving Certificate of Education (PSLCE).

Types of assessment

Formative assessment

Formative assessment is a process in which teachers assess learners in order to find out what the learners already know, understand and can do. It is done during the lesson. For instance, it can be done at the beginning of a lesson, during the lesson or at the end of a lesson; hence it is also called assessment for learning (AFL). Teachers can use formative assessment in their classes through asking questions, peer assessment, self-assessment, assignments, class exercises and teacher-made tests (MIE, 2006). The information obtained can then be used to provide feedback to the learners, during lessons.

Importance of formative assessment includes the following:

- it helps teachers to build a profile of the learners in terms of their performances in class
- it gives the class teachers and learners the feedback and information about whether the learning objectives are being achieved
- it provides information in areas for development and areas where the student has strengths and potentials. For instance, it can help learners to identify areas to focus on for them to improve.
- it is a source of motivation for learners as it helps to draw their attention towards learning.

Summative assessment

Summative assessment is generally taken by students at the end of a topic or unit or a term; hence it is also called assessment of learning. This type of assessment is generally concerned with grading, ranking and promoting learners to a higher-level class (MIE, 2006). Examples of summative assessment include: topic test, weekly test, monthly test, end of term test and end of academic year test.

Forms of assessment

Forms of assessment are means through which an assessment is administered. With availability of different forms of assessment, teachers are at liberty to decide which form of assessment to use when assessing learners. Specifically teachers are able to get assessment results of various domains such as knowledge, skills, attitudes and values since different assessment forms are applicable for different domains of learning.

The following are examples of forms of assessment:

i. ***Written forms*** – assessment can be done through writing. Examples of written assessment include multiple choice questions and essay type questions.
ii. ***Oral forms***- assessment can be done verbally. , For example, learners in standard one can be assessed orally by reading words or a text.
iii. ***Practical work***- assessment can also be done by performing an activity. Examples of practical assessment include science experiments in the laboratory, sewing in Expressive Arts and construction of nursery beds in Agriculture.
iv. ***Behaviour*** – performance may be assessed by using an observation checklist. For instance, a performance of traditional dances and a stage play in Expressive Arts can be assessed by using an observation checklist.

Tasks

Task 1 Justifying the purpose of assessment in the teaching and learning process

In this task, you are going to reflect on the assessments which you observed in term one.

Activity 1Reflecting own experiences of being assessed (20 minutes)

1 Brainstorm examples of assessment tasks you are given by lecturers in college.
2 From the assessment tasks you have identified, isolate assessment tasks which you are given by your lecturers:
   a. during lessons
   b. at the end of a topic or a term.
3 Suggest reasons why your lecturers gave you the assessment tasks identified in question (b) above?
4 What connection was there between the assessment tasks you were given by lectures and learning activities you had in class at the college?
5 Present your responses in plenary.

Task 2 Describing the use of different types of assessment

In this task you are going to explore on the different types of assessment

Activity 1 Distinguishing assessment for learning and assessment of learning (20 minutes)

1 Give examples of assessment tasks which are done:

a. during lessons
b. at the end of a topic
c. at the end of a term
d. as an ongoing process

2 Classify the examples of assessments identified above into different types of assessment.
3 In what way do the different types of assessment relate to the view of 'assessment as feedback'.
4 Share your responses in plenary.

Activity 2 Discussing forms of assessment (20 minutes)

1 Discuss the forms of assessment
2 Relate these forms of assessment to *Assessment of learning* and *Assessment for learning*
3 Share your responses in plenary

Activity 3 Discussing how continuous and summative assessments are conducted (1 hour)

1 Visit a nearby school and find out how continuous and summative assessments are conducted
2 Share your findings in plenary

Tip

Make sure that students understand the difference between assessment of learning and assessment for learning.

Summary

This topic gave you an opportunity to explore the relationship between the task which are learnt in class and the assessment which is given. It has also helped you to see the relationship between assessment for learning and assessment of learning. Further, it has also helped you to identify relevant assessment task for learners in primary school. This information will help you to link assessment tasks to the level of the learners.

Reflection and assessment Self-assessment

- Relate how you were assessed in schools with how you assessed your learners during micro teaching practice?
- Explain why you assessed your learners during micro teaching practice

Topic assessment

1 In your own words, define the term assessment.
2 There are two types of assessment, formative and summative. Describe them with examples.
3 What is the importance of assessment to both the teacher and the learner?

References

Malawi Institute of Education(2008). *Initial primary teacher education (IPTE): Foundation studies, lecturers' book.* Domasi: Malawi Institute of Education.

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TOPIC 6 Assessment tools

Time 6 hours

Introduction

Assessment tools are some of the items which a teacher needs to have knowledge on. A teacher is able to know if the learners have mastered the content if the correct tool is used. In this topic you will identify different examples of assessment tools. You will also construct assessment tools and the assessment items. In addition, you will prepare and use the marking scheme for structured and essay type of questions. Further, you will use the assessment tools for various purposes. This information will help you to construct appropriate tools that measure the intended learning outcomes.

Success criteria

By the end of this topic you must be able to:

- develop assessment tools
- analyse the quality of assessment tools for different purposes
- compute continuous and summative assessment for annual evaluation

Background information

Tools for assessment are items that help the teacher to generate record and store evidence of learner achievement. Consequently, these tools are in four groups: assessing tools, grading tools, recording tools and storage tools.

Assessing tools include tests, questionnaire, interview schedule, rating scale. These contain the set of assessment tasks to be administered to the learners.

Grading/scoring tools include Scoring rubric, checklist, marking scheme, task sheet. These help the teacher to place the learner into an achievement level according to how he/she responded to the assessment task(s)

Recording tools include progress record book, report cards, profile. These are documents which are a record of achievement levels for all learners.

Storage tools include learner's and teacher's portfolios. These tools safe-keep the teacher's assessment items, and the learner's assessment work.

Assessing tools

Questionnaire

Questionnaire is a document that asks the same questions to all individuals you would like to get information from. It consists of a set of questions on a particular topic which can be printed and sent through the mail or given to learners. The questionnaire may begin with the background information of the learner such as sex, date of birth,

number of years of school completed followed by the actual questions. A questionnaire may be given when a teacher would like to gather specific information about the learners in relation to the learning and teaching process.

Interviews schedule

An interview consists of oral questions by the interviewer and oral answers by the participants or learners. In most cases interviews are conducted with one person at a time but it is also possible to conduct group interviews. When assessing learners using interviews, a teacher should have a list of questions that he/she will be using when carrying out the interviews. It is important that the teacher should ask the questions in the same format to all the learners.

Rating scale

A rating scale is similar to a checklist, except that it provides a range of responses for each item. It is frequently used to record the results of observations. It can be used easily when teachers are collecting self-observation or self-report information. In most cases, a rating scale consists of a list of behaviours, characteristics or qualities that are observable, able to be judged and have some type of scale for showing the degree to which each behaviour is present. Rating scales can take different forms.

Tests

Tests are one of the most common forms of assessment tools used in schools.

Types of test items

There are various types of test items. These include:

1 Short answer questions: Learners are provided with questions to answer by providing brief answers.
2 Completion question: Learners are given incomplete tasks to complete.
3 Matching: Learners are provided with two sets of options to weigh, discriminate and match
4 True/False statements: Learners are provided with statements to critically examine whether they are true or false.
5 Multiple choice questions: A learner is provided with alternative responses from which he/she has to select the correct one. Multiple choice questions should be carefully constructed and clear instructions should be given
6 Essay questions: An essay question consists of a question on a particular topic that learners respond in continuous writing. Essays can be restricted/close/ unrestricted/open. Essay questions are good for applications, synthesis, evaluation and organisation. Considering that the skills and abilities that essay questions test are very important, it is proper to give learners such questions.

Planning a test

One important aspect in planning a test is to decide why you want to give a test. Do you want to sort the learners according to their ability or you just want to establish levels of mastery? Another way to address the "why" question is to identify if the test is to be a formative assessment to help diagnose students' problems and guide future instruction, or a summative measure to determine grades to be reported to parents.

The following points are a good guide when you are developing a test:

- what to test
- how much emphasis to give to various success criteria
- what type of questions to use
- how much time to allocate for the assessment

Blooms taxonomy and test item formulation

When formulating tests you should consider the type of thinking skills you wish to assess. Bloom's taxonomy would be a good guide. The important thing is to consider the levels of Bloom's taxonomy which are:

1 **Knowledge** which asks learners to: define, identify, label, list, locate, name, recall, recognise.
2 **Comprehension** (understanding) which asks learners to: collect, comprehend, describe, discuss, explain, gather, know, observe, paraphrase, read, restate, review, summarise, understand.
3 **Application** (apply learning to new things or situation) which asks learners to: apply, calculate, choose, demonstrate, determine, estimate, illustrate, measure, organise, select, solve, use.
4 **Analysis** (break down materials into parts for better understanding) which asks learners to: analyse, ask, categorise, classify, compare, conclude, contrast, differentiate, edit, examine, hyponthesise, interpret.
5 **Synthesis** (put together parts to form a new or different whole opposite of analysis) which asks learners to: assess, critique, debate, evaluate, judge, justify, revise.
6 **Evaluation** (judge the value of the material) which asks learners to: assess, critique, debate, evaluate, judge, justify, revise.

Grading tools

a) Scoring rubric

A scoring rubric is a way of evaluating a learner's work. It indicates, often in a table, the given criteria or characteristics for performance for each achieved grade from a particular assessment activity. Scoring rubrics are used where awarding of scores could be subjective ie in essays and composition.

b) Marking scheme
Unlike the scoring rubric, a marking scheme does not have a criteria for the four achievement levels. Rather, the teacher adds up the scores from all the assessment items. Then turn them into the grade. Marking schemes are objectively used in analytical scoring subjects/learning areas eg mathematics.

c) Observation checklist
An observation checklist is a set of prepared questions that help to evaluate a learner participating in an assessment activity. The checklist helps the teacher to objectively appraise performance of all learners because the same set of questions is used when evaluating all learners. This tool is used when learners are performing hands-on activities or participating in group work.

