ACRL 2019

Select Slides from:

At-Risk Students:

Needs and Responses in the Information Literacy Classroom

Jessame Ferguson
Lisa Janicke Hinchliffe
April Cunningham

Standardized Test Quandry?

- Hate them or love them?
- Assess quickly if students can apply learning
- Determine if an outcome was achieved
- Combine with other factors for bigger picture
- A well-designed assessment  improvement
- Experimental mindset

UbD: Stage 1 – Identify desired results

Goals →

Understandings (Big Ideas) and Predictable Misunderstandings →

Essential Questions (to foster inquiry, understanding, transfer of learning) →

Learners will know and do

Understandings

Components:

- Big Ideas
- Specific Understandings
- Predictable Misunderstandings

#acrl4atrisk

Example

Goals: ILS1.2: “information literate student identifies a variety of types and formats of potential sources for information”

Understandings:

- Big Ideas – Scholarly Communication Cycle; FW2: Information Creation as a Process; FW5: Scholarship as Conversation
- Specific Understandings – Peer Review and Formal Cited Sources as Defining Characteristic of Scholarly Articles
- Predictable Misunderstandings – Database Limiter Works on Article Level; Reviewed = True
- Essential Questions: If authority is constructed and contextual (FW1), what is the relationship of authority and information quality, credibility, and trustworthiness?

Example

KNOWLEDGE AND SKILLS

- describe the peer review process as typically structured in their discipline
- explain advantages and limitations of information published through the peer review process
- describe the process for determining whether a particular article was peer reviewed
- describe reasons for their professors' requirement to cite peer reviewed sources

BE ABLE TO

- identify peer reviewed articles in a set of retrieved results from a database search
- determine whether a particular article was peer reviewed
- use peer reviewed articles as required and/or appropriate to their information-based work

Reflecting on Outcomes

- Student is noun
- Possible formats:
    - Separate - knowledge/skill and application
    - Combine - understanding/skill IOT application
- Check for alignment:
    - Acquire
    - Make meaning
    - Transfer
- Judge-able

Evidence and Criteria

Goals:

- Move beyond “I Know It When I See It”
- Provide clear guidelines for students
- Make visible what is valued/judged

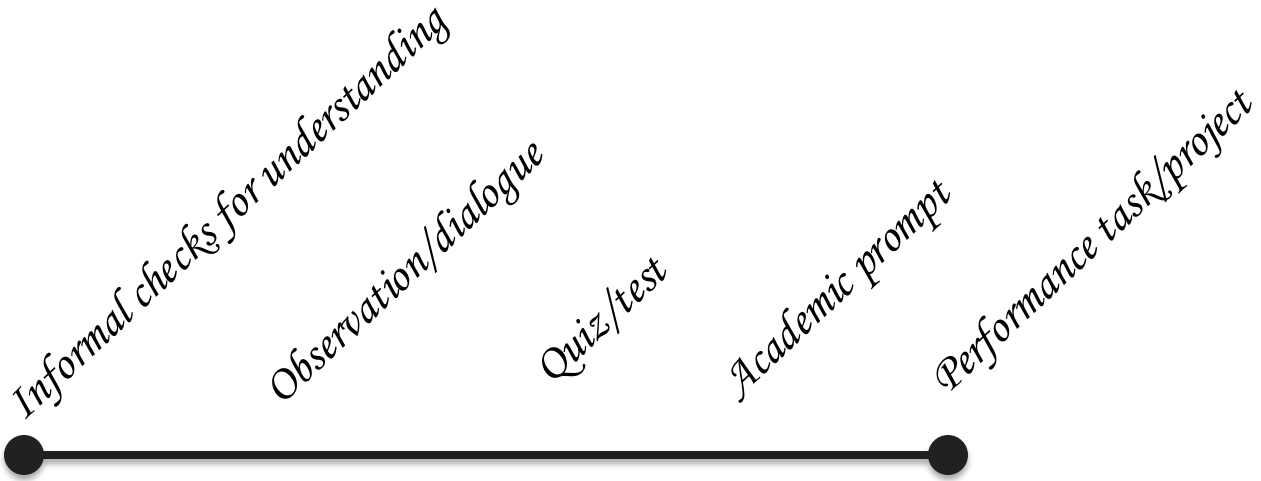
Accomplished by:

