Confidence in STEM Practices and Influencing Factors among Preservice Teachers

Reviewer 1 /Editor	Reviewer 2	Original	Refined Text	Remark
Editor 1. Please revise according to the reviewer's comment, and highlights the revised in different color 2. Please include at least 3 relevant IJTech articles (2020 - present) as references 3. Please upload the revised manuscript by filling * required (for response letters, you can download the template in Step 5) 4. Please revise your graphical abstract to the SmartArt Graphics which improves the reader's interpretation of the paper with jpg or png format			Three citations from IJTECH: Neo, M., Lee, C. P., Tan, H. Y.-J., Neo, T. K., Tan, Y. X., Mahendru, N., & Ismat, Z. (2022). Enhancing Students' Online Learning Experiences with Artificial Intelligence (AI): The MERLIN Project. *International Journal of Technology*, *13*(5), 1023. https://doi.org/10.14716/ijtech.v13i5.5843 Asvial, M., Mayangsari, J., & Yudistriansyah, A. (2021). Behavioral Intention of e-Learning: A Case Study of Distance Learning at a Junior High School in Indonesia due to the COVID-19 Pandemic. *International Journal of Technology*, *12*(1), 54. https://doi.org/10.14716/ijtech.v12i1.4281 Teoh, S. H., Mohamed, S. R., Mohd, A. H., Rasid, N. S. M., & Yusof, M. M. M. (2022). Creating Engagement Opportunity for Math Learning. *International Journal of Technology*, *13*(5), 1013. https://doi.org/10.14716/ijtech.v13i5.5858	A graphical abstract is attached

Reviewer (1) **Introduction:** Please merge the Literature Review section with Introduction section as suggested by the submission template of the journal (https://ijtech.eng.ui.ac.id/about/4/author-guidelines).				Introduction and literature review are merged.
Please provide additional explanations or justifications behind the focus of the study which is only on aspects of mathematical competence (algebra and statistics), not on science, technology and engineering competencies which may all support the success of prospective teachers in STEM practices through the Engineering Design Process (EDP).			Among mathematics preservice teachers, a solid understanding of algebra and statistics is crucial for excelling in STEM teaching (Ng, 2019). A higher level of algebraic proficiency not only increases their confidence in teaching these mathematical concepts but also enables them to effectively introduce broader STEM concepts. Preservice teachers who have a firm understanding of algebra can confidently guide students through the problem-solving process, for instance, …	An additional explanations or justifications are attached
Please provide state of the art (what previous studies have done that is relevant to the focus of this study, gaps that may exist, and what this study has attempted to fill in these gaps).				A research gap is added.
	Introduction: Please add some		for instance, when presented with a problem involving the concept of inverse proportionality in algebra. This problem-	An example is included.

	example of learning STEM activity using the two Mathematics concepts.		solving activity is key to a larger STEM activity, such as painting a home	
Please state the purpose of the study at the end of the Introduction section, including the research questions.				Added accordingly
Methodology: Please detail the characteristics of the sample in this study (e.g., what does science-based program mean here, are they in the same semester). Please justify whether the sample size of 113 is representative of the 941 prospective teachers. Please add information regarding data collection procedures (e.g., how the existing instruments were administered to preservice teachers),			To collect quantitative data, this research utilised cluster sampling. The samples were selected at random from the existing categories. .. but internally heterogeneous groupings are evident since they are all selected to enrol in the programme via an entrance selection procedure.	The subtopic of 'Sampling' has been refined accordingly.
Methodology: details of the algebraic and statistical test instruments (e.g., content and number of test items), and how the collected data were analyzed in this study. Table 1 is no longer needed because the results have already been reported in the paragraph.	**Methodology:** Could you mark which items are confidence, effort and mathematics achievement?		.... Table 3 shows that items 14, 15, 8, 6, and 7 are highly correlated for the first component (confidence) with the factor loadings of 0.873, 0.800, 0.786, 0.730, and 0.685 respectively. In this analysis item 9 was discarded since the variation of factor loadings between the two component was very small namely 0.535 – 0.533 = 0.012 which is less than 0.2 which is referred as a cut-off value to determine a significant factor loading to be remained. Second, the analysis shows that items 1, 2, 3, 4,	Items that belong to the respective factor are spelled out in the text. The samples of items in the algebraic

			12, and 13 are highly correlated for the second component (effort) with the factor loadings of 0.873, 0.800, 0.786, 0.730, and 0.685 respectively.	and statistical test are listed too.
Results and Discussion: The results presented are sufficient. If the results of a table could be presented in a paragraph that would be highly preferable (e.g., Table 5, Table 6, and Table 7). The discussion presented is also sufficient. The discussion presented is also sufficient. It would be better if the implications of the findings for teaching practice for preservice teachers, limitations of the study, and directions for future studies are added to the Discussion section.	**Results and Discussion:** How to improve the mathematics knowledge? please add more related research to improve it.		The implications of this study are threefold. Firstly, this study suggests that preservice teachers can acquire confidence in STEM practises through their own efforts, engagement, and practise. ... In conclusion, for teachers to remain confident ... STEM to real-world applications.	The implications of this study are added
References: Please make sure the citations and bibliography are presented as suggested on https://ijtech.eng.ui.ac.id/about/4/author-guidelines				Refined