Recording tools

Attendance and performance register
The attendance and performance register is used to record achievement results of learners in different learning areas. This register must be kept up to date. It should be secure, easily accessible but confidential.

There are two types of assessment results to be recorded. Firstly, the scores resulting from continuous assessment activities, such as observations, class exercises, quizzes and homework. Secondly there are results from formal tests, which are given at specified intervals such as midterm and end of term. Both sets of results have to be considered when computing an overall score and grade for a learner.

Integration of continuous assessment and tests or examination scores to come up with an annual evaluation score
At the end of the academic year, the learner's final grade will be a combination of end of year tests and an average grade achieved throughout the year. In the past, schools considered end of year tests results only and disregarded the efforts of the learner throughout the year. The present approach of including continuous assessment has a number of advantages:

1 when learners know that their daily efforts will be taken into consideration at the end of the year, they will work hard throughout the year.
2 a final grade that takes into consideration performance of the learner throughout the year gives a true description of the learner than when you use end of year tests only.
3 even if a learner fails to satisfy the required end of year test score consideration of his/her performance throughout the year could make him/her pass.

Processing of end of term and year grades in the infant phase (Standards 1 and 2)
The final scores and grades for each learner are based on continuous

assessment only. This means that the scores and grades of the tests to be administered at the end of the year will be treated just like the rest of the scores.

Integration of formative assessment (FA) and summative assessment (SA) in primary schools

Grading or awarding of marks for learners in infant section of primary schools is based on formative assessment (Continuous assessment) only. In junior section, grading is based on 60% formative assessment and 40% summative assessment. In senior section, formative assessment takes 40% while summative assessment takes 60%. The raw scores are also translated into levels ranging from 1 to 4

Calculating monthly grade for a learning area

Teachers can administer several tests in a month. But at the end, one grade should be indicated in the progress record. In this case, teachers only indicate in the progress record the average score for a learning area in a month.

For instance, Tawina who is in standard 4, got the following scores for Chichewa in the month of March:

Week 1	Week 2	Week 3	Week 4
56%	60%	58%	70%

To find the monthly grade for Tawina, teachers will find the average of 56, 60, 58, and 70 which is 56 + 60 + 58 + 70 = 244 ÷ 4 = 61%

Calculating annual evaluation score

To find the annual continuous assessment score, teachers need to add all the monthly scores and divide the total by the number of scores. In short, they need to calculate the average of monthly scores. For instance, for a learner who scored the following monthly scores: Jan. 50, Feb. 60, March 40, May 60, June 65, July. 60 Sept. 50, Oct. 54 and Nov. 45, the average of monthly scores will be 50 +60 + 40 + 60 + 65 + 60 + 50 + 54 + 45 = 484 ÷ 9 = 53. 7% or 54%(to the nearest whole number).

To find the annual term score, teachers need to add scores for the end of term tests (first, second and third terms) and find the average. For instance, to find average for the annual term score can be calculated as follows: term one: 58, term two: 60 and term three: 52;
58 + 60 + 52 = 170 ÷ 3 = 56.6 or 57% (to the nearest whole number).

Therefore, to calculate the annual integrated score (end of year score) for a learner who is standard 4, it will be 40% of formative assessment plus 60% of summative assessment.
In this case, it means 40% of 54 + 60% of 57 = 21.6 + 34.2 = 55.8%.

The table below gives a summary of the information about the weighting.

Table – Weighting

Primary section	Weighting	Remark
Infant	100% formative	Find average score for each learning area
Junior	60% from formative assessment40% from end of year test	For terms 1 and 2 just find the average
Senior (5-7)	40% from formative assessment 60% from end of year test	For terms 1 and 2 just find the average
Senior (std 8)	40% from formative assessment and 60% end of terms 1 and 2	For term 3 its national examinations (PSLCE)

Storage tools

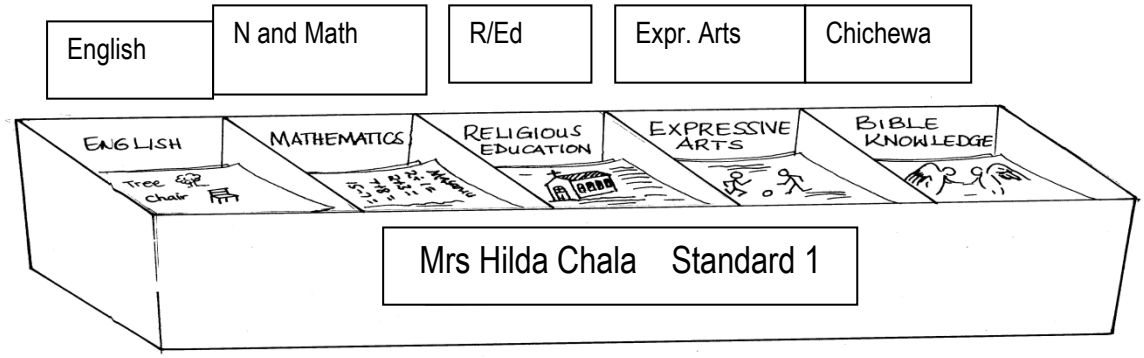
The learner's portfolio

This is a deliberate collection of learners' own work for future reference. It can be stored by the learner or the teacher in folders or boxes or envelopes or any other means of storage. Each learner has one portfolio with sections representing each learning area or subject. The learner's portfolio should contain evidence of achievement collected from different learning areas or subjects. These include exercises, essays, models and written tests.

The teacher's portfolio

The teacher's portfolio is a purposeful collection of all assessment tasks or items as well as assessment instruments. The items in the teacher's portfolio will act as evidence that indeed an assessment was administered. An example of contents of teacher's portfolio would include exercises, scoring rubrics, observation checklists, other assessment records, papers, tests and their marking schemes.

Sample teacher portfolio



Communicating the assessment information

Assessment records provide essential information needed by guardians, parents, ministry officials and other stakeholders. It is, therefore, important that teachers should communicate the assessment results promptly. The real goal for reporting assessment results to learners, parents, guardians and other stakeholders is to help children learn. The communication tool teachers normally use is the report card. When term 1 results are seen by a parent the report card is signed and returned to the teacher. The same happens for terms 2 and 3.

School report card

Nthanda Primary School

Sample one

Name of learner.....

LEARNING AREA	SCORE	GRADE	TEACHER'S REMARKS
MATHEMATICS			
ENGLISH			
CHICHEWA			
EXPRESSIVE ARTS			
LIFE SKILLS			
SOCIAL & ENVIRONMENTAL SCIENCES			
AGRICUTLURE			
SCIENCE & TECHNOLOGY			
BIBLE KNOWLEDGE /RELIGIOUS EDUCATION			

Teacher's overall remarks:

.....

...

……..……..……

…

Teacher's signature: .....

Headteacher's remarks:

.....

Headteacher's signature: .....

Promoted /Repeat

The learner is promoted from standard ..... to ..... or the learner

should repeat standard ..... Date of report: ..... Next term starts on: ..... Seen by the parent (Signature) .....

Definition of four achievement levels for assessment

National Primary Curriculum distinguishes four levels of achievement in order to make assessments comparable

4 - excellent
3 - good
2 - average
1 - needs support

In the following table these levels are expressed in percentages and in terms of satisfaction of requirements.

Level of achievement	**Percentage of fulfilment of requirements**	**Level of satisfaction of requirements**
4 (excellent)	80 – 100	Learner's performance has satisfied the requirements
3 (good)	60 – 79	Learner's performance has satisfied most requirements
2 (average)	40 – 59	Learner's performance has partially satisfied the requirements
1 (needs support)	0 - 39	Learner's performance has not satisfied the requirements

Tasks

Task 1 Developing assessment tools

In this task, you are going to identify and develop assessment tools used to assess learners in primary schools

Activity 1 Identifying assessment tools (1hour)

1 Visit nearby primary school and Interview the teacher on the following assessment tools they use to:
   a. assess learners work
   b. grade/score learners
   c. record learners work
   d. store/report learners work
2 Compile the responses.
3 Share in plenary.

Activity 2 Constructing assessment items (1hour)

1 In collaboration with a teacher at a demonstration school, identify a learning area where you can assess learners a lesson from any learning area.
2 Prepare assessment items that you are going to use to assess learning outcomes.
3 Relate the items with the levels of Blooms taxonomy.
4 Share the items in plenary for feedback.
5 Make corrections if any.
6 Share in plenary.

Activity 3 Constructing assessment tools (1 hour)

1 Develop appropriate assessment tools for assessing learners e.g., a questionnaire or a test.
2 Prepare a marking scheme for the items developed.
3 Share the assessment tools developed for improvement.

Task 2 Using the assessment tools

In this task you are going to practise using the assessment tools you have developed in task 2.

Activity Practising how to use assessment tools at the demonstration school (2 hour)

1 Plan a lesson in which you can use the tools you developed in task 1.
2 Use the assessment tool in the planned lesson.
3 Keep the results for each learner in a portfolio.
4 Give and receive feedback to and from fellow student teachers.

Task 3 Computing continuous and summative assessment for annual evaluations

This task will help you to calculate continuous and summative assessment scores

Activity Processing continuous and summative assessment for termly and annual evaluation (3 hours)

1 Study the scores of learners from the junior section below.
2 Write the level for each score
3 Calculate the continuous. assessment grade for each term
4 Use the scores to calculate the annual score of each learner.
5 Present your responses in a gallery walk for peer assessment.