- Defining what the results should look like
- Clarifying interpretations of terms like “effective”
- Developing expectations

Learning Goals/Teaching Roles

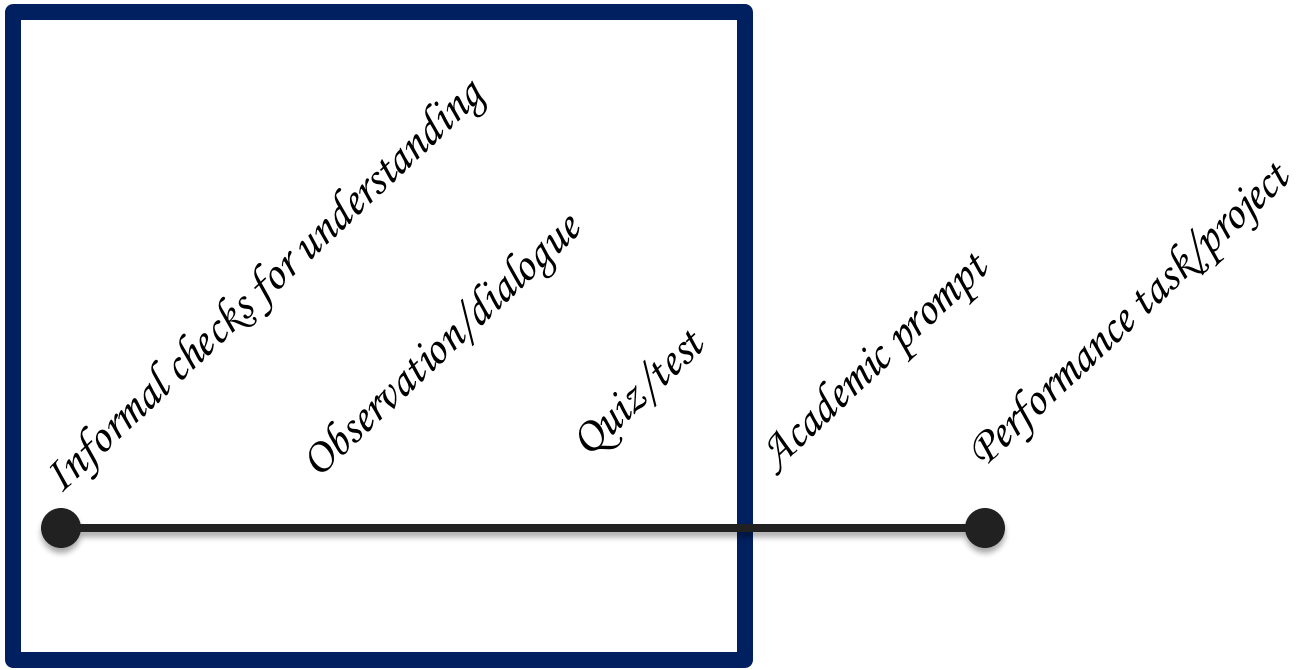
ACQUIRE	MAKE MEANING	TRANSFER
This goal seeks to help learners *acquire* factual information and basic skills.	This goal seeks to help students *construct meaning* (i.e., *come to an understanding*) of important ideas and processes.	This goal seeks to support the learner's ability to *transfer* their learning autonomously and effectively in new situations.
Direct Instruction: In this role, the teacher's primary role is to *inform* the learners through explicit instruction in targeted knowledge and skills; differentiating as needed.	Facilitative Teaching: Teachers in this role engage the learners in actively processing information and guide their inquiry into complex problems, texts, projects, cases, or simulations; differentiating as needed.	Coaching: In a coaching role, teachers establish clear performance goals, supervise on-going opportunities to perform (independent practice) in increasingly complex situations, provide models and give on-going feedback (as personalized as possible). They also provide "just in time teaching" (direct instruction) when needed.
Strategies include: · diagnostic assessment · lecture · advanced organizers · graphic organizers · questioning (convergent) · demonstration/modeling · process guides · guided practice · feedback, corrections · differentiation	Strategies include: · diagnostic assessment · using analogies · graphic organizers · questioning (divergent) & probing · concept attainment · inquiry-oriented approaches · Problem-Based Learning · Socratic Seminar · Reciprocal Teaching · formative (on-going) assessments · understanding notebook · feedback/corrections · rethinking and reflection prompts · differentiated instruction	Strategies include: · on-going assessment · providing specific feedback in the context of authentic application · conferencing · prompting self assessment and reflection

