

*PROJECT TITLE:
PROMOTING FORMATIVE ASSESSMENT: FROM THEORY TO
POLICY AND PRACTICE (FORMAS)*

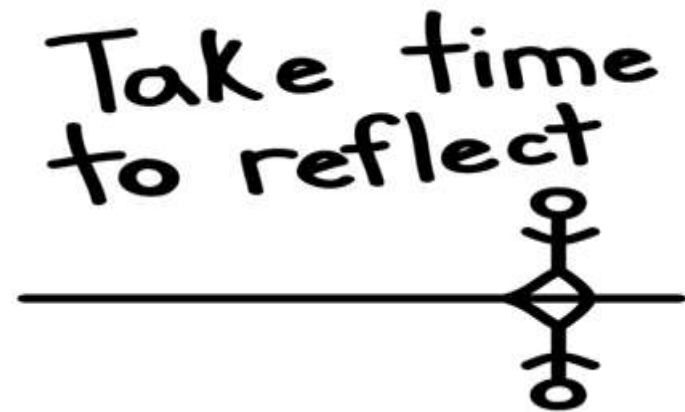
GROUP A - SESSION 3



ACKNOWLEDGEMENTS

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Reflection time



Reflect on your experiences with the actions you have undertaken since the previous meeting, to create a culture that fosters formative assessment practices to students.

Take into account the following:

- ❖ Describe the culture of your classroom. What actions did you take to improve it?
- ❖ What difficulties did you encounter? How did you handle them?
- ❖ Do you believe students feel safe to make mistakes? Give examples
- ❖ How did you try to reinforce positive interactions (both between you and students and between students themselves)?

In the previous session:

- ✓ Creating a culture that can foster formative assessment



In this session:

- ✓ Quality Assessment: representativeness
- ✓ Creating a specification table: content validity

Intended Learning Outcomes:

By the end of this session you are expected to be able to:

1) Take actions to improve the representativeness of your assessments

2) *Create a specification table to improve the content validity of your assessment instruments*

Ensuring the representativeness of written assessment

- Each teacher should be involved in the process of constructing his/her own assessment tools.
- Assessment tools should be aligned both with:
 - a) his/her own students needs and abilities*
 - b) the teaching content offered*
- Even when using a ready-made assessment, this should be adjusted to the content taught to ensure its representativeness.

Quality Assessment: Assessment representativeness

STEP 1: Deciding what will be assessed

- Intended Learning Outcomes (ILOs) should be initially defined during the planning phase and before the teaching occurs
- Since assessing all content taught is not usually possible, one has to select a valid sample from the achievements of interest.
- The first step for constructing an assessment instrument is to specify the ILOs to be assessed based on what was actually taught and how.

Application activity – Setting ILOs (A3a)



1. Write down two intended learning outcomes (ILOs) for the learning objective:

“addition and subtraction of polynomials”, Grade B.

1. Use the information provided in the next two slides (slides 9 and 10) to evaluate your ILOs and make revisions if necessary.

Quality Assessment: Assessment representativeness

Intended Learning Outcomes (ILOs)

- Statements must be concise, direct and clearly stated
- ILOs must not state what is going to be taught, but what the learning outcomes of that teaching are intended to be
- ILOs can be prefaced by the phrase, “*Students are expected to be able to ...*” and are followed by an action.
- ILOs must make clear the level of learning that students are expected to be able to achieve.
- ILOs must be written in such a way that the learning can be assessed through the use of an assessment method (that is select *a practicable task that embodies the target action of the ILO*). Linking ILOs to assessment is crucial for ensuring assessment quality.

More characteristics of ILOs

- Are planned in advance but flexible enough to take account of pupils' learning within the lesson
- Are frequently discussed during the lesson and therefore may contain specific language that pupils will learn to use during the lesson
- Are about what the pupils are going to learn – not what they are going to do
- Are about the learning that is to be done not the context in which it is to be learned
- Help the pupils understand the connections between lessons or between parts of the lesson.

Example: ILO

If the learning objective is: “Area of circle”, then four ILOs would be:

1. Students are able to apply the formula to find the area of a circle when its radius is given
2. Students are able to find the radius or the diameter of a circle (expressed in π or by using the equivalence $\pi \approx \frac{22}{7}$) when the area is given
3. Students are able to apply the circle area formula together with the use of Pythagoras theorem
4. Students are able to apply the formula of the circle area to find areas of mixed figures.

Quality Assessment: Assessment representativeness

STEP 2: Developing a table of specification

Table of specification -> a detailed document explaining what is to be assessed



Or else an *“assessment blue print”*

Declarative Knowledge

Examines student's ability to recall terminology, definitions, facts, principles, methods, structures etc.

Example:

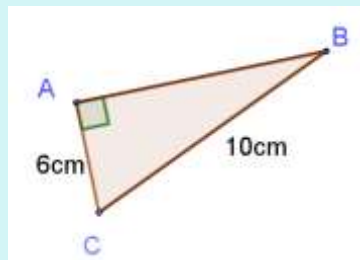
- Are the terms $3x^2y$ and $4xy^2$ like?
- Complete the sentence: 'opposite angles have (a) and (b)
- Which of the following measures of angles are obtuse: (a) 350° , (b) 168° , (c) 89° , (d) 65°

Using algorithms

Examines student's ability to use an algorithm taught in a given situation.