	S	O	N	CA T1	Exam T1	Term grade T1	J	F	M	CA T2	Exam T2	Term grade T 2	A	M	J	CA T3	Exam T3	Annual grade (T 3)
Kondwani	70	65	60		62		75	72	70		74		80	78	70		75	
Joel	80	82	85		90		82	86	88		88		85	89	90		85	
Ungwelu	40	60	85		72		58	75	80		77		64	54	89		70	
Yahaya	77	70	64		60		60	51	51		55		70	73	84		78	
Duya	50	65	40		45		56	64	34		40		67	60	59		60	

6 Prepare a report card for end of year for each learner.
7 Share your work in plenary.

Tips

- Some of the tasks could be done outside class ours
- Make sure there is proper collaboration between class teachers and student teachers.
- For consolidation, prepare all the assessment tools in advance

Summary

In this topic, you had an opportunity to explore how to construct valid and reliable assessment tools for summative and formative assessment. The topic has also provided you with an opportunity to analyse the quality of different assessment tools; and to use the tools in calculating assessment scores. This information will help you to develop and use assessment tools that will help you to effectively capture and analyse learners' school performance.

Reflection and assessment Self-assessment

1 Why do we need to have different types of assessment tools?
2 When do you use the following assessment tools: scoring rubric, a test, report card and learners portfolio?

Topic assessment

1 What are the importance of assessment tools?
2 Construct one assessment tool from any learning area.

References

Malawi Institue of Education (2008). *Initial primary teacher education (IPTE): Foundation studies, Lecturers' book.* Domasi: Malawi Institute of Education.

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TOPIC 7 Assessment of learners in lower and upper primary

Time 2 hours

Introduction

Assessment of learners largely depends on their cognitive development stages. This entails that learners in lower and upper primary are assessed using different ways. This topic, therefore, will allow you to discuss appropriate ways of assessing learners in lower primary and in upper primary. This knowledge will help you to properly assess learners in relation to their level of cognitive development, their individual differences, and factors that affect children's development.

Success criteria

By the end of this topic you will be able to compare and contrast ways of assessing learners in lower and upper primary classes.

Background information

Assessments are administered in both lower primary and upper primary. In both cases, assessment involves deciding how much learners know, understand and can do from what they have learnt. Children understand things differently. Therefore teachers need to use a broad range of assessment approaches that caters for child cognitive development stage and individual differences.

Ways of assessing learners in lower and upper primary

Learners in lower primary classes are younger than learners in upper primary classes. For this reason, teachers need to prepare simple tasks for learners in lower primary classes since young learners find it difficult to complete complex written assessment. For instance, teachers can give learners in lower primary classes few written tasks. Other appropriate ways of assessing lower primary learners include:

Effective questioning

This involves teachers creating a safe classroom environment for learners to feel free and safe to participate in question answering. With this method, the teacher has also a role to encourage learners to develop their communication skills, through listening and responding.

Instructions should be simple and clear.

Teacher observation

It involves a teacher assessing learners as individuals, with a partner, or a group. The observation could be formal whereby a teacher uses a checklist which has behaviour and practices against which learners are assessed. The teacher can also use a checklist less formally to observe learners' behaviour outside classroom activities, like their participation in co-curricular activities. Observation used for assessment can be both formative and summative, and can provide evidence to confirm to the teacher what the learner can do. It can also inform the teacher about learners' learning, and their future needs.

Peer and self-assessment

Peer assessment involves learners assessing each other's work, and giving constructive feedback. Self-assessment involves learners making judgement about their own learning and achievement, and deciding how to progress in their learning. Peer and self-assessment give an opportunity to learners to celebrate their successes as they may identify peer's work which they consider worthy praising.

Tasks

Task 1 Comparing and contrasting ways of assessing learners in lower and upper primary (30 minutes)

In this task you will identify ways of assessing learners for lower and upper primary. You will then relate ways of assessing learners to knowledge of child development, individual differences and factors that influence child development.

Activity 1 Discussing appropriate ways for assessing learners of lower and upper primary (20 mins)

1 Identify appropriate ways of assessing learners in lower and upper primary.
2 Give reasons in support of your responses in question 1.
3 Which ways of assessment could be used for both lower and upper primary.
4 Give reasons in support of your responses.
5 Share your findings.

Activity 2 Relating each of the ways of assessing learners to knowledge of child development, individual differences and factors that influence child development (40 mins)

1 Relate the ways of assessing learners identified in activity 1 to knowledge of:
   a. child development
   b. individual differences
   c. factors that influences child development
2 Share in plenary.

Activity 3 Analysing assessment arrangements in PCAR framework for lower and upper primary (1 hour)

1 Analyse assessment arrangements in PCAR framework for lower and upper primary.
2 What activities can be used for infant section to get 100% continuous assessment?
3 How best can the grades in all the phases be maintained?
4 Why is there more of continuous assessment in lower classes than upper classes?

Tip

Searching from internet ways of assessing learners in lower and upper primary should be encouraged and be done in advance.

Summary

This topic allowed you to discuss appropriate ways for assessing learners in lower primary and in upper primary. The topic allowed you to relate ways of assessing learners with your knowledge of child development and individual differences. Further, tasks in the topic allowed you to compare and contrast ways of assessing learners in lower primary with ways of assessing learners in upper primary. For example, in lower primary, oral questioning may be used whilst in upper primary written tests may be used. However, observation may be used for both lower and upper primary.

Reflection and assessment

Self-assessment

- Analyse factors which should be considered when assessing learners in lower primary and in upper primary?
- Reflect on the strengths and challenges that you have identified during micro teaching in schools in relation to assessment in lower primary, and assessment in upper primary.
- Suggest ways of handling those challenges

Topic assessment

In what ways are assessments for lower primary classes different to the assessments used for upper primary classes?

References

Malawi Institute of Education (2008). *Initial primary teacher education (IPTE): Foundation studies, Lecturers' book.* Domasi: Malawi Institute of Education.

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TOPIC 8 Inclusive education

Time 6 hours

Introduction

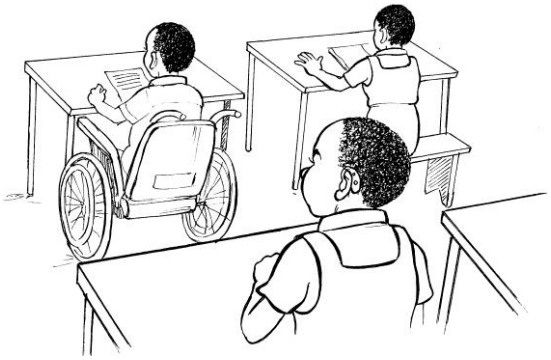
Inclusive education entails that all children, despite different cultural, social and learning backgrounds; should have equivalent learning opportunities in all kinds of schools. The government of Malawi advocates for inclusive education as a way of ensuring that all learners are enjoying their right to education.

In this topic, you will analyse your own positive and negative experiences related to learning as a child. You will also help you to identify situations where children are discriminated against, included or excluded. Further, you will conduct a self-awareness exercise on inclusion/exclusion based on your experiences. You will also analyse, compare and contrast the concepts of inclusive education and special needs education. This will help you to handle learners with diverse needs appropriately.

Success criteria

By the end of this topic you must be able to:

- reflect on your own individual learning experiences while learning as a child
- compare concepts of inclusive education to concepts of special needs education



Background information

Schools need to create a conducive environment for all learners to feel accommodated. Therefore, teachers and learners need to develop a positive attitude towards each other for effective teaching, learning and assessment to take place. In order for schools to achieve this, there is need to embrace inclusive education. This will ensure that all learners have equal access to education.

The concept of inclusive education

UNESCO (2002) outlines the concepts of inclusive education as a process of finding better ways of responding to diversity. It is about learning how to respond to different learners needs. In this way differences come to be seen more positively as a motivation for fostering learning amongst learners.

Inclusive education is concerned with identification and removal of barriers in learning. This involves collecting, collating and evaluating information from a wide variety of sources in order to plan for improvements in learning.

In addition, inclusion is about presence, participation and achievement of all learners. "Presence" is concerned with where children are educated, and how they attend. "Participation" relates to the quality of their experiences in the classroom. Therefore, the views of the learners themselves must be incorporated. "Achievement" is about learning outcomes across the curriculum and not merely test or examination results.

Inclusive education involves a particular emphasis on those groups of learners who may be at risk of marginalisation, exclusion or underachievement. This indicates the moral responsibility of the teachers to ensure that all groups of learners "at risk" are carefully monitored, and that, where necessary, steps are taken to ensure their presence, participation and achievement in the education system.
Riser (2008) describes an inclusive school as "one that values all learners and staff equally, increasing participation of learners in the classroom and reducing exclusion and that restructures its cultures, policies and practices so that they respond to the diversity of learners". The goal of inclusive education is to ensure that all children are educated in the same school and in the same class.

Terms in inclusive society have been modified to suit the current trend of disability friendly language preferred and approved by the organisation that promotes the rights of the people with disabilities known as Federation of Disability Organisations in Malawi (FEDOMA). Terminologies have changed to focus on the person and not the disability such "a child with disability" and not "disabled child". Similarly, we talk about a child or an adult who experiences barriers to learning and development.

Characteristics of inclusive education

- involves and support all learners
- incorporates more than just placement or physical presence of the learner.
- fosters change in approaches, attitudes and teaching strategies. inclusion is about recognising and respecting the differences among all learners and building on similarities
- focuses on overcoming barriers in the system that prevent it from meeting the full range of learning needs.

