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| Journal Name: | [**Asian Journal of Education and Social Studies**](https://journalajess.com/index.php/AJESS) |
| Manuscript Number: | **Ms\_AJESS\_138678** |
| Title of the Manuscript: | **RICOSRE and Miro: An Effective Combination for Improving Scientific Argumentation Skills in Ecosystem Materials** |
| Type of the Article | **Original Research Article** |

**PART 1: Comments**

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|  | **Reviewer’s comment**   |  |  | | --- | --- | | **Artificial Intelligence (AI) generated or assisted review comments are strictly prohibited during peer** | | | **review.** |  | | **Author’s Feedback** (It is mandatory that authors should write his/her feedback here) |
| **Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.** | The RICORSE approach in process lessons enhances critical thinking and problem-solving skills. Through RICORSE, students explore concepts step by step, leading to meaningful learning. This structured and reflective process helps students engage deeply with the content. Furthermore, MIRO as a tool for implementing RICORSE models is facilitating student to have collaborative learning and organizing the idea and argumentation through argumentation patterns. Learning Approaches like this are very relevant to students, and an article about this approach is great to publish for reflective evaluation and new inspiration for teachers. | Thank you. Ya, this research examines innovative learning approaches so that they are very relevant for teachers as inspiration for learning approaches. |
| **Is the title of the article suitable?**  **(If not please suggest an alternative title)** | Yes, the title of an article is suitable, but it is better to use a word that reflects the scientific title of the article. Suggest an alternative title: RICORSE and Miro: Teaching Approach for Improving Scientific Argumentation Skills in Ecosystem Materials. | Thank you for the suggestion, I agree and have changed the title of the article according to your recommendation. |
| **Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.** | Make a paragraph that is a narrative that contains aims, method, gaps and results of the research that you did. Do not write it with a point. | Thanks for the suggestion, I have changed the abstract to a narrative that contains aims, method, gaps and results of the research, not a of points. |
| **Is the manuscript scientifically, correct? Please write here.** | **Introduction**  Overall, the introduction has pointed to a relevant and current issue. However, it is still necessary to explain what contribution will be made in this research (Make it clear whether the contribution is conceptual (theory development), or practical (improving the quality of learning outcomes, such as improving argumentation skills). Explain the research objectives clearly.    **Metodh**  Explain the result of the validity and reliability that have been carried out, and explain the method used for validity and reliability, including who validated it.    **Result and Discussion**   * The aims of the research must be written down in the introduction, not in the results and discussion * This article states that Systematic argumentation formulation can improve scientific argumentation skills, so it provides reinforcement through citations of scientific articles * Provide the results and discussion with a flow chart of RICOSRE that you implemented in this research * Add a discussion of the effects of learning methods in the ecology material used in relation to argumentation skills (in this case, the ecology material has not been explained in detail about its implementation).       **Conclusion** Clear! | **Introduction**  I have added the research contribution at the end of the introduction as follows: This research contributes practically to improving the quality of students' scientific argumentation abilities, and as an inspiration for teachers in developing professional competence in teaching by using a variety of learning models and media when teaching in the classroom. I have placed the research objectives at the end of the introduction section paragraph,  **Metodh**  I have added the results of the validity and reliability test of the instrument, including the method and who validated it.  **Result and discussion**   * I have placed the research objectives/aim of the research at the end of the introduction section paragraph. * I have added an article that supports the states that a systematic argumentation formulation can improve argumentation skills: This is in line with the research by Rahayu, et al. (2022), which states that the application of learning strategies by organizing arguments can help improve the quality of students' scientific arguments. * I have added a flowchart of the implementation of ricosre assisted by miro. * I have added a little bit about the relationship between ecosystems and scientific arguments, namely that the Ecosystem material contains socialscientific issues such as deforestation, habitat loss, and other contextual issues that are closely related to everyday life. Based on the statement by Christenson et al. (2017) that the socioscientific issues approach can develop students' critical thinking and science literacy skills so that they can debate with socioscientific arguments. |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.** | 1. The reference is almost good, at least. Below is an additional reference that would make your article good.    Pengembangan E-LKPD berbasis Argument Mapping pada Materi Perubahan Lingkungan untuk Meningkatkan Kemampuan Argumentasi Siswa  *Mutia Sri Rahayu, Rita Istiana, Desti Herawati*  DOI: [**https://doi.org/10.37058/bioed.v7i1.3917**](https://doi.org/10.37058/bioed.v7i1.3917) | 1. Thank you for the additional reference suggestion. I have added the reference to support the introductions and discussion section.   This is in line with the research by Rahayu, et al. (2022), which states that the application of learning strategies by organizing arguments can help improve the quality of students' scientific arguments. (discussion section).  A learning approach that provides opportunities for students to learn to argue in science learning is needed (Acar et al., 2015). (introduction)  The RICOSRE model and discovery learning require an understanding of concepts as the basis for constructing scientific arguments. Based on Acar et al. (2017), argumentation skills improve with mastery of concepts. (discussion)  Ecosystem material contains socialscientific issues such as deforestation, habitat loss, and other contextual issues that are closely related to everyday life. Based on the statement by Christenson et al. (2017) that the socioscientific issues approach can develop students' critical thinking and science literacy skills so that they can debate with socioscientific arguments. (discusion) |
|  | Acar, Ö., Patton, B. R., & White, A. L. (2015). Prospective secondary science teachers’ argumentation skills and the interaction of these skills with their conceptual knowledge. *Australian Journal of Teacher Education*, *40*(9), 132–156.<https://doi.org/10.14221/ajte.2015v40n9.8>    Christenson, N., Gericke, N., & Rundgren, S.-N. C. (2017). Science and language teachers’ assessment of upper  secondary students’ socioscientific argumentation. *International Journal of Science and Mathematics Education*, *15*(8), 1403–1422.<https://doi.org/10.1007/s10763-016-9746-6>    2. Write references according to the style of the article (Pay attention to the alphabetical order) | 1. Thank you for your attention to the corrections. I have compiled the references according to the guidelines and arranged them alphabetically. |
| **Is the language/English quality of the article suitable for scholarly communications?** | Yes it is. The languange is suitable for scholarly communication. | Thank you |
| **Optional/General** comments | **Overall it is good, only needs improvement according to a few more suggestions.** |  |

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| **PART 2:** | | |
|  | **Reviewer’s comment** | **Author’s comment** *(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)* |
| **Are there ethical issues in this manuscript?** | *(If yes, Kindly please write down the ethical issues here in details)* |  |