Dear Mr. Muhammad Rusydi Rasyid,

Editor in Chief of **MaPan: Jurnal Matematika & Pembelajaran**

We hope this submission finds you well.

We as the research collaboration team are writing the manuscript entitled “**Manipulative Learning Media Based on STEM (Science, Technology, Engineering, And Mathematics) To Improve Student Learning Outcomes**" for consideration for publication in Mapan: Jurnal Matematika & Pembelajaran. This manuscript was written using the **author guidelines** of Mapan: Jurnal Matematika & Pembelajaran mentioned on the website.

This paper provides a result of research and devolepment of manipulative learning media based on STEM (Science, Technology, Engineering, and Mathematics) called *Magic Hours* on Clock and Corner material for the fourth-grade of elementary school students. Research procedure are Analysis, Design, Development, Implementation, and Evaluation (ADDIE). Data collection techniques are collecting through expert validation, teacher questionnaires, student questionnaires, test, observation, and interviews. The instrument are including test instruments (description questions) and non-test instruments (material validation sheets, design validation sheets, practicality assessment sheets, questionnaire validation sheet, and questionnaires). The trial subjects consisted of 3 students (small-scale trials) and ten students (large-scale trials) who were students in the fourth grade of elementary school students in Kediri. The results show that the learning media are valid, practical, and effective. Learning media have feasible criteria with an assessment score of 88.46% from media experts and 86.67% from material experts. In the practicality test, learning media obtained a percentage of 86.67% with practical criteria. The results of the student questionnaire analysis showed an effectiveness criterion with a score of 75.7%. The results of a *one-sample t-test* on student test scores indicate that the average mathematics score test is significantly more than KKM.

This paper also describes **our original work** and is **not under consideration** by any **other journal**. All authors approved the manuscript and this submission. The **four** co-authors **do not have any conflict of interest** regarding this manuscript. This document was reported as the result of the research we conducted as one of the requirements of our responsibility as a researcher in our university.

Thank you for receiving our manuscript and considering it for review. We do really appreciate your time and look forward to seeing your response.

Best Wishes,

Eka Sulistyawati, M.Pd.

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**Title : Manipulative Learning Media Based on STEM**

***(Science, Technology, Engineering, and Mathematics*) to Improve**

**Students Learning Outcomes**

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**Declaration of Absence of Conflicts of Interest:**

This paper also describes **our original work** and is **not under consideration** by any **other journal**. All authors approved the manuscript and this submission. The four co-authors **do not have any conflict of interest** regarding this manuscript. This document was reported as the result of the research we conducted as one of the requirements of our responsibility as a researcher in our university.

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