Concept of special needs education
Special needs education is "specially" designed instruction to meet the unique needs and abilities of diverse learners (Heward, 2000). Heward states that, "it refers to individualised support that gives learners with special educational needs and disabilities the extra help they need to access the general curriculum". Other supports may include physical therapy, speech and language therapy, a behaviour plan, environmental accommodations,

curriculum adaptations, and many others.

Special needs education assumes that learners with special educational needs can have their needs addressed outside the mainstream / general education in special schools or in resource rooms with specialised personnel (UNISE, 1996). In special needs education, teachers' are required to modify teaching, learning and assessment resources, curriculum, instruction and mode of delivery to meet individual learning needs (UNISE, 1996). Therefore, as all teachers in special needs education are specialists, the curriculum is modified according to the ability of each individual learner.

The advantages and disadvantages of special needs education as outlined in MoEST Disability ToolKit (2005) include:

Advantages of special needs education

- children learn physical and social skills in an environment that understands and accepts them
- availability of trained staff, equipment and specialised services
- learners have a chance to improve the skills that increase participation in more integrative situations
- individual attention is easier to obtain
- learners are able to meet individuals with the same disability
- there is specialisation on the part of teachers
- there is a low teacher/ pupil ratio
- the needs of individual learners are usually met as learners learn at their own pace

Disadvantages of special needs education

- it promotes segregation as it isolates learners from a wider community of the school and society
- learners face challenges to the transfer of skills from specialised to normal settings
- there is a general loss of links with the community and poor preparation for future life
- high maintenance costs as learners live in boarding schools

Tasks

Task 1 Reflecting on own individual learning experiences

In this activity, you will Reflect on own individual learning experiences

Activity 1 Analysing own positive and negative experiences concerning learning as a child (15 mins)

1 Discuss with your negative and positive experiences when you were learning as a child in the classroom.
2 Imagine you have been side lined from participating in any activity you wanted to take part with your friends, how would you feel?
3 How can you promote positive experiences in all learners in your class?

4 Share in plenary.

Activity 2 Discussing situations where children are discriminated and excluded in the classroom (45 mins)

Read the case study below and answer the questions that follow.

Case study

A teacher at the mainstream school had a class with learners of diverse learning needs that included learners with visual and physical impairments. The teacher usually segregated learners with visual and physical impairments from participating in some class activities. When the teacher was teaching physical education, he would leave them to keep clothes of other learners.

1 How would you describe the teacher in the case study?
2 What do you think the learners with impairments feel when discriminated from participating in the activities?
3 Describe situations that discriminate or exclude learners from participating in class or school activities?
4 Discuss ways of avoiding situations that are discriminatory and exclusionary.
5 Role play a teacher with inclusive tendencies.

Activity 3 Conducting a self-awareness exercise on inclusion/exclusion at the college (1 hour)

1 Conduct a self-awareness exercise at the college to establish the factors to establish the factors that make your college inclusive or discriminatory.
2 Use the following questions to guide you.
   a. Mention practises that show inclusiveness at the college.
   b. Brainstorm factors that discriminate and exclude students at the college.
   c. Does the college accommodate students with diverse learning needs?
   d. Are there some lecturer or peers who are knowledgeable about disability friendly communication such as sign language or Braille transcription? If so, how do they use this knowledge?
   e. What type of resources does the college have to address unique needs of learners with diversity?
   f. How does your lecturer involve all students in classroom activities?
   g. Is there social interaction among students including those with diverse learning needs?
3 Share the findings.

Activity 4 Discussing the results of child studies conducted in term one with a focus on individual differences (1 hour)

1 Present results of the child study undertaken in term 1.
2 From your child studies, discuss how children of the same age may differ eg in terms of behaviour appearance.
3 Share in plenary.

Task 2 Comparing concepts of inclusive education with concepts of special needs education

In this task, you will relate concepts of inclusive education concepts of special needs education.

Activity 1 Analysing the concepts of inclusive education (terms, purpose and characteristics) (1 hour)

School 1	**School 2**	**School 3**
		
Policy: Do not come here;	*Come but change for me;*	*Come, l will change for you*

1 In your own words how can you define inclusive education?
2 What are the principles of inclusion?
3 Study the schools' policies. Which is an inclusive school and why?
4 Discuss ways of incorporating inclusive education in mainstream schools.
5 What factors should an inclusive school consider in order to meet the needs of every learner?
6 Think and share the situations where inclusive education took place in your learning experience.
7 How can you write the following phrases in disability friendly way, for example: a disabled person is a person with disability and a crippled man is a man with physical disability:
   - A disabled learner is .....
   - Disabled people are .....
   - Mental retarded learner is .....
   - Albino person is .....
   - Wheel chaired person is.....
8 Explain why there was a change towards disability friendly language

Activity 2 Discussing the concept of special needs education (terms, models, purpose and its characteristics)(30 mins)

1 Research on the difference between:
   a. special needs education and special education needs.

b. Regular and specialised schools

2 Discuss on:
   a. how regular shools benefict from specialised schools
   b. challenges of special schools to education of learners with disabilities
   c. common disabilities in learners with special educational needs
   d. characteristics of a classroom that can accommodate a learner with special educational needs.
3 how special needs education practices be incorporated in mainstream schools.
4 Share your findings in plenary.

Activity 3 Comparing the concepts of inclusive education and special needs education
(30 mins)

1 Compare the concepts of inclusive education and special needs education by looking at their advantages and disadvantages.
2 Share in plenary.

Tips

- You could use several teaching and learning methods such us pair methods, brainstorming, jigsaw, group discussions, bus stop.
- Students can use video cameras or phone recordings to record their discussions so that they keep their conversation.
- Encourage students to present summaries in power point.
- Consider learner diversity when dividing student teachers in groups.
- In task 3, students can use video cameras or phones to record the interviews.
- In task 4, ask students to read the results of the child study they conducted in term one in advance.
- Allow students to present their results of child study in groups.

Summary

In this topic you have learnt about inclusive education and special needs education. In inclusive education all the learners are taught together while special needs education is done in special schools with learners with the same difficulties. Special education needs are difficulties learners experience in the learning process while special needs education are instructions and services designed to meet the unique learning needs of learners. You have also learnt that some terminologies have been modified to ensure that the person is the focus and not the disability. You related the child studies conducted in term one with the concept of

individual differences. In addition you compared advantages and disadvantages of the two concepts: Inclusive education and special needs education. This knowledge has prepared you to handle learners with diverse needs.

Reflection and assessment Self-assessment

- Brainstorm the characteristics of an inclusive education school
- Discuss the role of community members in promoting inclusive education

Topic assessment

1 Discuss how the teacher with positive attitude towards children with special educational needs can affect the process of teaching and learning.
2 How can a school promote inclusive education?

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TOPIC 9 Learners diversity in a classroom

Time 5 hours

Introduction

In the previous topic, you were looking at inclusive education. As student teachers, you need to develop skills of identifying learners with learning needs in order to assist them accordingly.

In this topic, you will explore ways of identifying the diversity of learners using different tools. The knowledge will help you to support learners with diverse learning needs in the classroom by, among other things, making timely identification, placement, and referrals.

Success criteria

By the end of this topic you must be able to:

- identify diverse needs of primary school learners
- develop basic tools for identification of learner diversity
- use tools for identification of learner diversity
- identify ways of supporting learners with diverse needs

Background information

Learner diversity refers to variations of abilities and differences found among any group of learners in any given setting (UNESCO, 2012). Having a diverse group of learners in a class simply means recognising that people are unique in their own way (Ainscow, 2005). In the classrooms

you will observe that there are learners from different socio-economic, language, cultural, religious, ethnic, racial, gender and ability groups etc. All of these learners come to school with different experiences and a diverse range of learning needs and abilities.

Examples of learner diversity are:

- learners who have learning difficulties in reading, writing or remembering what has been taught to them.
- learners with hearing difficulties who require sign language for communication
- learners with visual difficulties who need assistive devices and adaptive materials such as braille.
- learners living in poverty
- learners with health or emotional difficulties
- learners who are faster than other learners

Learning difficulties

MoEST disability toolkit, (2005) describes learning disability as "a delay or slowness in a child's mental or developmental capacity". It encompasses a number of disabilities such as: communication difficulties, specific learning disabilities, physical and health impairments, emotional / behavioural difficulties and intellectual disabilities. The gifted and talented learners are also included in this category because they need special attention from the teacher hence they may disturb the lessons when they completed their tasks.

Characteristics of learners with learning difficulties

- difficulty in speaking or learn to speak late
- difficulty to remember things / poor memory
- trouble in understanding social rules or appropriate social behaviours
- inability to connect actions with consequences (fearlessness)
- difficulty in problem solving or logical thinking
- slower in learning or mastering new information and skills
- poor academic performance
- attention problems (easily distracted)
- hyperactive (overactive-doesn't stay in one place for long)
- poor motor abilities (poor coordination)
- withdrawal behaviour
- aggressive behaviour (tantrums, hitting, kicking, insulting, fight)

Visual impairment

It is reduced vision caused by eye diseases, accident or eye conditions present at birth. Visual impairment has two categories: total blindness and low vision.

Characteristics of learners with visual impairment

- red eyes
- painful eyes headache

- frequent mistakes when copying from the chalkboard, text or workbook
- bumping into objects when walking
- discomfort in bright light
- handwriting off the lines
- difficulty to read
- skipping of words, letters or lines when reading
- blurred or double vision
- poor eye-hand coordination
- confusing letters or words that look alike
- problems in distinguishing pictures in books, which the rest of the class can manage
- getting confused with details on maps, diagrams
- tilting the head towards one side or closing or covering one eye when performing visual tasks.
- blinking excessively or rubbing the eyes
- moving the head rather than the eyes when reading
- unusual fatigue after completing a visual task
- fear of heights and poor balance when moving
- spacing letters and words unevenly
- clouding of pupils or papillary opening
- tearing eyes when focusing an object
- failure to recognise familiar people from a distance

Hearing impairment

It is the loss in the hearing ability caused by genetic or environmental factors. Environmental factors could be diseases (measles, cerebral malaria), strong drugs (quinine), accidents, noise pollution, infections (otitis media) or age-related. There are two types of hearing impairment which are: hard of hearing and deaf.

