

## Shortened Jr. Metacognitive Awareness Inventory (MAI, Jr.-S)

This measure assesses students' self-reported metacognitive awareness in a domain-general context.

### Purpose

- The shortened version of the Jr. Metacognitive Awareness Inventory (MAI, Jr.-S) provides a condensed yet validated approach to measuring adolescents' knowledge about and regulation of their own cognition.
- Metacognition is strongly related to learning, decision-making, and problem-solving. Understanding students' metacognitive skills can provide insight to how they are learning and what instructional supports they may benefit from to advance their learning.

### Measure Details

- The final version of the MAI, Jr.-S has seven items across two dimensions of metacognition:
  - Knowledge of Cognition: 3 items
  - Regulation of Cognition: 4 items
- All items are measured on a 0-100 scale, with 0 representing "never true of me" and 100 representing "always true of me."
- The original scale contained 18 items, evenly balanced across the two dimensions, and gathered responses on a 5-point Likert scale.

### Contribution to the Field

- This measure was developed in response to school district partners' requests to minimize the amount of time needed for data collection within efficacy studies; these requests were due in part to limited instructional time during the COVID pandemic.
- The request from district partners is in alignment with recommendations from the field regarding measuring cognitive processes like metacognition, where survey fatigue can influence assessment accuracy, especially when administering multiple measures (e.g. Roebers, 2017; Schraw, 2009).
- This measure was also developed using data from a demographically diverse sample of students across grades 6 through 8.

### Development History and Previous Uses

- The MAI, Jr.-S was developed through a multiple year modeling and validation effort conducted in the same school district. In the first year, the original MAI, Jr. was administered and initial modeling analyses were conducted. In the second year, the shortened version was administered, and this data was used to refine the model into its final version.

Shortened Version of the MAI, Jr.  
Gutierrez de Blume, A. P., Rhodes S., & Bryck R.L.  
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- The MAI, Jr.-S has been used in three additional studies after its validation, including two mid-to-large-scale evaluation studies with middle grades students.

## Accessing the Measure

- You may access the shortened measure here:
  - Gutierrez de Blume, A.P., Rhodes, S.R., Bryck, R.L. (2024). Metacognitive awareness among middle school adolescents: Development and validation of a shortened version of the MAI, Jr. *Psychologia: Advances de la Disciplina*, 18(2), 55-66. <https://doi.org/10.21500/19002386.7034>
- You may access the original MAI, Jr. here:
  - Sperling, R.A., Howard, B.C., Miller, L.A., Murphy, C. (2002). Measures of children's knowledge and regulation of cognition. *Contemporary Educational Psychology* 27(1), 51-79. <https://doi.org/10.1006/ceps.2001.1091>
- For additional information, please contact:
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## Associated Publications

Smith, T., Williams, R., Cade, W., Joshi, M., Meyer, C., Dedrick, D., Margolin, J., Zhu, B., & Pruitt-Britton, T. (2025, August). *CueThinkEF+ phase 4 evaluation: Final report*. American Institutes for Research. <https://osf.io/y2wr5>