Kinds of Learning Assessments

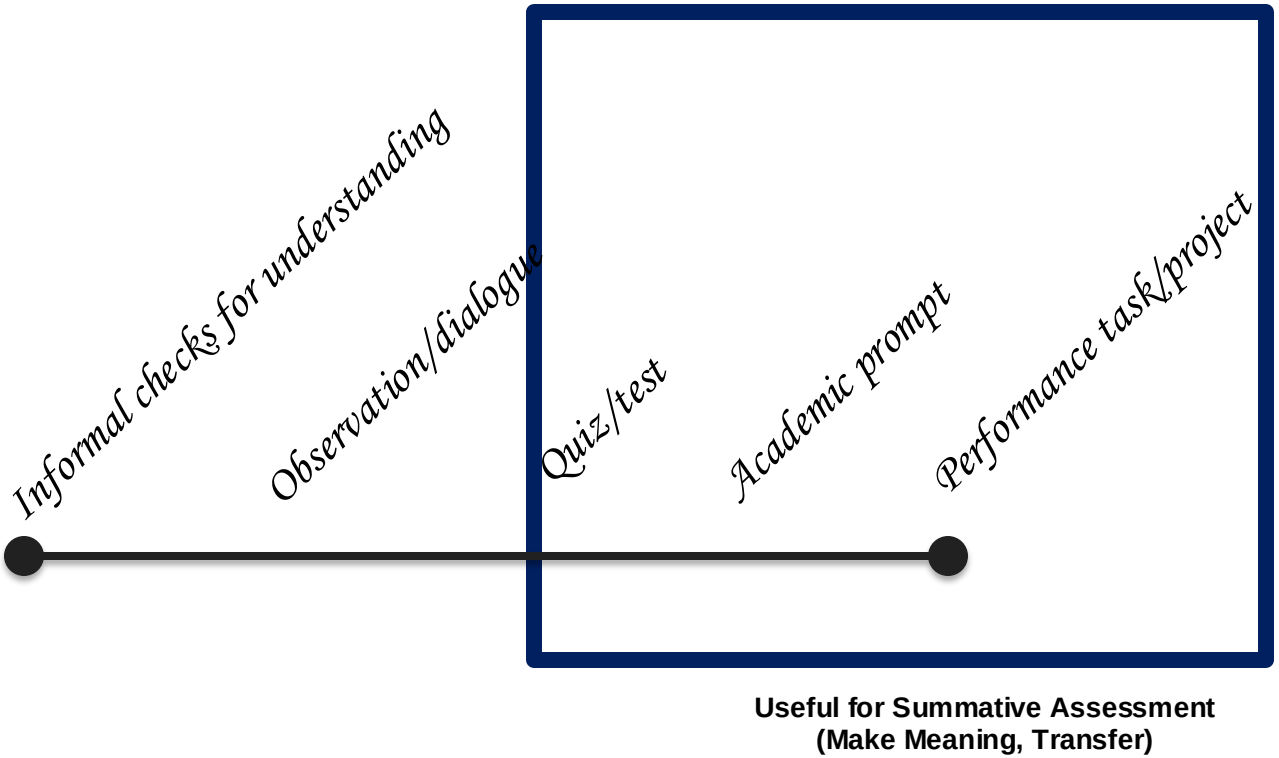


Wiggins and McTighe, *Understanding by Design,* p. 12

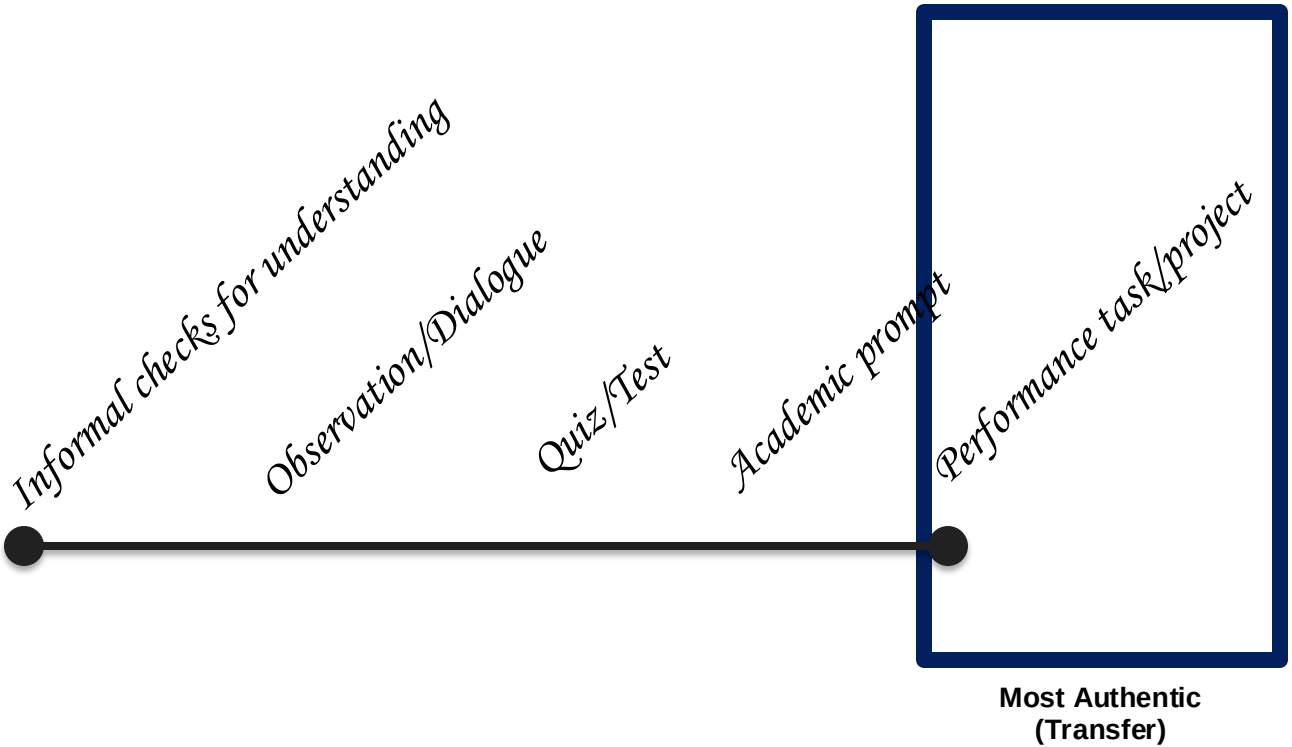
Kinds of Learning Assessments



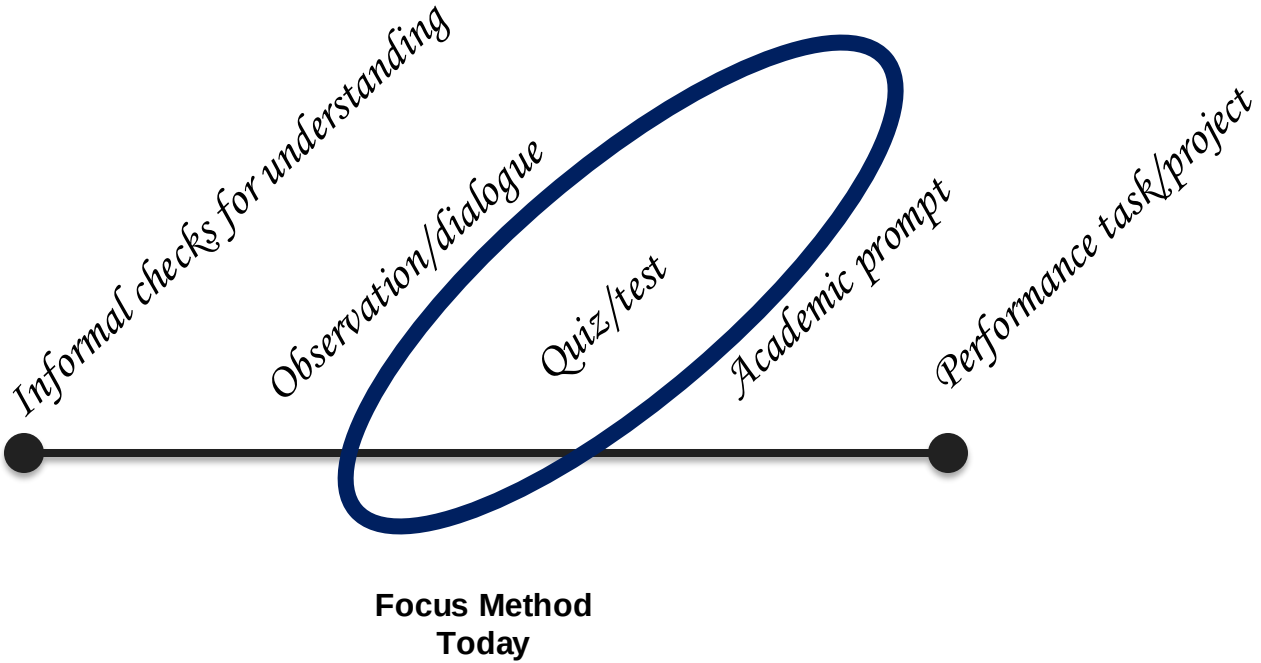
Kinds of Learning Assessments



Kinds of Learning Assessments



Kinds of Learning Assessments



Wiggins and McTighe, *Understanding by Design,* p. 12

Using Fixed Choice Quizzes

Strengths

- Focused on effects of the intervention
- Standards are set during the quiz creation
- Quiz serves as reminder/second exposure
- Results can be available quickly after instruction
- Administered in less time = You're sure to get the data

Limitations

- Writing good questions is hard
- Question types are constrained
- Students might guess
- Distractors may strengthen students' misunderstandings

Higher Order Thinking [1]

"By adhering to certain strategies, it is possible to construct multiple choice items measuring processes such as knowledge application and analysis."

--Darina Scully
Centre for Assessment Research, Policy & Practice in Education