Example:

- Solve the equation, $2x - 3 = 7$
- Expand the expression $(x - 2)^2 - 4(x + 2)^2$ in its simplest form.
- Find the length of side c of the right-angle triangle ABC

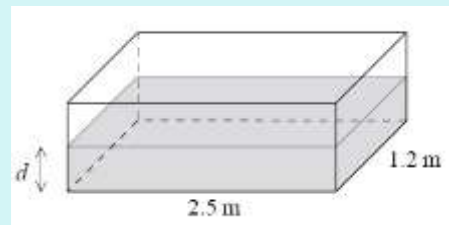


Problem solving

Examines student's ability to analyze an unknown problematic situation and effectively use an algorithm or a series of algorithms to solve it. A problematic situation taught in class is not assessed as a problem but as an algorithm.

Example:

- The equation $2x^2 - 3x - (k + 1) = 0$, where k is a constant, has no real roots. Find the possible values of k.
- There is 2.1 m^3 of oil in the tank. The depth of oil is d metres. What is the value of d?



Application activity – Specification Table (A3b)



Study the written test provided in the Teacher Handbook Appendix.

Now, fill in the specification table below. Try to identify which objective each item assesses and at which level. Write down the item's number on the relevant cell.

Content: (Algebraic expressions)	Knowledge	Using Algorithms	Problem Solving	Total Items
<i>Monomials (similar, equal, opposite)</i>				
<i>Operations with monomials</i>				
<i>Addition and subtraction of polynomials</i>				
<i>Multiplication of polynomials</i>				
<i>Division of polynomials</i>				
Total Items				

Look at the completed performance table in the Teacher Handbook Appendix and compare it with yours

- Do you consider that the distribution of the exercises fulfills the objectives adequately?
- Would you remove any exercises to improve the test? If so, which ones and why?
- Would you add any exercises to improve the test? If so, such changes would be in relation to which concepts / activities / dimensions?

You can also use a specification table to indicate the weight of each assessment technique per learning domain.

Mathematics	Written assessment	Oral Assessment	Performance assessment	TOTAL
Problem solving	40%	30%	30%	100%

The distribution above is an example and should not be treated as the ideal case.

Which factors should be considered for defining the weighting of each assessment technique per learning domain?

Or indicate the weight given during instruction to each learning objective. This will help you align your assessment with your teaching

Learning Objectives	%
1. Rename improper fractions as mixed numbers and mixed numbers as improper fractions	60%
2. Demonstrate addition and subtraction of fractions with common denominators	20%
3. Recognize equivalent forms of commonly used fractions and decimals	20%
TOTAL	100%

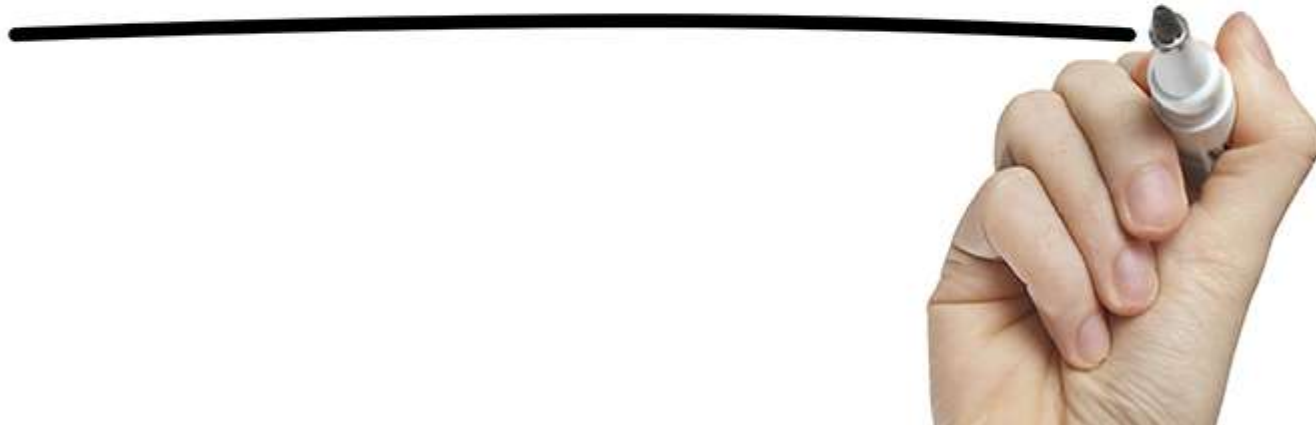
Or match learning objectives with assessment tasks

Learning Objectives	KNOWLEDGE	USING ALGORITHMS	PROBLEM SOLVING	TOTAL
1. Rename improper fractions as mixed numbers and mixed numbers as improper fractions	1, 2a	2b, 4b	5,10	6
2. Demonstrate addition and subtraction of fractions with common denominators		3,6, 11	7,9, 12	6
3. Recognize equivalent forms of commonly used fractions and decimals		4a, 8, 12		3
TOTAL	2	8	5	15

Table of specification

- It is preferable to have at least 2 items evaluating the same level of the objective (i.e. at least 2 items in each cell used)
- Not all levels of each learning objective need to be assessed (i.e. not all cells need to be completed)

ACTION PLAN



**Adjusting your action plan for
improvement**

- At the beginning of the session you reflected on your experience of implementing your action plan.
- Based on this reflection and on the new content presented today, adjust your action plan:
 - *Remove actions that you found difficulties implementing and/or you found ineffective*
 - *Continue actions that were helpful and were easy to implement*
 - *Add new actions that relate to this session's objectives*

You can use the sample action plan provided for ideas.



Until the next meeting:

- Implement the actions mentioned in your action plan

Thank you for your time!

For support/ enquiries please contact:

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