

Session 9

The Multiple-Choice Test

A. Introduction

An efficient examination that precisely assesses student comprehension can be produced with the assistance of carefully considered test questions and answers. When students take tests designed with learning objectives in mind, the questions assist students in developing good study habits, affect how well students retain information, and prepare them for summative evaluations. In addition, when students perceive that an evaluation is objective and pertinent to their learning, they are less likely to participate in dishonest academic behavior.



Image 1: Yes, Let Your 3-Year-Old Decide Certain Things on Her Own (and Learn to Live With It!) (Source: Perez, 2019: Online)

Aside from the academic purposes of assessment, the teacher can make testing versatile so that it not only evaluates learning but also makes the child realize some values like honesty, integrity, humility, perseverance, and decision-making.

Session 8 Conclusions

1. The test instrument is grounded on the statements of learning outcomes or objectives. The test type, mechanics, and language are cohesive with the learning objectives, which will also determine the instrument's validity and reliability.
2. The objective type of testing is preferred to be used when the teacher needs to assess the cognitive skills expected to be learned by the students by giving absolute responses.

Since several forms and types of tests were discussed in the previous lecture, this material shall provide more specific and focused concepts, guidelines, features, and practices in drafting multiple-choice tests.

B. Session Objectives

This lecture is intended to help you accomplish the following:

1. To discuss the importance, purposes, advantages, and disadvantages of using the multiple-choice type in various aspects and
2. To determine the mechanics and guidelines in crafting valid multiple-choice test items.

C. Session Content

1. Why utilize Multiple-Choice Test Tools?

Exams and tests are a source of frustration for both teachers and pupils. At least four significant purposes can be achieved through the use of assessments in the classroom.

- (1) Students' performance on tests is a valuable indicator of whether or not they are grasping the concepts being taught. Good exams can inspire and direct a student's study efforts.
- (2) Students tailor their study strategies to the questions they anticipate seeing on exams. They will memorize information if they believe the examination will be fact-based but will focus on comprehension and application if they believe the test will include solving problems or bringing together different areas of knowledge.
- (3) Teachers and parents can learn a lot about how well the topic is being presented through standardized testing.
- (4) By indicating which concepts or skills students have not yet mastered and should focus on and then providing a qualified explanation of why each answer is correct or incorrect when scored, tests can reinforce and continue the learning process.

Despite these advantages, taking a test can be emotionally taxing and lead to test-taking anxiety, which unquestionably affects performance. Multiple-choice tests are the most helpful in encouraging, measuring, and reinforcing learning.

Multiple-choice tests can assess basic and advanced knowledge. Multiple-choice questions can quickly measure pupils' knowledge of many areas. Items can also be scored efficiently and accurately. The correctly structured Multiple-Choice Quiz with the most academic value will indicate if the student's answer is right or wrong and explain why each answer was right or wrong, ensuring the learning process continues.

Advantages:

- It is simple to keep score of, either manually or digitally.
- It can be constructed to probe a wide variety of higher-level cognitive abilities.
- It can deal with a wide range of topics yet can still be completed in one sitting.

Disadvantages:

- Literacy is frequently evaluated this way. Even if the student understands very little about the topic, the solution is evident if they read the question carefully.
- It allows students who haven't studied to guess; if their guess is correct, they'll receive credit for the material.
- It introduces false information that can shape students' perspectives on the topic.
- Good questions require effort and expertise to formulate.

2. Crafting Multiple-Choice Test Items

Exams of the multiple-choice variety allow students to select from a pool of more than two answers for each question. Every item on the test is divided into two distinct sections: the stem and the options. There is one option that should be chosen because it is the correct or best choice, and the other possibilities should be ignored because they are distractions. The distracters are placed in such a manner that they are appealing to the individuals who are speculating or who do not know the answer, but at the same time, they are unappealing to the individuals who are aware of the correct response. Even if the options are straightforward, the instructor can still evaluate the student's higher-order thinking skills thanks to the exam's multiple-choice format.

a. Crafting Multiple-Choice Test Items from Learning Objectives

When writing the multiple-choice test item, the primary bases are the learning objective and the central concepts. The following process will provide you with a more systematic way of writing. You may refer to our previous lectures as regards the proper way of stating the learning objectives. This will hint you on how to express the test item, too.

1. *Begin with the expected or correct answer.*

Most test constructors often translate the learning outcomes into the stem of the test item, proceeding with the correct or best answer, then the distracters. However, one technique in writing the multiple-choice test item starts with the expected or correct answer derived from the learning objective from which the stem is formulated. This method is like beginning with the end in mind, which is easier because the tougher task of formulating the stem or question is well-guided by the thought of the expected or correct answer.

Example:

Learning Objective: To illustrate how the three major processes in the water cycle occur

Expected or Correct Answer: Evaporation

If more than one item is required with this learning objective, list them, ensuring they are within the scope of the objective and subject matter.