Dublin City University

Higher Order Thinking 2

"[E. Robert] Burns (2010, p. 332) distinguished between 'one-neuron' items, whereby, 'figuratively, the student only has to fire one neuron to obtain the memorized, tidbit answer', and 'multiple-neuron' items, which require an understanding of 'interconnections between knowledge'."

From "Constructing multiple-choice items to measure higher-order thinking" by Darina Scully

Review: Desired Results

Goals: ILS1.2: “information literate student identifies a variety of types and formats of potential sources for information”

Understandings:

Big Ideas – Scholarly Communication Cycle; FW2: Information Creation as a Process; FW5: Scholarship as Conversation

Specific Understandings – Peer Review and Formal Cited Sources as Defining Characteristic of Scholarly Articles

Predictable Misunderstandings – Database Limiter Works on Article Level; Reviewed = True;

Essential Questions: If authority is constructed and contextual (FW1), what is the relationship of authority and information quality, credibility, and trustworthiness?

Review: Outcomes (Know & Do)

KNOWLEDGE AND SKILLS

describe the peer review process as typically structured in their discipline

explain advantages and limitations of information published through the peer review process

describe the process for determining whether a particular article was peer reviewed

describe reasons for their professors' requirement to cite peer reviewed sources

BE ABLE TO

identify peer reviewed articles in a set of retrieved results from a database search

determine whether a particular article was peer reviewed

use peer reviewed articles as required and/or appropriate to their information-based work

Identifying Desired Results -/-> Observation of Learning

Identify Desired Results of the Instruction:

<-?->

Observe and Evaluate Students' Learning:

- Goals
- Understandings/Misunder-standings
- Big Ideas
- Essential Questions
- Outcomes (Know and Do)

- Informal or Formal Assessment
- Near or Far Transfer
- Direct or Indirect Evidence
- Traditional or Performance Assessment

