## CHAPTER V CONCLUSIONS AND SUGGESTIONS

## **5.1 Conclusions**

Based on the results of research and discussion of research journal articles about the development of learning device with PBL models to improve students' mathematical communication skills, it can be concluded as follows:

- 1. Improving students' mathematical communication skills from the results of research on 5 journal articles about the development of learning device with the Problem-Based Learning model to improve students' mathematical communication skills experienced a significant increase with the achievement of good results seen from the results of the comparison of the average value of the percentage of trials learning device that are repeated to students.
- Metasynthesis provides a comprehensive picture of the development of 2. learning device using the PBL model to improve students' mathematical communication skills. The learning device developed are the most important thing in facilitating the improvement of students' mathematical communication skills including the syllabus, lesson plans, LKPD and LAS, their development models, as well as scores of aspects of validity, practicality, and effectiveness of learning device developed to improve students' mathematical communication skills. Several learning strategies with the PBL model used in the learning device in this research resource are the development of a 4-D model consisting of the define, design, develop and disseminate stages and research & development (R&D) with a 4-D model that refers to the Thiagarajan development theory. and Semmel. Assessment of the quality of learning device development results requires three criteria, namely validity, practicality, and effectiveness. The results of research analysis on journal articles that were used as research sources

found that all learning device developed had met the valid, practical, and effective criteria with good and very good categories.

## **5.2 Suggestions**

In developing learning device, researchers suggest to make improvements to learning device to the validator team in order to get valid, practical and effective learning device for students. After the researchers conducted a metasynthesis of five articles, the researchers suggested using the development of a learning device with the PBL model to improve students' mathematical communication skills with a 4-D model consisting of define, design, develop and disseminate stages because they obtained the highest achievement in improving students' mathematical communication skills.

