



# How to create effective questions



Each resource should relate to the **course content and objectives**.



**What is the lecturer's name?**

*This question is ineffective – it doesn't relate to the course or its objectives.*



**What is the capital city of Australia?**

*This question is effective - it only assesses content relevant to its course.*

Resources should not be trivial, overly specific, or too general.

Each resource should be correct and easy to understand. Do NOT add irrelevant material.



What is the capital of Australia?

*This question is effective – it doesn't have any irrelevantly material and is clear.*



Australia, officially the Commonwealth of Australia, is a sovereign country comprising the mainland of the Australian continent, the island of Tasmania, and numerous smaller islands. It is the largest country in Oceania and the world's sixth-largest country by total area. What is the capital of Australia?

*This question is ineffective – it has irrelevant material which obscures the question*

# Encourage high-order thinking

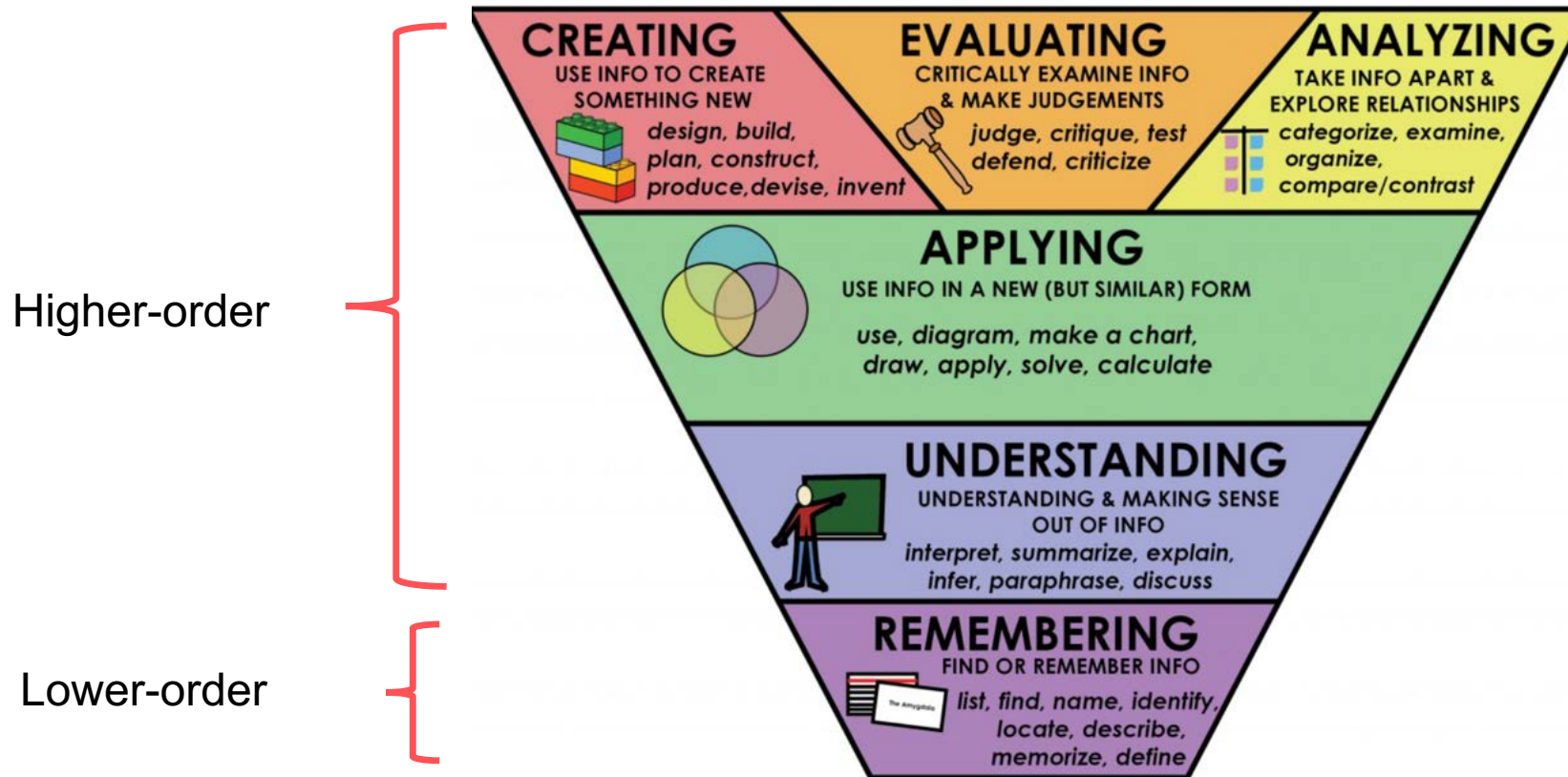


Image source: Rawia Inaim / Kwantlen Polytechnic University

Although higher-order thinking questions can be challenging to develop, researchers suggest they may contribute to a deeper understanding of the topic than other study methods.

