

Metacognitive level of chemistry students in the chemistry department of Universitas Negeri Surabaya

The article went through 2 rounds of and reviewers A and B have agreed in advance to publish their reports, anonymously.

The authors agreed to disclose the reviewers' reports and their responses to the reviewers' comments.

Disclaimer: The peer review report content is the entire copy of the reviewers' and authors' comments. Typing and punctuation errors are not edited.

ROUND 1

Reviewer A: Anonymous

Recommendation: See Comments

I suggest improving the quality of the figures, as well as a slight increase in size to enhance visibility and comprehension. I also suggest adding an identification for the figure, explaining what it represents.

I suggest adding a brief explanation mentioning that it was John Flavell, the author who coined the term "metacognition" in the 1970s.

Reviewer B: Anonymous

Recommendation: Revisions Required

1. The article is relevant to the field of chemistry education by investigating the levels of metacognitive skills among students in different academic programs. The general structure and data are presented clearly. However, the text needs some changes.
2. The abstract fulfills its informative function but repeats ideas and lacks conciseness. The third highlight: "The first-year students showed the highest metacognitive scores, while the fourth-year students had the lowest, according to an intriguing study." Contradicts the claim that the classes are almost identical in ability.
3. The introduction presents a good initial review of metacognition in education and cites relevant references, including international and local authors.
4. The literature review addresses authors relevant to the understanding of metacognition. However, the section repeats concepts from the introduction and mixes theoretical review with practical implications without a clear separation. I suggest reorganizing the concepts already defined and making it clear what the theoretical basis is and what the results from other studies. In addition, it is important to establish what metacognitive skills are, since this is the central object of the research.
5. Regarding the methodology, the description of the sample could be clearer. Azwar's criteria (2018) are mentioned, but they are not described or discussed in detail, which compromises the understanding of the analysis.
6. The data are relevant, and the tables are organized. However, the section mixes statistical interpretation with subjective statements from students without delimiting the qualitative and quantitative methods. There are contradictions during the discussion of the data; while it is stated that the classes have "almost identical" abilities, the data show significant variations. The ANOVA and Duncan analyses are cited, but they could be described or presented with graphs for a better understanding. For the rewrite, it's suggested that you make clear the difference between quantitative and qualitative results, explain the inferences drawn from the ANOVA, talk about how the students' reports were collected and analyzed, and talk about the empirical results of the references given in the introduction and the theoretical background.
7. Regarding the conclusion, the suggestions are vague and do not derive directly from the results found. I also recommend discussing the limitations and potential for future research.

ANSWERS TO ROUND 1

[Author's Files](#)

ROUND 2

Reviewer A: Anonymous

Recommendation: Accept Submission

The suggested adjustments have been made. This version of the text demonstrates quality and can be published.

[Reviewer Files](#)

Reviewer B: Anonymous

Recommendation: Accept Submission

Dear Editor,

The suggested revisions have been duly incorporated by the authors, and no further modifications are required at this time.

ACCEPT SUBMISSION

01 October. 2025