

Aims of the presentation

Describe the Guide to Writing Objective Tests

Look at myths around objective tests

Explore how to write "difficult" objective questions

Guide to Writing Objective Tests: Background

- ♦ Written as part of the "e-only" project
- ♦ To bring together advice on writing objective tests
 - harmonise advice
 - standardise terminology
- ♦ Produce a standard guide for use within SQA
- ♦ Encourage teams to use objective testing (where appropriate)

Guide to Writing Objective Tests: Contents

1. Introduction to selected response questions
2. Type of selected response questions
3. Choosing selected response questions
4. Writing multiple choice questions
5. Writing questions for higher order skills
6. Item analysis
7. Constructing tests
8. Dealing with guessing

Myths about objective testing

- ♦ Objective tests dumb-down education
Objective tests are easy
- ♦ Objective tests can only be used to assess basic knowledge
- ♦ Writing an objective test is easy
- ♦ Objective tests encourage guessing
- ♦ Objective testing is only fashionable because of e-assessment

Question types

♦ Constructed response questions

- Restricted response
- Extended response

♦ Selected response questions

- True/False
- Matching
- Multiple choice
- Multiple response
- Ranking/Sequencing
- Assertion-Reason
- Likert scale



Advantages and disadvantages of SRQs

- | | |
|----------------------------------|--|
| ✓ Less time to answer | ✗ Time consuming to write |
| ✓ Quick to mark | ✗ Less valid |
| ✓ More reliable | ✗ Not suited for assessing certain abilities |
| ✓ Suited to formative assessment | ✗ Wordy |
| ✓ Good for breadth of knowledge | |
| ✓ Well suited to e-assessment | |

Multiple choice questions

In psychiatry, holding two contradictory views about the same thing is called:

- A cognitive dissonance
- B dementia
- C dissociative disorder
- D factitious disorder

Anatomy of an MCQ

Which one of the following cities is the capital of the United Kingdom?

Stem

Distractor

A

• Edinburgh

Key

B

• London

Distractor

C

• Manchester

Options

Best answer questions

A user wishes to use a search engine to look for information relating to Celtic music that originated in Scotland. Which one of the following queries is likely to produce the best results?

- A Celtic music Scotland
- B "Celtic music" Scotland -football
- C Scotland +celtic +music +originate
- D "Celtic music that originated in Scotland"

Exception questions

Smoking is a contributory factor in the following conditions EXCEPT:

- A diabetes
- B heart disease
- C lung cancer
- D Parkinson's disease

Assertion/Reason questions

The following assertion and reason relate to World War II. Read the assertion and associated reason and then choose a corresponding letter (A-E) to indicate whether the assertion and/or reason is/are true.

- | | |
|-----------|---|
| Assertion | Japan's lack of raw materials was a cause of World War II in Asia. |
| Reason | Japan lacked natural raw material except for small deposits of coal and iron. |
- A Assertion is true and reason is true and the reason is a correct explanation of the assertion.
 - B Assertion is true and reason is true but the reason is not a correct explanation of the assertion.
 - C The assertion is true but the reason is false.
 - D The assertion is false but the reason is true.
 - E The assertion is false and the reason is false.

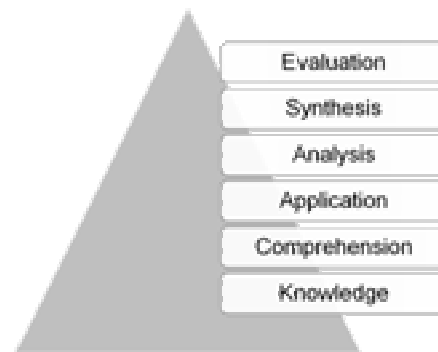
Writing an item

- ♦ Ensure that each item is relevant to the course/unit outcomes.
- ♦ Ensure that the level of language is appropriate to the target cohort.
- ♦ Assess one thing at a time (unless you intend to ask an integrative question).
- ♦ **One correct answer only.**
- ♦ Don't write questions in isolation.
- ♦ Don't include unnecessary words.
- ♦ Pre-test items whenever possible.

Writing MCQs for higher order skills

- ♦ MCQs have reputation for quick-and-dirty assessment
- ♦ Most assess basic knowledge and surface learning
- ♦ BUT they can be used for deeper learning...
 - Scenario questions
 - Passage-based reading

Selecting SRQs – Bloom's Taxonomy



Difficulty & demand

- ♦ Demand
 - Intellectual (cognitive) skills
- ♦ Difficulty
 - "How hard" it is
- ♦ Examples
 - *Describe the main processes that take place during nuclear fusion*
 - *Cross the road when it is clear*

Scenarios – Application skills

Julie is 14 years old and frequently uses an online community called MyParty, which is used as a social network by many of her friends. However, the service is open to any member of the public. She has become very friendly with Jamie, who is another user of the service, whom she has never met. Jamie's profile reports that he is 16 years old and attends a nearby school. Julie and Jamie share many common interests and Jamie has asked to meet Julie, who is keen to agree. Which one of the following is Julie's best course of action?

- A Refuse to meet with him.
- B Agree to meet with him but accompanied with a responsible adult.
- C Agree to meet with him but accompanied with a friend.
- D Agree to meet with him.

Scenarios – Application and analysis

Raj and Sophie, who have never been married, have two children – Ben aged 8 and Shazia aged 2. Raj and Sophie's relationship has ended, and Sophie has married Carlton. Raj has agreed that the children can live with Sophie and Carlton for the time being. For questions 1-4, the options are:

- A Raj and Sophie.
 - B Raj, Sophie and Carlton.
 - C Sophie and Carlton.
 - D Sophie only.
 - E Raj only.
- 1 Who has parental responsibility for the children at present?
 - 2 If Section 8 orders are required in respect of the children, who could apply as of right (without leave) for any Section 8 order?
 - 3 Who would be able to apply as of right (without leave) for a residence or contact order?
 - 4 If Raj obtained a contact order to see the children every week, who would have parental responsibility for the children?

Passage-based reading

1 "Psychoanalysis has been criticised on a variety of grounds by Karl Popper,
2 Adolf Grünbaum, Udo Bunge, Hans Eysenck, L. Ron Hubbard and others.
3 Popper argues that it is not scientific because it is not falsifiable. Grünbaum
4 argues that it is falsifiable, and in fact turns out to be false. The schools of
5 psychology have produced alternative methods of psychotherapy, including behaviour therapy,
6 cognitive therapy, group therapy and person-centred
7 psychotherapy.
8
9 An important consequence of the wide variety of psychoanalytic theories is that psychoanalysis is
10 difficult to criticise as a whole. Many critics have attempted to offer criticisms of psychoanalysis that
11 were in fact only criticisms of specific ideas presented in one or more theories, rather than in all of
12 psychoanalysis.
13 For example, it is common for critics of psychoanalysis to focus on Freud's
14 ideas, even though only a fraction of contemporary analysts still hold to Freud's
major theories." (Wikipedia)

Summary

- ♦ There is a place for selected response tests
 - Very good for assessing basic knowledge
 - Can be used to assess higher order skills
 - Quick to mark (reduce burden on teacher)
- ♦ The question is: "Why shouldn't I assess this knowledge using SRQs?"
 - Should be default method
- ♦ Well suited to item banking

Latest version

<http://www.scribd.com/doc/464785/Objective-Test-Guide>