# Create 4-6 options that are plausible and from the same category.



**What is the capital city of Australia?**

- Sydney *Plausible*
- Melbourne *Plausible*
- Brisbane *Plausible*
- Canberra *Plausible*

***This question is effective – each option is plausible and from the same category (i.e., Australia cities).***



**What is the capital city of Australia?**

- Earth *Not plausible*
- Canberra *Plausible*
- New south whales *Different category*
- Brisbane *Plausible*

***This question is ineffective – some of the distractors are not plausible or from the same category.***

Having unrealistic options, or not enough options, may make the questions too easy and prevent the questions from testing learning.

# Common errors or misconceptions make great plausible options



**What is the capital city of Australia?**

- Sydney *Common misconception*
- Melbourne *Common misconception*
- Perth
- Canberra

*This question is effective – it includes common misconceptions and therefore is a good assessment of whether a student knows the capital city of Australia.*



**What is capital city of Australia?**

- Adelaide
- Canberra
- Logan
- Perth

*While this question is satisfactory it can be improved by including common errors or misconceptions.*

## Avoid negatives such as “NOT” or “EXCEPT”



**Which continent is Australia apart of?**

- Oceania
- Asia
- Australia
- Europe

*This question is effective – the question is positively worded which makes it easy to understand.*



**Which of the following is NOT true about Australia?**

- It's part of the continent Oceania
- Its First Nation people are the oldest culture on earth
- Its capital city is Canberra
- Its national flower is the Golden Wattle

*This question is ineffective – it asks a negative question making it harder to understand.*

Negatives can make the question unnecessarily difficult; the examinee must shift from the usual task of finding correct answers to finding incorrect one. If a significant learning outcome requires negative phrasing, the negative element should be emphasized.

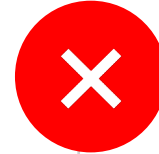
# Avoid Using Complex Item Types or Answering Procedures



**Who received a Nobel Prize for discovering the structure of DNA?**

- Francis Crick
- James Watson\*
- Rosalind Franklin
- Ryan Noah

*This question is effective – it is clear and avoids complex options*



**Who received a Nobel Prize for discovering the structure of DNA?**

- Francis Crick
- James Watson
- Rosalind Franklin
- A and B
- B and C
- A and C

*This question is ineffective – it is too complex and may confuse students*

Test-taker can use partial knowledge to achieve a correct answer, these items are not better at measure higher-order thinking, they can be complex to create, and they are not effective tools for learning because they obscure the correct answer



# Try write questions that can be answered without looking at the options



## Which of the following is true?

- The capital city Australia Sydney
- The capital city Australia is Melbourne
- The capital city of Australia is Brisbane
- The capital city city of Australia is Canberra

***This question is ineffective – without looking at the options you cannot answer the question***



## What is the capital city of Australia?

- Sydney
- Melbourne
- Brisbane
- Canberra

***This question is effective –you can answer the question without looking at the options***

While this isn't always possible (such as when creating higher-order questions) try follow this rule when you can as it helps promote active recall of content rather than simple recognition.

# Avoid fill-in-the-blank or sentence-completion items

these type of questions can be more difficult to understand



**What is the main reason so many people moved to California in 1849?**

*This question is effective – the question is direct, and the student can focus on answering the question*



**In addition to fertile and inexpensive land, \_\_\_\_\_ is an important reason for people moving to California in 1849?**

*This question is ineffective – this is less clear and takes more mental effort to answer.*

# Avoid “None of the above” and “All of the above”

test-taker can use partial knowledge to achieve a correct answer



**Which of the following is a city in Australia?**

- Sydney
- Melbourne
- Queanbeyan
- Albany
- All of the above

*This question is ineffective – a test-taker that knows Sydney and Melbourne are cities of Australia will know the Answer must be “All of the Above” without actually knowing Queanbeyan and Albany are also cities.*



**What is the Capital city in Australia?**

- Paris
- London
- Berlin
- Johannesburg
- None of the above

*This question is ineffective – the test-taker can answer it correctly by recognizing that two of the options are false. This undermines the key mechanism that supports learning from tests (i.e., retrieval of the correct information).*

# Write an explanation that helps those who are struggling



The explanation should be clear and free of errors.



The explanation should explain why the answer is correct and why the incorrect options are wrong.



Questions that require working out (e.g. math questions) should include a worked solution.

## 4. Write Question Explanation

- A. **A survey and self-report design** is a research design that collects responses using a nominal or numerical scale. This is because if a design is collecting *responses* the participants are filling out a survey and are giving reports on-themselves hence it is a "self-report" design.
- B. **A correlation design** is a type of non-experimental research method, in which a researcher measures two variables, understands and assesses the statistical relationship between them with no influence from any extraneous variable.
- C. **An experimental design** allocates participants to experimental groups to investigate the difference between the groups. Types of design include Repeated Measures, Independent Groups, and Matched Pairs designs.
- D. **A case study** is an in-depth study of a particular situation rather than a sweeping statistical survey. It is a method used to narrow down a very broad field of research into one easily researchable topic.

A good explanation, that outlines why each options is correct or incorrect