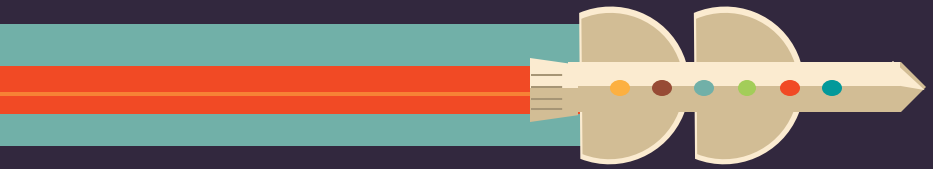
Identifying Desired Results → Performance Indicators → Observation of Learning

Identify Desired Results of the Instruction:

- Goals
- Understandings/Misunderstandings
- Big Ideas
- Essential Questions
- Outcomes (Know and Do)

Observe and Evaluate Students Learning:

- Informal or Formal Assessment
- Near or Far Transfer
- Direct or Indirect Evidence
- Traditional or Performance Assessment



#acrl4atrisk

Any Learning Outcome Can Be Observed in Multiple Ways

Performance Indicators let you define how you will observe it.

- They lighten your cognitive load.
- They fine tune the connection between your outcome and your evidence.

Operationalizing for Assessment with a Quiz 1

Outcome – Knowledge and Skills

- explain advantages and limitations of information published through the peer review process

Performance Indicators for Quiz Items

- Given a list of statements about the peer review process, students will be able to categorize each item as an advantage, limitation, or not true about peer review.
- Given a research scenario describing an information need, students will select the appropriate reason(s) why peer reviewed articles are the most useful sources for fulfilling that information need.
- Given a research scenario describing an information need, students will select the appropriate reason(s) why peer reviewed articles are not the most useful sources for fulfilling that information need.

Operationalizing for Assessment with a Quiz 2

Outcome – Knowledge and Skills

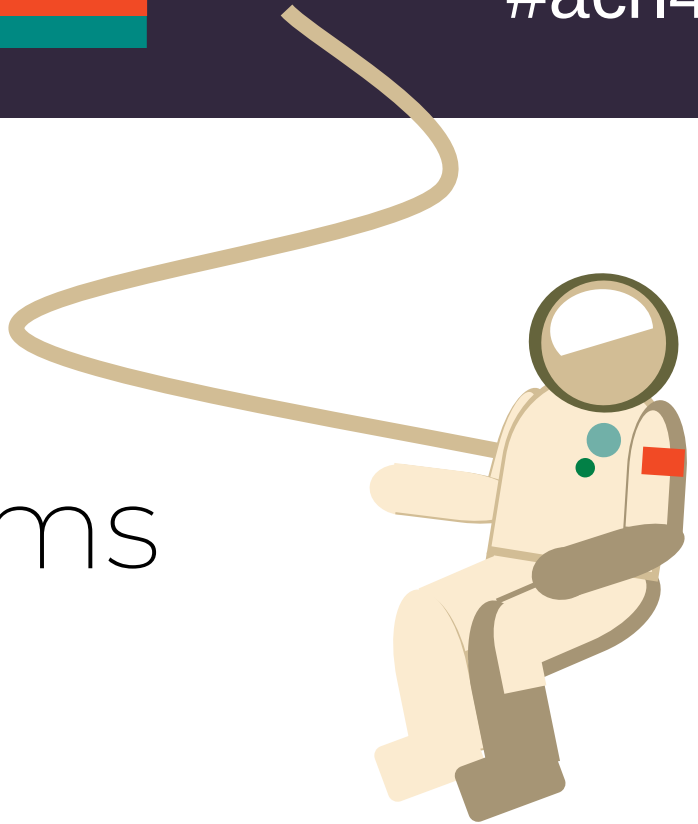
- describe the process for determining whether a particular article was peer reviewed

Performance Indicators for Quiz Items

- Given a list of characteristics they can look for to determine whether an article is peer reviewed, students will select the correct characteristics.
- Given a scenario in which a student applies one or more wrong criteria for determining if a source is peer reviewed, students will correctly identify the wrong criterion/criteria.

