

The Role of Metacognition in Student Learning in Higher Education

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Set the stage...

- Describe **certainty** and its roles in metacognitive-based assessment (Phase I).
 - The **degree of belief** that **one's response** to an assessment item **is correct**.
- Describe **confidence** and its roles in metacognitive-based assessment (Phase II).
 - The **degree of belief** in **one's ability to provide a correct response** to an assessment item (given some frame of reference for what the item will concern and entail)



Certainty Based Performance Levels

Trueness Component *†

From a Correct Response:

From an Incorrect Response:

Justification Component †

From being
Not at all
Certain (1):

Absent Knowledge †

- Correct *wild guesswork*
 - No learned information
 - Item omission as an alternative

Absent Knowledge *†

- Incorrect *wild guesswork*
 - No learned information
 - Item omission as an alternative

From being
Somewhat
Certain (2):

Partial Knowledge †

- Correct *educated guesswork*
 - Correct partial information

Partial Knowledge †

- Incorrect *educated guesswork*
 - Correct partial information

From being
Very
Certain (3):

Complete Knowledge *†

- Correct *mastery*
 - True and justified information

Flawed Knowledge †

- Incorrect *full misinformation*
 - Incorrect information believed to be correct
- Incorrect *partial misinformation*
 - Incorrect *educated guesswork*
 - Incorrect partial information

Key: * Correctness-Only Assessments
† Certainty-Based Assessments

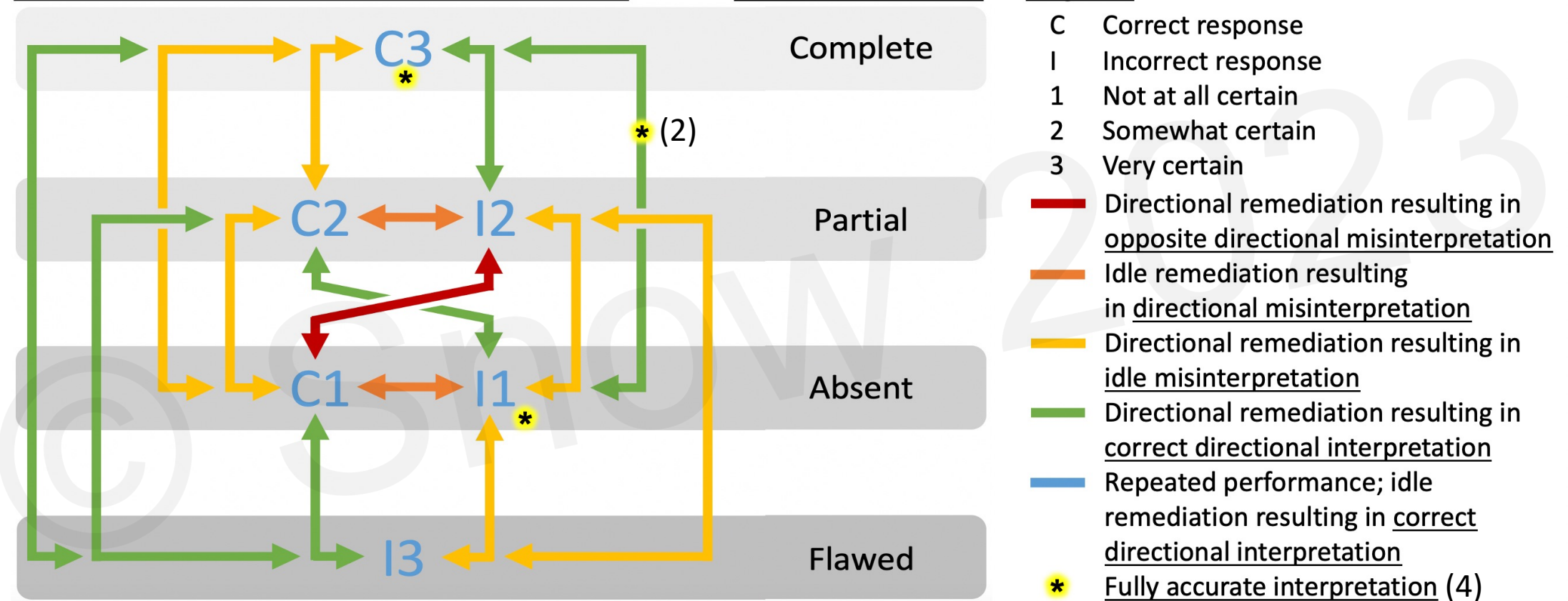
Note the inherent error in correctness-only assessment frameworks

Remediation Possibilities *REVISITED*

Certainty-Based Remediation Possibilities

Knowledge Level

Legend



Unconventional remediation: Remediation direction and/or knowledge level that would be misinterpreted by correctness-only assessment.

Confidence + Correctness + Certainty

- The “3C” Methodology
- Alignment of:
 - Pre-assessment reflection of performance ability
 - *How confident are you that you can provide a correct response to a question regarding each of the following learning objectives?*
 - _____ LO#: <<xyz>>
 - Open assessment; respond to items
 - Post-response reflection of certainty
 - *How certain are you that your provided response is correct?*

