

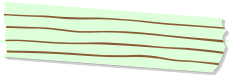


TWO SELF-ASSESSMENT TOOLS

Two special assessment tools are suggested to complement the exercises for Lesson Plans II and III. Their design rationale and implementation approaches will also be provided.

Tool 1. Self-checking Slip – What am I learning?

This kind of slips can be given at the end of certain multi-part exercises. For example, the following design may be used for the ‘skip counting’ exercises in Lesson Plan II:



What am I learning?

Do the following on your exercise.

1. Draw a 😊 beside the part you think is the most challenging.
2. Underline the best part of your work. Explain why you think so.
3. Put a ★ beside the part you think is the most important to learn.
4. Circle the part you would most like to improve.
List the difficulty you find in it.

This assessment tool aims at encouraging students to

- reflect on their own work,
- justify their own work,
- make on-going improvement,
- be aware of what learning targets they are expected to achieve, and
- develop their own judgement skills.

Tool 2. A Form to check understanding – How is it done?

A form of this type is recommended for open-ended exercises. As an illustration, the following design is based on the ‘Open-ended Exercise with story problems’ that has been suggested in Lesson Plan III, as copied here below. The form (Tool 2) will follow.

The exercise:

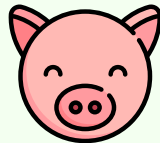
Miss Wong went to a toy shop and found special offers there.
Duckies were 2 dollars each. Piggies were 5 dollars each. Teddy bears were 10 dollars each.
(黃老師在玩具店大減價時，看見小鴨只賣2元，小豬賣5元，小熊賣10元。)

Duckie (小鴨)



2 dollars
(2 元)

Piggy (小豬)



5 dollars
(5 元)

Teddy Bear (小熊)



10 dollars
(10 元)

(Letting students decide what to buy)

Miss Wong came into the toy store with 17 dollars. What could she buy?
黃老師只帶了17元去玩具店。她可以買到些甚麼呢？



Miss Wong could buy _____  , _____  and _____  .

She spent _____ dollars and had _____ dollars left.

Various students should have done the above exercise in different ways. The teacher may select a few representative ones as Sample Work in the following form to check understanding.

Self-assessment form of the above exercise:

How is it done?

Sample Work A

1-1, 2-2, 3-3
 1-5, 1-5
 10

Miss Wong could buy 3 , 2 and 1 .

She spent 16 dollars and had 1 dollars left.

Sample Work B

2, 4, 6, 8, 10, 12, 14, 16

Miss Wong could buy 8 , 1 and 1 .

She spent 16 dollars and had 1 dollars left.

Sample Work C

1-5, 2-10, 3-15, 4-20

Miss Wong could buy 1 , 3 and 1 .

She spent 17 dollars and had 0 dollars left.

Sample Work D

10 + 5 + 2

Miss Wong could buy 1 , 1 and 1 .

She spent 17 dollars and had 0 dollars left.

Read the Sample Work above and fill in the boxes below.

1. My work is ☐ different from all the Sample Work.
☐ similar to Sample Work _____.

2. Sample Work _____ is the most different from mine.
 I know its method and reasoning, which are:

3. Without counting my own work, I like Sample Work _____ the most,
 because:

4. In the future, for another exercise like this, would you use another method?
Why or why not?

This assessment tool aims at encouraging students to

- learn to explain their ideas,
- analyse other people's reasoning,
- reflect on their own thinking by comparing with that of their peers,
- appreciate and/or criticise different approaches,
- justify such appreciation/critique,
- continue to think and question, rather than sitting back after an answer has been reached,
- realise that improvement can always be made by reflecting on the work of their own and others, and hence
- be more daring to try things out in the future.

WHY SELF-ASSESSMENT?

Most of the exercises suggested in this module do not only solicit a simplistic numerical answer, but require awareness and description of the methods they use in finding it. In such a way, exercises aid the learning process, and hence begin to appear very early on, serving the purpose of continuous formation of knowledge. This is contrary to the usual exercises, which merely check whether the students have acquired the skills and knowledge taught. In this way, the term 'exercise' in the current theme 'Exercise Counts' has been refined.

This type of formative exercises demands better assessment than the usual checking and marking from teachers. Self-assessment provides deeper and more meaningful feedback. As illustrated by the two tools in the above section, self-assessment involves asking questions about students' own learning, like

- How and why do I do it like this?
- Is there any other way to do it?
- What do I know?
- What appear difficult to me?
- What do I need to know and why?
- How can I improve on this?

In other words, students focus their efforts on

- 'reflecting' on their own learning,
- 'judging' their own learning,
- 'seeing' their mathematics ability as something that can be changed and extended, and
- 'realising' that they can monitor the direction of their own learning.

Such self-assessment pushes students to become responsible, autonomous and lifelong learners with a growth mindset.

TEACHING STUDENTS TO DO SELF-ASSESSMENT

Students are not expected to know how to do self-assessment on their own. Teacher may support them in the following ways.

- » Start with tool 1, which is simpler.
- » As they work on the self-assessment, observe, provide explanation, feedback and support when necessary.
- » Split the class into a few groups. Let them discuss their different self-assessment within their group.
- » Select some self-assessments worth discussing, and show them as examples for comments, to gradually familiarise students with the process.

By the time of tool 2, instead of asking students to individually complete all four items at one go, the teacher may assign one or two items first before going into the rest. For each item, students may again be assisted with the same targeted attention, peer discussion and the teacher's "show and tell".

FOR TEACHER AND SCHOOL DEVELOPMENT

Student work in the exercises and self-assessments always facilitates professional conversation among teachers. Good opportunities to share and review the student work are provided by teachers' meetings for collaborative lesson planning or post-lesson evaluation, where discussion can involve:

- what students have learnt as shown in their responses,
- what understanding has been demonstrated,
- what good performances can be identified, and
- how they can be recognised and praised openly; and further,
- what follow up might be assigned to each student, and
- what improvement can be made on the exercises and assessment tools.

The ideas of 'Exercise Counts' as shown in this module primarily aim at helping students learn. But learning is more than simply knowing whether one's answer is right or wrong, and all-round achievement cannot be reflected by a simple score. Learning autonomously, willingness to explore, evolving a growth mindset, open-mindedness towards other people's approaches, etc. are equally if not more important achievements. Teachers' awareness of such deeper learning contributes much towards teacher development. Another development is teachers' ability to better cater to student diversity by looking at the students' self-assessment. With such developments, teachers' professional and career horizons are widened. Moreover, if parents are also motivated to be concerned of such achievements, a collaborative team spirit could also be built among students, parents and school.