6.2 PLANNING AND WRITING SELF-ASSESSMENT

6.2.1 INTRODUCTION

Self-assessment is not of much importance in face-to-face teaching, but it is in ODL.

In the classroom, learners have many opportunities to (informally) measure their progress: they answer questions set by the teacher, they do short tests and they hear discussion of problems raised by other learners. For the ODL learner, there are far fewer opportunities to assess their own progress. At the same time, learner-tutor contact is necessarily limited (because of expense)

in ODL. Overall, then, ODL learners generally have insufficient means to judge their own progress. Self-assessment tests are one means of making up for this deficiency.

Generally, self-assessment tests cover a specific section of a course – say, one unit or one chapter. Each test aims to:

- provide learners with summative feedback on their learning of that section,

- help learners identify any errors and misunderstandings they may have, and

- provide learners with advice on additional (remedial) study to deal with those errors.

Issues for instructional designers

1. What methods can I use to build self-assessment into the learning materials?

2. What should the self-assessment test?

3. How much self-assessment should I build into the ODL courses?

4. What types of questions make good self-assessment?

5. How can I give feedback as a result of the self-assessment tests?

6.2.2 WHAT SHOULD BE THE FORMAT OF THE SELF-ASSESSMENT TEST?

A good self-assessment test:

- takes the minimum amount of time necessary to give the learners a clear picture of their progress,

- tests as much of the content of the section as possible,

- is a reasonable length in comparison with the length of the study section,

- uses questions that are diagnostic in character, and

- provides feedback on correct answers and likely wrong answers.

More detail on the latter four points is provided below.

Testing section contents

Ideally, a self-assessment test should test all the new learning in a section, that is:

- all new vocabulary

- all new concepts

- all new rules

- all new facts

- all new theories

- all new methods

- all new problem-solving methods

- all new methods of creating things (e.g., reports, spreadsheets)

- all new skills of analysis.

However, there are two practical reasons why it is not always possible to test all of these items. First, such a test might be too long (see below). Second, some things are very difficult to test by self-assessment (e.g., synthesis) and are best assessed by tutors. So, in practice, the contents of a self-assessment test are a compromise between the ideal and the feasible.

Setting test length

If the test is over-long, learners will not complete it. A good guide to length is to say that the length of the test should not be disproportionate to the length of the section of learning that it tests. Thus, if you have a 2-hour unit of learning, 15 minutes might seem a sensible maximum test time. On the other hand, a 10-hour unit of learning might merit a test of 45 minutes.

Using diagnostic questions

If the learning material is well written, most of the students will correctly answer most of the questions in the self-assessment test. However, when they make mistakes, they need to know where they went wrong and what to do about it. This means that the questions should be of a diagnostic nature, where you (the question writer) can predict likely wrong answers.

Consider the question 'What is the value of 2^3?' This has one correct answer (8). Additionally, learners make three common errors in answering questions of this type. A question like this – one with a single correct answer and a small number of predictable wrong answers – makes an ideal self-assessment question, as in Example 73. Depending on the answer that the learner chooses, it is possible for the teacher to identify where the learner went wrong. Thus, the question is diagnostic in its purpose.

EXAMPLE 73. A diagnostic-style self-assessment question

What is the value of 2^3?

A 6

B 5

C 8

D 9

Providing feedback on answers

Once you have a diagnostic-type question, you can give feedback that is precisely matched to the error the learner makes (see Example 74).

EXAMPLE 74. Giving feedback to a diagnostic-style self-assessment question

Feedback

The correct answer was C.

If you chose A, then you have calculated 2 × 3. In fact the question asks you to calculate 2 to the power of 3 (i.e., 2 × 2 × 2 = 8).

If you chose B, then you have calculated 2 + 3. In fact the question asks you to calculate 2 to the power of 3 (i.e., 2 × 2 × 2 = 8).

If you chose D, then you have calculated 3 × 3. In fact the question asks you to calculate 2 to the power of 3 (i.e., 2 × 2 × 2 = 8).