Characteristics of learners with hearing impairment

- ear discharge (pus coming out of the ear)
- malformation of the outer ear (no pinna)
- appear less intelligent than intelligent quotient (IQ) tests indicate
- have speech problem
- may emphasise wrong syllables in words
- mispronounces words
- often asks for repetition / appears not to listen or comprehend
- watches teachers or speakers intently trying to grasp words
- offers little in discussions; appears shy
- follows directions better after being shown rather than told
- fails to comprehend what is said
- fails to carry out verbal instructions
- make grammatical errors that do not reflect good language.
- capping the ear
- does not enjoy being read to
- raises a hand but giving a wrong answer
- has difficulty with abstract concepts presented auditory.
- relies heavily on picture clues

- speaking with louder or softer voice than usual.

Deaf blindness

It is a condition where a person has impairments of both vision and hearing. Not all deafblind persons are totally deaf and totally blind, some have residual (partial) vision and hearing which can be used for functional purposes. Deaf blindness is caused by: premature birth (birth before 37 weeks of pregnancy), infection during pregnancy, such as rubella (German measles), genetic conditions such as CHARGE syndrome or Down's syndrome, cerebral palsy (a problem with the brain and nervous system that mainly affects movement and co-ordination), health problems caused by drinking alcohol during pregnancy

Characteristics of deaf blindness

- appear to be withdrawn and isolated
- lack the ability to communicate with his or her environment in a meaningful way
- lack curiosity
- are defensive to being touched
- have extreme difficulty in establishing and maintaining interpersonal relationship with others
- have feeding difficulties and/or unusual sleeping patterns
- exhibit frustration, social and cognitive development because of the inability to communicate
- moving meaninglessly in the environment

Some of the ways of supporting learners with diverse learning needs are:

Ways of supporting learners with diverse learning needs

Impairment	Suggestions for assistance	How to provide the assistance
Visual	• use sense of touch (tactile activities) • verbal description (voice projection) • use of larger size of objects or print for learners with low vision • use correct colours of objects and pictures with good contrast for learners with low vision • train them on orientation and mobility • use raised diagrams	• for learners with total blindness/deafblind, they learn through touching like reading braille text • speak clearly-use audible and clear voice, speak at a normal rate. • objects should be big enough or use large print • write with white chalk on black chalkboard. • some learners prefer using red colour to black or blue • orienting them on how they can find facilities within the classroom/school environment such as toilets, play areas, teacher's desk

Impairment	Suggestions for assistance	How to provide the assistance
		• raised diagrams used for a learner to touch eg raised diagram to teach parts of a fish
Hearing	• early identification and intervention • use gestures, sign language or an interpreter • use speech reading techniques • use games and songs • give more time to the learner to express ideas • use a lot of TALULAR • place the learner in appropriate position • present oral work before written work for them to speech read • provide remedial teaching • involve learners in lesson activities	• position a learner where he/she could be comfortable to hear. It could either be in front, near the source light like the window etc • when teaching the words like 'father' pronounce the word first for the learner to lip read. Then write the word on the chalkboard. • use pictures and names for identification/ concept formation eg picture of man with word "man" • use of gestures like beckoning to mean come here • some examples of speech reading techniques include: asking the learner to repeat the words like "was" help the learner to use correct words like "mother • take time to listen what the learner is trying to say
Learning difficulties	• grade learning tasks to match with learners' level of understanding • proceed slowly in logical steps • vary teaching, learning and assessment methods and resources • give continuous reinforcement • provide room for practice • seek medical attention • provide enough time • be time conscious	• the best example here would be breaking the task into steps like when teaching area of a rectangle: l+b+l+b 2l+2b 2(l+b) • for talented learners consider giving them more tasks or challenging tasks. • do one activity at a time and complete it • use real objects that the pupil can feel and handle like stones, fruits, etc rather than using much paper and pencil work • some examples of reinforcement include verbal like good, well done, thank you etc social like smiling, waving, shaking hands.

Impairment	Suggestions for assistance	How to provide the assistance
		• give the learners untimed tests that can be written until they finish or tests with period breaks of about 30 minutes and let them continue • make lessons timely eg do one activity at a time and complete it clearly before starting a new one
Deafblind	• use tactile methods or augmentative alternative communication (AAC) • use pictures to express wishes	• use raised diagrams for the learners to touch and feel • modify questions that require labeling parts of an object, for example, name the parts of a flower labeled a, b and c to name any three parts of a flower • use of pictures to express wishes. For example, show a picture with a learner sleeping to mean it is time to sleep.

Tasks

Task 1 Identifying diverse needs of primary school learners

In this task you will identify diverse needs of primary school learners.

Activity 1 Observing a lesson with focus on learners' diversity (2 hours)

1 Observe how the teacher manages learners with diverse learning needs in lower and upper primary.
2 Use the checklists provided below to ensure that your observations are focused.
3 Share your observations in plenary

No	Observation items	Yes/No	Remarks
	Teacher's preparation Detailed lesson plan with focus on: • availability of varied teaching and learning resources • availability of varied methods • time allocated for activities **Lesson presentation:** • involve learners with diversity	No	

No	Observation items	Yes/No	Remarks
	in the lesson • awareness of individual needs • use speech and gestures • use teaching, learning and assessment resources • sound projection • legibility of hand writing • involve volunteers /non-volunteers • involve diverse learners in lesson (reading, group work, questions, presentations) • ability to organise individual learners' activity • seating arrangement accommodating learners with diverse needs		

Activity 2 Interviewing a teacher on learners' diversity in the classroom (30 mins)

1 Conduct an interview after observing the lesson in the classroom. (You may use the following guiding questions)
   a. What successes have you had in teaching learners with a diverse range of needs?
   b. Could you describe your challenges when teaching a class with a diverse range of learners?
   c. What are your experiences about lesson planning for diverse learners?
   d. Do you prepare lessons considering learner diversity? How?
   e. How do you support learners with diverse learning needs in the classroom?
   f. Were your teaching, learning and assessment resources suitable for learners with diverse learning needs? How?
   g. How does the school support the presence, participation and engagement of learners with diverse learning needs?

Activity 3 Discussing results of observation and interviews (30 mins)

1 Discuss the outcomes of the lesson observation and interviews basing on the observation checklist and interview notes.
2 Present the findings of the class observation.
3 Discuss the responses from the interview.
4 Discuss in plenary.

Activity 4 Exploring ways of identifying the diversity of learners (eg learning difficulties, visual impairment, hearing impairment) and the challenges in identification in a classroom (30 mins)

1 Research on the characteristics of children with special needs in the following categories
   - different kinds of learning difficulties (dyslexia, dyscalculia, cerebral posy)
   - different kinds of behavioural challenges (hyperactivity)
   - different kinds of sensory challenges (hearing impaired, visual impaired, deaf blind)
   - different kinds of physical challenges (eg people with challenges to walk)
2 Prepare a presentation and present your findings in plenary.

Activity 5 Analysing steps in the identification of learner diversity (30 mins)

1 Analyse steps in the identification of learner diversity in order to familiarise yourself with the identification process.
2 Share in plenary.

Task 2 Developing basic tools for identification of learner diversity

In this task you will practice developing basic tools for identifying learners with diverse needs.

Activity 1 Designing a simple checklist for identifying learners with diverse needs (15 mins)

1 Design a checklists for identification of learners with the following impairments:
   a. learning difficulties
   b. hearing impairment
   c. visual impairment
2 Share and discuss your checklists.

No	Items	Yes	No	Comments
1	Is the learner not responding when spoken to		✓	Does not turn the head to source of sound
2	Is the learner mispronouncing the words?			
3				
4				
5				
6				

Sample: Identification of learners with hearing impairment

Activity 2 Analysing the quality of the tools for identification of learner (15 mins)

1 Analyse the appropriateness of the quality of tools developed in identifying learners with diverse needs.
2 Share the findings in plenary.

Task 3 Using tools for identification of learner diversity

In this task you will practise using tools developed to identify learner diversity.

Activity 1 Practising the identification of learner diversity in a classroom (20 mins)

1 Observe learners in class.
2 Use the checklist developed to identify learners diversity.

Activity 2 Sharing experiences with identifying learner diversity (10 mins)

1 Share the observation as a whole class.
2 Suggest other ways of improving the checklist.
3 Share the experiences of identifying learners with diverse needs.

Task 4 Identifying ways of supporting learners with diverse needs

In this task you will conduct a research on ways of supporting learners with diverse needs.

Activity 1 Researching on ways of supporting learners with diverse needs (30 mins)

1 Conduct a research on ways of supporting learners with diverse needs.
2 Compile the findings.

Activity 2 Discussing the findings of the research (20 mins)

1 Share the findings from the research done in activity 1.
2 Hold discussions on the findings.

Tips

- You could divide the students in groups to observe sections of the observation checklist.
- In tasks 1 students could use cameras or phones to capture pictures or videos of the teaching and interview process. Ask for permission before you start recording.
- In task 2, activity 1, you could divide the students in groups to develop checklists for different impairments.
- Allow students to present their findings in plenary with the aid of playing of voice recorders.
- In task 2, choose one student to interview the head teacher.