#acrl4atrisk

Tips for Writing Items



Traditional Items

What is the problem with using a source for an academic paper when you cannot determine who is responsible for it (e.g., there is no author or organization listed)?
Select the best answer.

a) You won't know if the creators of the information are a reliable source.
b) You won't know who to contact about it if the information is unclear.
c) You won't know which citation style you should use without an author.

Scenario-Based Items

Sivonne is doing research about healthcare in the United States for her Sociology class.
She starts by finding background information on the history of healthcare in the U.S.
Then she explores blog posts to understand the strong feelings on both sides of the issue.
Finally, she searches the library's databases for articles that back up what she has decided to argue in her paper.

Which of Sivonne's strategies shows that she is open to learning from her research and changing her mind?

Anatomy of a Quiz Item

- Stem=Set up/scenario
- Item Shell
- Response instructions

- Correct answer
- Distractor-answers

Types of Item Responses

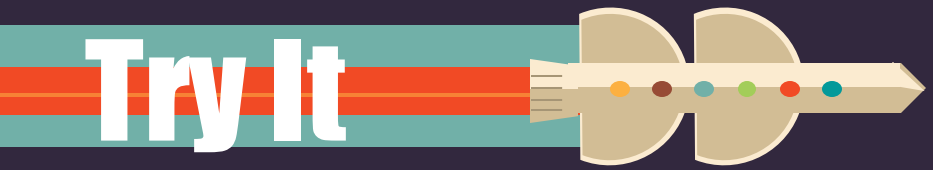
- Select the best answer.
- Match each option to the correct description.
- Put the similar options together.
- Choose all that apply.
- Put the options in order (e.g. from first to last, from most to least based on a specified criterion, etc.

Item Writing Guidelines 1

- Focus each item on a single mental behavior instead of a complex chain of behaviors.
- Include the central idea in the stem instead of the options. The answer options should always be shorter than the stem.
- Word the stem and options positively. It introduces unnecessary complexity and increases errors to have students select the one that is NOT the right answer.

Item Writing Guidelines 2

- Introduce new information or novel situations to get at students' higher-order thinking.
- Avoid library jargon unless you are testing library vocabulary.
- Write scenarios in third-person.
- Do not use contractions or abbreviations.
- Minimize the amount of reading in each item as much as possible.



#acrl4atrisk

Work with a partner to write a quiz item.

1. Choose a performance indicator.
2. Choose an item shell to adapt.
3. Write a question and response instructions.
4. Write the correct answer(s).
5. Write the distractors.

Wrap Up: Next Steps for Items

- Peer review of quiz items with librarians and others
- Revise items

- Cognitive interviews or piloting with students like your students
- Revise items

- Administer quiz
- Analyze item performance as well as student performance

Wrap Up: Tips for Quizzing

- Collect students' ID numbers. Then disaggregate data by student characteristics to identify gaps in your effectiveness.

- Consider using follow-up confidence questions.

  How sure are you about the answer you selected in the question above?

  a) I'm pretty sure
  b) I'm guessing

Quizzes: Suggested Readings

Haladyna, T. M. (2015). *Developing and validating multiple-choice test items*. New York: Routledge.

Rodriguez, M. C., & Haladyna, T. M. (2013). Writing selected-response items for classroom assessment. *SAGE handbook of research on classroom assessment*. 293-311. Los Angeles, CA: SAGE Publications.

Scully, D. (May 2017). Constructing multiple-choice items to measure higher-order thinking. *Practical Assessment, Research & Evaluation*, *22*(4). Available online: http://pareonline.net/getvn.asp?v=22&n=4

Final Reflections

"Being right keeps you in place. Being wrong forces you to explore."

— Steven Johnson, *Where Good Ideas Come from: The Natural History of Innovation*

Launch

#acrl4atrisk

Find more details at:
https://digitalcommons.ursinus.edu/imls_ilframework/
Expand on our beginnings
Add your resources and results to the toolkit!

INSTITUTE of Museum and Library SERVICES

This project was made possible in part by the Institute of Museum and Library Services grant number, SP-02-16-0022-16.

Graphic Design by Jessica Barbera

THANK YOU JESSICA!