6.2.3 WRITING THE TEST QUESTIONS

The following steps will help you create questions that work well in self-assessment tests:

1. Start with an idea for the question.

2. Write down the *answer* that you expect.

3. Use the answer to help you write a question that requires the answer that you want.

4. Write down the common mistakes you expect students to make. (If you can't think of any likely common mistakes, look for another question idea.)

5. Write the feedback to those common mistakes.

By writing down the answer (Step 2) before you write the precise question, you will be better able to choose exactly the right wording for the question.

Some examples of typical test questions are shown in Examples 75 and 76.

EXAMPLE 75. The first page of a physics self-test

Self Test taken from Physical Science IGCSE

1. The diagrams show a bus at four different stages of a journey.
    At which stage does the bus with its passengers have the **lowest** centre of mass?

    stage A   stage B   stage C   stage D
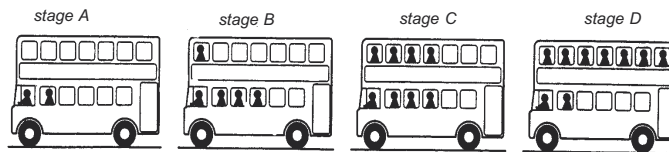
2. The diagram shows a toy bird which balances on its beak.
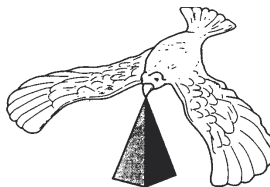
    (a) The weight of the bird is 0.65 N. Calculate its mass. (g = 10 N/kg)

    (b) Mark, **on the diagram above**, a possible line on which the centre of gravity of the bird lies.
    (c) The diagram shows a view from above the bird.

    W_1 5 cm W_2

    plan view
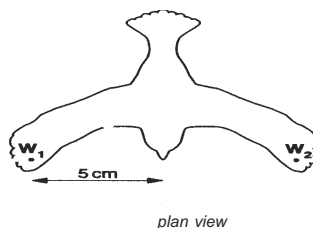
    The bird balances because there are weights in each wing. The weights (W_1 and W_2) are each 0.3 N. Stating the formula you use, and showing your working, calculate the moment of W_1 about the bird's beak.

Source: Namibian College of Open Learning (NAMCOL)

EXAMPLE 76. Using an activity as self-assessment

Self Mark Activity

1. Looking at Mrs Angula's activities for one day, fill in the following grid to decide whether she is a good leader.

Leadership Quality	Does Mrs Angula show this quality? YES/NO	Pick out one phrase from the diary entries above to illustrate your answer.
Has vision		
Leads by example		
Coordinates		
Communicates		
Listens		
Delegates		
Supervises		
Supports		
Is transparent		
Is fair		
Understands		
the team		
Networks		

2. In your own words, please say whether or not Mrs Angula is a good leader and give reasons for your answer.

Source: Namibian College of Open Learning (NAMCOL)

6.2.4 SELECTING THE QUESTION FORMAT

Some question formats work better than others at the various Bloom's taxonomy levels. Table 27 summarises some of the more common matches. Notice that methods suitable for self-assessment appear in column 2.

TABLE 27. Choosing an appropriate question format

1 Category	2 Suitable self-assessment formats	3 Additional methods suitable for teacher-marked assessments
Knowledge	• multiple choice (one or more correct answers) • true/false • matching • fill in the blank • short answer	
Comprehension	• multiple choice (one or more correct answers) • true/false • matching • fill in the blank • short answer	• essays
Application	**Where recognition of how to apply is sufficient:** • multiple choice (one or more correct answers) • true/false **Where actual application of a theoretical method is required:** • short answer • fill in the blank • create/do something (e.g., type a letter; create a database; change a car wheel) **Where actual application of a practical method is required:** • create/do something (e.g., type a letter; create a database)	• short answer
Analysis	**When you wish the learner to identify elements/relationships that you regard as being the correct answers:** • multiple choice (one or more correct answers) • true/false • matching • short answer • fill in the blank **When you wish learners to produce original analyses where you are unable to predict the answers:** • short answer • essay outline • report outline • project outline	• essay • essay • report • project
Synthesis	• essay outline • report outline • project outline	• essay • report • project
Evaluation	• multiple choice (one or more correct answers) • true/false • short answer • fill in the blank • essay outline	• essay • report • project