Summary

In this topic you have developed basic checklists for identifying a range of needs in the classroom. You have also practiced using these checklists to identify learners' diverse needs such as those with socio-

economic, hearing, visual and learning difficulties in order to support them effectively in the classroom. You also observed a lesson and have interviewed the class teacher concerning the lesson with focus on learners' diversity in the classroom. You have discussed ways of identifying learners with diverse needs such as checking learner's attendance; observe learner physical appearance and mobility, monitor learner's progress and interview parents. Finally, you have discussed the results of the research conducted on ways of supporting learners with diverse learning needs such as use of Braille, speaking clearly using audible and clear voice. This knowledge has helped you to develop practical skills to identify and assist learners with diverse needs.

Reflection and assessment
Self-assessment

Identifying learners with diverse needs through Appearance, Behaviour and Complaint (ABC)

Learning difficulties

Appearance:
Difficulty in speaking or learn to talk late
Difficulty to remember things
.....
.....

Behaviour:
Attention problems (easily distracted)
Hyperactive (overactive-doesn't stay at one place)
.....
.....

Complaint:
Trouble in understanding social rules or appropriate social behaviours
Inability to connect actions with consequences (fearlessness)
.....
.....

Topic assessment

1 Discuss how can teachers become more responsive to learners with diverse learning needs?
2 Are learners who are living in poverty more likely to experience difficulties in learning? Why?
3 In your own words, how would you define "identification of learners' diversity"?
4 Justify why is it important to identify learners who require additional support?

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TOPIC 10 ICT in teaching, learning and assessment

Time 3 hours

Introduction

This topic will help you to examine the need for and use of Information and Communication Technologies (ICT) in primary schools. It will support you to develop your understanding of the terminologies used and then develop your skills in using the technologies in primary schools. In addition, this topic will assist you to reflect on the ways of using the ICT in teaching, learning and assessment. This knowledge will prepare you to become a teacher who can use ICT to support learners with diverse needs.

Success criteria

By the end of this topic you must be able to:

- analyse basic concepts of ICT and related terminologies
- evaluate the role of ICT in education, society and economy.

Background information

Information and Communication Technology is an agent for change in education, society and economy. It has considerable potential to enhance teaching, learning and assessment process. Developing an understanding of ICT is important in enabling you to develop skills in using it for a range of purposes including supporting your learning and teaching in all learning areas. To achieve the skills to use ICT, you may need to know its related terminologies and the way they are used in different sectors especially in education.

ICT for teaching, learning and assessment may involve different technological skills which you need to acquire, for example, skills to produce a report on learners' progress using a spreadsheet and database programs.

Data and information

Data are simply facts or figures whereas information is created from data. When data are processed, organised, structured, interpreted or presented to make them meaningful or useful, they are called information as depicted in figure 1.

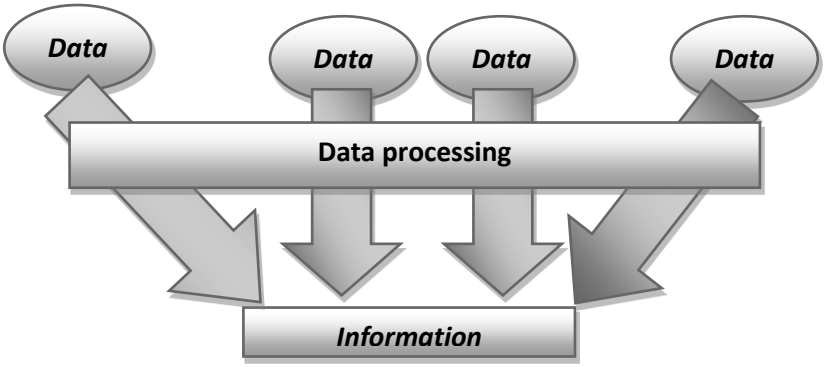

Figure 1 Processing data to become information

Operating system

Without an operating system, a user cannot run an application program on their computer (unless the application program is self booting). Below is a picture of an operating system.

Figure 2 Example of a monitor showing a computer running on Windows 10 operating system

Advantages of using ICT

There are many advantages of using ICT in different sectors.

- ***''Processing of data*** is much faster on a computer or any other computing devices than without. Example: calculating annual students' grades on a spreadsheet is easier than calculating manually.

- ***Receptive processing*** can be better done using computerised machinery. Example: humans get tired and lose concentration and generally become fed up if they must repeat the same task. These same tasks can be done by software to process all the records in a database (Elmaifi, n.d).

- ***Searching for data*** is much faster. For example accessing information from the internet for learning and research purposes become easier and faster.

- ***Data storage capacity*** is almost limitless with ICT. For example large quantities of examination data can be stored in a hard disc or media such as phone, memory cards, flash disks, CDs or DVDs.

- ***Data communications*** are fast and accurate. Example: An ICT user can place an order for an item on an internet website and it will be received immediately - posting an order in the mail would take a day or two to arrive. Various ICT gadgets are available to have fast data communications. For example: phones for sending SMS and other information even by using internet.

- ***Data can be output*** in a variety of different formats. Example annual progress report for a learner can be printed as a spreadsheet, displayed as a graph, or as a multimedia presentation involving text, sound, graphics and animations.

Information and Communication Technologies have recently gained grounds of interest. Their nature has highly changed the face of education over the last few decades. Nowadays, learners in some primary schools are using ICTs for learning. Figure 3 shows the learners using tablet computers or ICT gadgets in the classroom.

Figure 3 Primary school learners using ICT for learning

Impact of ICT in the schools

The use of ICT can have an impact in schools especially in the following areas.

1 ''Changing literacy: Learning through technologies may support the learner to develop a range of capacities.
2 Changing communities: Social interaction between teacher-learner and learner-learner may increase by creating new virtual groups such as WhatsApp, Facebook etc.
3 Changing schools: More open flexible learning will take place in schools through self study and researching'' (Godara, 2016).

ICT in inclusive education

Technology could be a great equaliser, particularly for diverse learners' needs. Technology can serve to overcome or compensate for differences among learners. Use of ICT can support learners with Special Educational Needs in different ways. In this case, ICT can be used:

- as a tool for learning using various electronic methods eg for visual challenged learners or children with learning difficulties
- to communicate using Electronic Language Board, Voice Synthesizers, Voice Recognition System and Symbol Communication System
- for diagnosis of learning difficulties in learners
- as a management tool using software or systems to manage day to day activities in schools

ICT- an enabling tool for learning

ICT can support the application of knowledge and skills in classrooms in a range of activities. You may see your learners acquire many skills and attitudes as you gradually implement ICT in your teaching. For example, it can promote many aspects like critical thinking and problem solving learning in our learners as illustrated in figure 3.

Figure 3 ICT as an enabling tool

Specific challenges in using ICT

In Malawi most of the primary schools are in rural areas. So, some teachers may think that it is not the time to introduce and learn ICT in education. Many may consider that it demands a lot of expensive gadgets and this may influence schools/teachers' decision not to use ICT in learning and teaching. As we are in the era of technologies it is important for student teachers to develop their knowledge, attitudes and skills in ICT in order to offer high quality education and thus make the future better for all learners. The main challenges you may face are:

- high prices for the ICT gadgets and its maintenance
- poor network
- lack of enough capacity of users
- lack of electricity
- lack of knowledge in maintenance

Tasks

ICT can be used as an enabling tool in the classrooms. The following tasks will help you to understand the role and need of using ICTs in education specifically in teaching, learning and assessment. These tasks will also help you to use the ICTs in a responsible way.

Task 1 Analysing basic concepts of ICT and related terminologies

In this task you will analyse basic concepts of ICT.

Activity1 Conducting research on ICT and related terminologies (15 mins)

1 Conduct a research on ICT and the related terminologies: ICT and ICTs, data and information, information processing cycle, hardware and software, input, processing, output, storage devices, application software and others.
2 Compile the findings.

Activity 2 Making presentations on the research findings (45 mins)

1 Share the findings from the research done in activity 1.
2 Hold discussion on the findings.

Task 2 Evaluating the role of ICT on education, society and economy

In this task you will explore the role of ICT in education

Activity 1 Analysing the positive and negative impacts of ICT (30 mins)

1 Explore positive and negative impacts of ICT in
   a. education
   b. society
   c. economy
   d. health
2 Share your findings

Activity 2 Discussing the various advantages of ICT in teaching and learning in lower and upper primary (1 hour 30 mins)

1 Identify ICTs which can be used in teaching lower and upper primary.
2 Discuss how they could be used.
3 Observe a lesson on use of tablets on unlocking talent at the demonstration school.
4 Discuss the advantages of using ICT in teaching and learning.
5 Evaluate initiatives or programmes of ICT in primary schools.
6 Prepare a presentation on a chosen initiative or programme.

Tips

- In task 2 activity 1 you may decide to assign student teacher to different aspects.
- Task 2 activity 2 initiatives or programmes such as "unlocking talent" should be evaluated. You can use prior knowledge of student teachers, have a project/programme concept note or invite a resource person.
- Some of the activities could be done during students' own time eg task 1 activity 1.

Summary

In this topic you have developed an understanding of the different aspects of ICT and the ways in which they can be applied in education. You have also considered the positive and negative impact of ICT on education, society, economy and health. You

evaluated initiatives or projects on use of ICT for learning at primary schools in Malawi. As professionals, teachers need to develop knowledge and skills in using ICT to support learning and teaching. This could help to meet the needs of a diverse range of learners.

Reflection and assessment
Self-assessment

- As a teacher in a technological era, how can you use ICTs in your lesson delivery?
- Undertake research on how to use digital story telling in teaching learners with special educational needs.
- How would you use ICTs in lower primary classes to make your lessons more effective?

Topic assessment

Discuss the roles and barriers to use of ICT in the teaching, learning, and assessment process.