2. *Draft the stem or question.*

Mindful of the content scope of the learning objective, formulate a stem, condition, and question or challenge that should yield the pre-determined expected or correct answer. The item must also be congruent with the action word of the objective.

Example:

Draft the stem: What is the process that involves water heating up and changing into gas form?

The action of the learning objective is “To illustrate”. The test item should measure how students define, describe, or identify the concepts involved.

You may also invert the pattern with the same learning objective.

Example:

Expected or correct answer: Heats up and turns into gas form

Stem: What happens to water during evaporation in the water cycle?

3. *Assign distracters.*

Distracters are supposed to test the students' absolute learning of the tested concept. They should be parallel with the expected or correct answer in which they also semantically respond to the stem or question.

Example:

Distracters: Condensation, Precipitation, Sublimation

Here are the models of multiple-choice test items for the objective, "To illustrate how the three major processes in the water cycle occur."

1. What process involves water heating up and changing into gas form?
A. Condensation C. Precipitation
B. Evaporation D. Sublimation
2. What happens to water during evaporation in the water cycle?
A. Cools down and forms clouds
B. Expands and becomes rainfall
C. Heats up and turns into gas
D. Gets smaller and vanishes

4. *Be cautious of the "don'ts".*

Aside from the language and proper derivation of the test items from the learning objectives, the test constructor should also be aware of the possible pitfalls that could invalidate the test items. Here are some of the traps comparing poor and good items.

UNWANTED CLUES	ABSURD REPETITION
<p>poor item</p> <p>1. What <u>global</u> problem is a result of the greenhouse effect in the atmosphere? a. global warming c. ozone depletion b. pollution d. carbon monoxide</p>	<p>poor item</p> <p>2. What are beaks of birds for? a. <u>They are used for</u> transportation. b. <u>They are used for</u> eating. c. <u>They are used for</u> protection. d. <u>They are used for</u> attacking enemies.</p>
<p>good item</p> <p>1. The greenhouse effect in the atmosphere may result in ____. a. carbon emission c. ozone depletion b. global warming d. pollution</p>	<p>good item</p> <p>2. How do birds primarily use their beaks? a. attacking enemies c. protection b. eating d. transportation</p>

<p>SPECIFIC DETERMINERS</p> <p>poor item</p> <p>3. Which issue is discussed by sociologists? a. political system b. democracy c. factors that influence people's behaviors d. unemployment rate</p> <p>good item</p> <p>3. Which topic may be mostly studied by economic sociologists? a. democracy c. political system b. human behavior d. unemployment</p>	<p>ARTICLE CLUES (a/an)</p> <p>poor item</p> <p>4. An _____ is a word that describes a noun or a pronoun? a. adjective c. gerund b. adverb d. verb</p> <p>good item</p> <p>4. Which part of speech is used to describe a noun or a pronoun? a. adjective c. gerund b. adverb d. verb</p>
<p>TRIVIAL OPTIONS</p> <p>poor item</p> <p>5. Who is the first woman President of the Philippines? a. Corazon A. Aquino c. Corazon C. Aquino b. Corazon B. Aquino d. Corazon D. Aquino</p> <p>good item</p> <p>5. Who is the first woman President of the Philippines? a. Corazon C. Aquino c. Leni G. Robredo b. Gloria M. Arroyo d. Sara Z. Duterte</p>	<p>OVERLAPPING OPTIONS</p> <p>poor item</p> <p>6. Which is the best synonym of "beautiful"? a. good-looking c. pleasing b. gorgeous d. pretty</p> <p>good item</p> <p>6. Which synonym of "beautiful" is most fitted to describe a cute and attractive girl? a. fine c. noble b. gentle d. pretty</p>
<p>NEGATIVE OVERKILL</p> <p>poor item</p> <p>7. Which does <u>not</u> show an <u>anti</u>(<u>im</u>)moral action? a. acting according to government law b. behaving based on religious beliefs c. dealing with people with respect d. taking advantage of others' weakness</p> <p>good item</p> <p>7. Which is considered to be an "immoral" action? a. taking advantage of others' weakness b. acting according to government law c. behaving based on religious beliefs d. dealing with people with respect</p>	<p>ODD-MAN-OUT</p> <p>poor item</p> <p>8. What science process is involved in using the senses to examine the environment? a. <u>defining</u> c. <u>discussing</u> b. <u>describing</u> d. <u>observing</u></p> <p>good item</p> <p>8. What science process is involved in using the senses to examine the environment? a. analyzing c. experimenting b. describing d. observing</p>

D. Conclusion

The multiple-choice test is versatile because it encompasses almost all cognitive learning skills. The action of the learning objective determines the test stem and the answers following the procedure: (1) begin with the expected answer, (2) Draft the stem or question, and (3) assign worthy distracters.

E. References

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