

## PREFACE

Praise and gratitude to God Almighty for His blessings and grace so that the author can complete the preparation of the thesis entitled "The Effect of the Jigsaw Cooperative Learning Model on Students' Mathematical Communication Skills". This thesis was prepared to fulfil one of the requirements for obtaining a bachelor's degree in education (S.Pd) at the Bilingual Mathematics Education Study Program, Faculty of Mathematics and Natural Sciences, State University of Medan.

In preparing this thesis, the author realizes that the author has received a lot of help and support from various parties to complete this thesis correctly. Therefore, on this occasion, the author would like to thank:

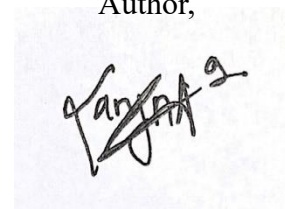
1. Mr. Prof. Dr. Baharuddin, S.T., M.Pd., as the rector of State University of Medan.
2. Mrs. Dr. Ani Sutiani, M.Si., as the dean of the faculty of mathematics and natural sciences of State University of Medan.
3. Mr. Dr. Pardomuan Sitompul, M.Si., as the head of the mathematics department at State University of Medan.
4. Mrs. Nurhasanah Siregar, S.Pd., M.Pd., as the head of the mathematics education study program, faculty of mathematics and natural sciences, State University of Medan and also as an academic supervisor who has guided the writer throughout the lecture period.
5. Mrs. Dr. Ely Djulia, M.Pd., as the coordinator of the bilingual mathematics education study program at the Faculty of Mathematics and Natural Sciences, State University of Medan.
6. Mr Mangaratua M. Simanjorang, M.Pd., Ph.D as a thesis supervisor who has provided time during his busy to guide, motivate and direct the author through each stage of the preparation of this thesis.
7. Mr. Dr. E. Elvis Napitupulu, M.S., Ms. Nurhasanah Siregar, S.Pd., M.Pd., and Mr. Sudianto Manullang, S.Si., M.Sc. as examiners who have given many suggestions and directions to improve this thesis.

8. Mr Mhd. Nizar as a headmaster of SMP Negeri 37 Medan, Mr Jannes Aritonang, S.Pd., as the mathematics teachers in SMP Negeri 37 Medan and all studies of IX-E and IX-F who help the author to finish the research
9. Prof. Dr. Asmin, M.Pd., and Mr. Dr Edy Surya, M.Si as the validators who help the author to finish the research.
10. Special thanks to my beloved parents, Mr. Jannes Aritonang and Mrs. Tityn Kristina, who have given love, prayers, and motivation and has worked hard in raising the writer with love. In addition, my beloved sister, Elisha Oktaria Aritonang who always gave me encouragement and prayers in every step of completing this thesis.
11. To all my friends in MESP 2020 who provide beautiful stories and experiences for 4 years, provide important information during lectures, and help each other

In preparing this thesis, the author realizes that there are still many shortcomings and limitations experienced. Therefore, the author expects constructive criticism and suggestions. Finally, the writer hopes this thesis can be helpful for readers and related parties.

Medan, July 2024

Author,

A handwritten signature in black ink, appearing to read 'Karyn Angelina Aritonang', is written over a light blue rectangular background.

Karyn Angelina Aritonang

IDN. 4203111034