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TOPIC 11 Text editors for teaching, learning and assessment

Time 4 hours

Introduction

In this topic you will develop skills which you can use to produce your own word-processed documents. In addition, you will develop an understanding of word software for writing and editing texts. This topic will help you to improve your performance using printed documents in teaching, learning and assessment.

Success criteria

By the end of this topic you must be able to use word processing packages to teach and assess learners.

Background information

In its most general form, text editing is the process of taking some input, changing it, and producing some output. From basic text editors to advanced word processing applications, there are many programs available to view and edit text documents. Some text editors are basic while others can perform complex tasks. It is appropriate for you to know more about Word as you will use it in your learning, teaching and assessment.

Creating word documents

Word is the first tool that comes to mind when you are asked to write a report, a letter, an invitation or a resume. That is because ''it has been the standard word processing software for more than three decades'' (Wempen, 2013). Word has many in built features or advanced capabilities that you can use to create any type of quality documents. However, it needs sustained practice to learn how to use these features. Figure 2 shows a sample word document.

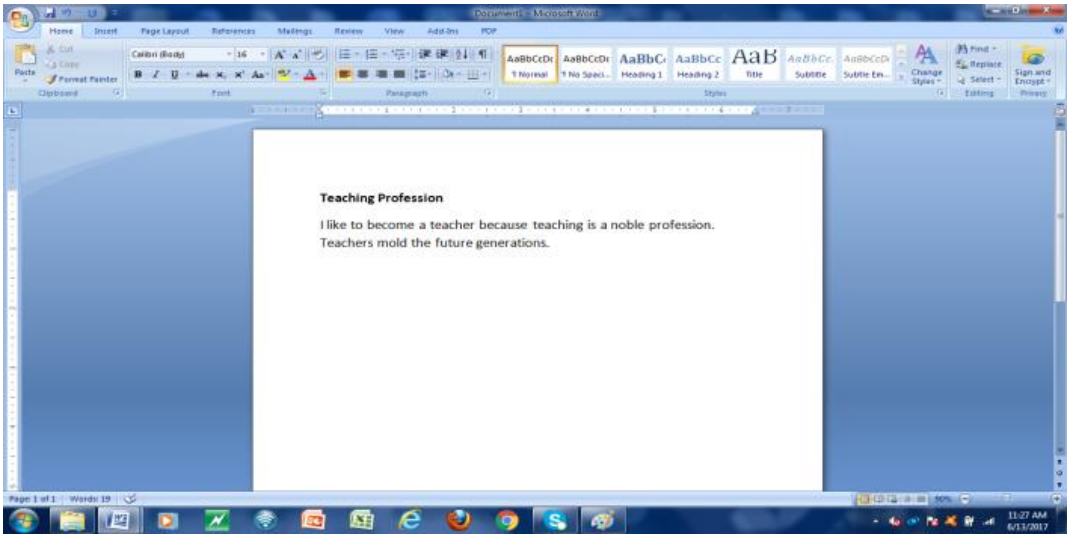

Figure 1 Sample MS Word document

Editing and formatting the text

Microsoft word is a text editing component of the Microsoft Office Suite. For example, Microsoft Word is a text editing software that helps one to produce a well formatted text document. You can spend more time writing and less time formatting. Putting together documents has never been easier. It's used to create, view, edit, save and print documents. One of the most popular tools is the spell checker.

An understanding of editing and formatting the text in a document is very useful in teaching and assessment as it allows you to update and customise materials. Assessment or test items must avoid errors if the learners are to be able to answer the questions correctly. Hence it is valuable to have skills in editing and formatting the test items you produce. The following are some example of the editing and formatting tools:

- spell check
- copy, cut, paste,
- undo redo,
- search and replace
- bold, underline, italics
- line spacing
- changing case
- numbers and bulleting
- change font (style, colour, size)
- text alignment
- inserting graphical content such as tables, clip art, pictures, Smart Art, and charts, WordArt, symbols etc

Use of text editors in teaching, learning and assessment

Word can be used to produce schemes and records of work, lesson plans etc. to be used in teaching, learning and assessment. You can also use MS Word to produce test items and other assessment tools such as check lists and scoring rubrics. You can use ICT for record keeping in managing different types of data in different ways.

Tasks

Task

Using word processing package to teach and assess learners task you will be able to produce your own Word documents which can be used in teaching, learning and assessment.

Activity 1 Producing a document (1 hour)

1 Familiarise yourself with the keys on the keyboard and their functions.
2 Create a document titled *'Reflecting on teaching profession'* using the Microsoft Word.
3 Save your document in a folder named "practice" on the desktop.

Activity2 Editing a word document (30 mins)

1 Open the already saved Word document in the folder "practice" on the desktop.
2 Familiarise yourself with the text editing tools and use them to edit your existing document.
3 Edit your document using common editing tools such as changing font size and type, paragraphs etc.
4 Submit it to your lecturer to assess it.

Activity 3 Inserting tables, symbols, images in a word document (1 hour)

1 Produce assessment items for any learning area, for example, Agriculture, Mathematics, Social Studies.
2 Insert tables in the assessment items.
3 Insert symbols, images or pictures in the assessment items you produced.
4 Save your document.

Activity 4 Producing a lesson plan on a given topic in a specific learning area (1hour 30mins)

1 Produce a lesson plan on a given topic in a specific learning area using MS Word
2 Perform editing and formatting to improve the quality of your work.
3 Save your lesson plan in a folder.
4 Peer-assess your lesson plans developed in activity one by tracking changes and make corrections.
5 Make corrections or modifications to your lesson plan by accepting and rejecting.
6 Save your corrected document.

Tips

- Student teachers may need support in familiarising with the word applications.
- In task 1, you could tell students which font type and size to use
- All the tasks will require a significant amount of practice. Therefore, you may advise student teachers to find extra time outside the formal lessons to familiarise themseves with editing and formatting options.
- Consider diversity and gender ,

.

Summary

In this topic you have developed an understanding of the word application software used in education. You have learnt how to apply the knowledge and skills in editing and formatting the

created document including inserting objects and tables. You could also perform tracking, accepting and rejecting of changes in the word document. And hence you will be able to use MS Word document in teaching.

Reflection and assessment Self-assessment

- How could you use word editing, formatting and inserting skills to improve your teaching and assessment?
- What are the advantages and disadvantages in using MS Word for teaching, learning and assessment?

Topic assessment

1 Produce a two-page document on your experience in the Teaching Practice School to describe the benefits of practicing teaching skills in lower classes.
2 Produce a checklist using a table that can be used to assess learners' performance in an activity in the lower classes
3 Suggest any five documents that you can produce in MS Word which would be suitable for you to use in teaching and assessment and state the advantages over traditionally prepared materials.

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TOPIC 12 Use of mobile devices in research, teaching, learning and assessment

Time 4 hours

Introduction

In this topic, you will be familiar with the variety of mobile devices that can be used in different sectors specifically in education. As you learn their uses and benefits you will understand the importance of these devices in research, teaching, learning and assessment. In addition, you will develop an understanding of the uses of different learning applications that can be used in research, teaching, learning and assessment. You will compare the traditional methods of learning with the use of learning applications in order to appreciate the benefits of these learning applications both in classroom and individual learning. This will support you to improve ways of teaching in your classrooms using mobile devices and learning applications which are available.

Success criteria

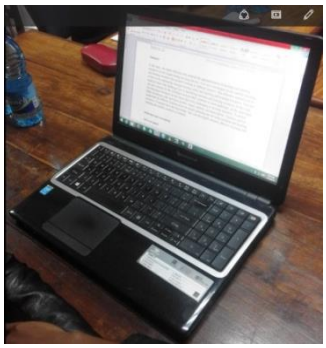
By the end of this topic you must be able to use mobile devices for research, teaching, learning and assessment

Background information

When we think about mobile devices, the first thing to come to our mind is mobile phone. These are devices that can easily be carried from one place to another. You need to know about the types and wide range of mobile devices that can help in working wherever you are.

Examples of mobile devices

Below are some of the common examples of mobile devices as illustrated in the pictures below:



Laptops

Smartphones

Smartwatches

Basic phones

Figure 4 Images of mobile devices (photo by: Lazarus Banda)

Mobile devices and communication devices

Mobile devices can be enabled to use a variety of communications technologies, including:

- Wireless fidelity (Wi-Fi) - a type of wireless local area network technology
- Bluetooth - connects mobile devices wirelessly
- Data services - data networking services for mobile phones

Mobile devices in classrooms

Some educators disagree that mobile devices should be allowed in the classroom. Some concern exists about the distraction caused by the use of mobile devices. Students may spend time texting, surfing websites or chatting online with their friends which means that they are not paying attention to the teacher. This conduct causes problems for classroom management in general.

Nevertheless, mobile devices could also be useful in learning and teaching. ''Despite of all the distractions, mobile devices can be used to enhance classroom learning. Some of the useful features include the ability to access information, record data and create podcasts'' (Chartrand, n.d).

Figure 5 Images of classroom settings using mobile devices

They can also be used as a ''way to gather data for classroom presentations and enhance interaction in large classroom settings and serving as an alternative to 'clickers' used on personal response systems'' (Chartrand, n.d). It is also a trend that mobile devices are replacing traditional tools such as dictionaries, timers and digital cameras. These are also very useful in teachers learning, teaching and research.
Source:
https://www.google.com/search?q=classroom+settings+using+mobile+devices&source=lnms&tbm=isch&sa=X&ved=0ahUKEwiPirK1uv7UAhUGC8AKHWSSApIQ_AUIBigB&biw=1280&bih=646#tbm=isch&q=classroom+settings+using+mobile+devices+in+africa&spf=1499677250054

Teachers play a basic role in supporting individuals to learn independently. As you use mobile devices and different learning applications in your classroom teaching, automatically you will encourage the learners to use them for individual learning.

Examples of learning applications

Table 1 is a list of some examples of applications to help learners in primary school learn.

Table 1 examples of applications to help learners in primary school learn

Name of Application	Description
Arts and Culture	An application that contains a lot of information about, arts and culture to help you become more educated about our heritage and the development of the human race.
Amazon Kindle	A learning application that provides a wide range of educational books, how to use books, and self-help books available and those can be genuinely useful when learning a new skill or just learning new things in general.
Duo lingo	An educational application that teaches you how to speak a second language. It helps to take small lessons to improve the vocabulary.
Khan Academy	An online resource for learning which teaches some of the more traditional subjects such as math, science, physics, economics, and many more. The application contains over 10,000 educational videos along with various lessons.
Memrise	A language learning application which boasts a scientifically developed set of courses for each language and it supports you to learn a new language as effectively and quickly as possible.
Photo math	Unique applications that can help you learn mathematics. You take a picture of your math problem and the application will show you how to solve it with steps in how to get there.
Udemy	A learning application that allows you to take courses on various subjects and it focuses more on skill-based learning. You watch the instructional videos and learn how to do the things.
Wolfram Alpha	With this you can find out a great deal of information including things related to math, statistics, physics, engineering, astronomy, Earth science, life science, computational science, and the list literally goes on and on and on'' (Hindy, 2017).

Name of Application	Description
YouTube	A common application used for a lot of things is YouTube. There are numerous videos that teach you things that range from mathematics to cooking, music theory to physics, and pretty much whatever else you can think of. The tricky part is finding appropriate material which can be difficult but if you search for long enough, you'll be able to find what you're looking for. ''Some up loaders even have full blown courses there. It means some provide fully developed courses in different areas which we can access for self-study. For example, the complete works of Shakespeare'' (Shaikh, 2017).It is a powerful tool that you should already be using.
Microsoft Encarta	A digital multimedia encyclopedia published by Microsoft Corporation from 1993. It comes with other options like 'Learning essentials for students', 'Encarta Kids', 'Encarta dictionaries' etc. with many features. It works online and offline and it would be very helpful in classroom teaching and learning individually. It also provides some methods to assess your knowledge and hence it can be used in learners' assessment.
Learning apps for improving English language skills (e.British council Learn English Grammar)	There are many apps which can support you to improve your English skills. Examples are the apps from the British council. In an interactive way you can improve your language skills.

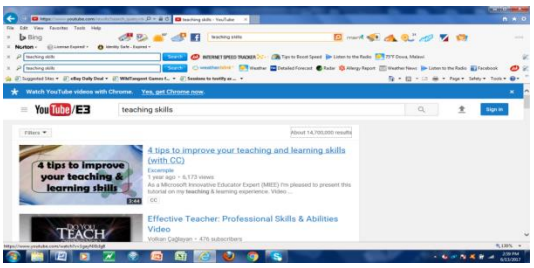


Table 2 sample YouTube page

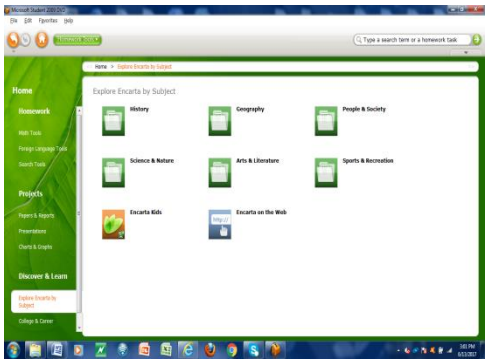


Table 2 Sample Microsoft Encarta page

Use of learning applications for assessment

You can use different learning applications to assess learners' progress. For example, pictures, video and audio clips from different learning applications can be included in assessment items at classroom level. Online and offline quizzes can be conducted to assess your learners. For example, Microsoft Encarta provides many inbuilt assessment tasks.

Tasks

Task 1 Using mobile devices for research, teaching, learning and assessment

In this task you will explore the use of mobile phones during teaching and learning.

Activity 1 Exploring the functions of different mobile devices

1 Discuss the functions of different mobile devices.
2 What are the advantages and disadvantages of using mobile phones during teaching and learning (use the table below.
3 Share your answers in plenary.

Advantages	Disadvantages

Activity 2 Discussing uses of different learning applications

1 Familiarise yourself with learning applications
2 Identify your own learning needs such as English skills, teaching skills, facilitation skills and search for learning applications which can help you to overcome those challenges.
3 Write down how the app operates.
4 Share in plenary.

Activity 3 Searching applications for research, teaching, learning and assessment

1 Using the internet, search the applications for research, teaching, learning and assessment.
2 In relation to primary school curriculum, write examples of topics which are found in the apps you have searched in activity 1.

Activity 4 Using applications for research, teaching, learning and assessment

1 Explore how learning apps can be used when planning for teaching.
2 Choose a challenging topic from any learning area in the upper primary.
3 Find the information in the apps which you will use to teach the topic.
4 Share how you found the information from the apps in plenary.

Tips

- Make sure that students access internet.
- In task two, you should demonstrate the use of some learning applications
- Some of the tasks can be undertaken outside the class.
- Consider diversity and gender.

Summary

Mobile devices assist and enhance learning in the classroom and outside. Using the mobile technologies learning becomes easier as it can be used for communication and knowledge sharing. In this topic, you have learnt about different types of electronic mobile devices that can be used in the process of teaching, learning and assessment. In addition, you evaluated the advantages and disadvantages of using mobile devices in the classroom and discussed how to overcome challenges. You have learnt how to use learning applications in teaching, learning, research and assessment. Furthermore this topic assisted you to plan your future as a teacher in using ICT and mobile learning applications in schools. You might have discovered that mobile devices are very helpful along with the learning applications that can be used in classroom and for individual learning or research purposes.

Reflection and assessment

Self-assessment

- 'Mobile devices motivate self-learning in the classroom.' Reflect on the challenges and benefits of this statement.
- For a teacher it is very important to learn or research individually to master in the topics he/she is handling. Identify the means and ways you can engage in doing research on your own using mobile devices and learning applications.

Topic assessment

1 Explain the ways in which communication technologies and mobile devices are closely related.
2 Identify the benefits of doing research using learning applications

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Glossary

abstract	:	not concrete; with no representational qualities
adolescent	:	a child who is between the period of puberty and adulthood in human development (12-17 years)
argumentative alternative communication	:	method of communicating through pictures
assessment	:	a way of observing and collecting information and making decisions based on the information collected
audiologist	:	a person who tests hearing loss, treats infection and assesses provision of hearing aids
audiology services	:	checking the ear infection and treatment or hearing loss
audiology	:	study of hearing and hearing loss
Braille	:	a system of writing letters, words and numbers using raised dots
charge syndrome/down syndrome	:	disorders of genes in the process of foetus development during pregnancy
classification	:	grouping objects into categories
cognitive development	:	gradual orderly changes by which mental processes become more complex and sophisticated
compensation	:	the principle that changes in one dimension can be offset by changes in another dimension...
concrete operations	:	mental tasks tied to concrete objects and situations
deaf	:	not hearing completely
development	:	orderly, adaptive changes that humans (or animals) go through from conception to death
disability	:	the loss or reduction of functional ability of an individual due to impairment
discriminate	:	to treat one person or group negatively, usually because of prejudice about race, ethnicity, age, religion or gender
diversity of learners	:	range of different learners (different in terms of culture, social-economic background, sex, abilities etc)
exclusion	:	removing some groups from the community

handicap	**:**	a limitation imposed on the individual by environmental demands; consequences of a disability
hard of hearing	**:**	having partial or residual hearing
hypothesis	:	suggested explanation for a group of facts or phenomena either accepted as a basis for further verification
impairment	**:**	the damage to a part of the body, either through accident, disease, genetic factors or other causes.
intellectual development	**:**	mental or cognitive development
learner- centred methods	**:**	learning approaches that promote learner participation in lesson
learner diversity	**:**	range of different learners
learner profile	**:**	it is a general description of a learner at school in terms of academic performance and personality
low vision	**:**	having partial or residual sight
mainstream school	**:**	school that accommodates all learners including those with diverse learning needs
marginalisation	**:**	negative actions and tendencies perceiving others functions are below desired levels. People are excluded and side-lined from the societies
marking scheme	**:**	it is a written document with model answers and scores or marks for a particular test. It is also called a marking key
maturation	**:**	genetically programmed, naturally occurring changes over time
micro-teach	**:**	a training exercise in teacher training in which a student teacher is assessed for subsequent analysis and evaluation
physical development	**:**	an increase in size, weight, length and height.
physical development	**:**	changes in body structure that take place as one grows
physiotherapist	**:**	one who helps people affected by injury, illness or disability through movement and exercise
prejudice	**:**	unreasonable dislike of or preference for a person
rehabilitation	**:**	the action of restoring something that has been damaged to its former condition

reinforcements	**:**	a teaching skill which is used to give feedback for responses given by learners during teaching and learning
scoring rubric	**:**	this is an assessment tool with indicators used to find out levels of achievement of a learner
seriation	:	arrangement of objects in sequential order according to one aspect, such as size, weight, or volume
social and emotional development	**:**	changes over time in the ways in which one relates to others and the self
speech therapist	**:**	a person who conducts speech therapy (training in improving speaking difficulties
teaching skills	**:**	ability to do something or broad set of knowledge, skills, habits and character traits believed by educators
theory	:	a system of rules, procedures and assumptions used to produce results
total blindness	**:**	not seeing completely sight
uneducable	**:**	considered as not able to be taught /educated
specimen/realia	:	any part or whole of an organism used for learning or investigation
innovation	:	doing the same activity in a different or new way to bring about intended results
lifespan	:	the period during which something is functional