PREFACE

In the name of the Lord Jesus Christ, the Most Gracious, the Most Merciful. Praise be to God because by His grace the author was able to complete the final assignment in the form of a thesis entitled "Development of Android-Assisted Problem Based Learning Interactive Learning Media to Improve Student Achievement and Motivation at SMA NEGERI 10 Medan". which is to complete one of the requirements for a Bachelor of Education (S.Pd) in the Bilingual Mathematics Education Study Program, Faculty of Mathematics and Natural Sciences, Medan State University..

The author realizes that during the process of preparing this thesis, I found a lot of attention, encour agement, assistance, as well as moral and scient ificguidance from the other, so that the author can complete this final project. Therefore, on this occasion the author would like to thank:

- 1. Prof. Dr. Baharuddin, St., M.Pd.as a rector Universitas Negeri Medan
- 2. Mrs. Prof. Dr. Fauziyah Harahap, M.Si as a dean of faculty mathematics and natural science Universitas Negeri Medan
- 3. Mr. Dr. Pardomuan Sitompul, M.Si as a head of mathematics department off aculty mathematics and natural scienceUniversitas Negeri Medan
- 4. Mrs. Nurhasanah Siregar, S.Pd., M.Pd as a head of mathematics education program, faculty mathematics and natural science Universitas Negeri Medan
- 5. Mrs. Dr. Ely Djulia, M.Pd as acoordinator of mathematics education program, faculty mathematics and natural science Universitas Negeri Medan
- 6. Prof. Dr. Asmin, M.Pd as a thesis supervisor who has guided me loving, provided motivation, directions that this thesis could be completed
- Prof. Dr. Hasratuddin, M.Pd,. as a first examiner, Dr. KMS, Muhammad Amin Fauzi,. as a second examiner and Sudianto Simanullang, S.Si, M.Sc.as a third examiner who has given many suggestions and criticisms to this final project.

- 8. Thank you also to Sry Murni, S.Pd., as the principal of SMA N 10 Medan who has given research permission, to Mrs. Ummi Aulia, S.Pd as the Mathematics teacher for class XI MIA-1 and helped the author during the research and all teachers, staff and students at SMA N 10 Medan.
- 9. Special for my parents who I really respect, Sincere and beloved thanks to my best parents, beloved father Sabam Sitinjak and beloved super mother Marince Sintaraya Sitanggang (my miracle woman and my hero mother) who gave me so much strength to become a strong human being and provide motivation to face everything conditions and situations in God's way sincerely. Thank you for your prayers, attention, motivation and sacrifice for me, so that I can complete my first degree in Bachelor of Education (S.Pd), I feel very lucky and happy to be your son. And thank you very much to my brother, the source of funds for the 3rd Pratu Martogi Pangihutan Sitinjak. And likewise to my beloved sisters, Aldifren Sitinjak, Winawati Sitinjak and Sipudan, Natan Apsael Sitinjak. We hope that our children, father and mother, will be successful to make them happy.
- 10. I also express my deepest gratitude to the extended family of my beloved Sitinjak and Sitanggang who cannot be mentioned one by one for their attention, prayers, financial assistance and motivational assistance. Big Loph and biggest thanks to all my family. And I would like to say a big thank you to my friends and friends, brothers and sisters (alumni of Sma N 1 Tigabaru who I cannot mention one by one, especially my friends Huminsa, Ricky, Ivana, Fitri Sinaga, Joshua Simboloon and also my college friends to my Brother, Japarto Simanjorang, Join Sinaga, Mikael Sinaga, Frengky Butar-Butar, laeku dongan stay up late hanging out dongan susah dohot sonang haha Avonsius Sinaga, also for boarding house friends who are studying at the moment my little brother Saroha Pintubatu semangat na pejuang skripsi ateh and also for boarding house op.doviThank you for the 4 years.
- 11. I would also like to express my thanks to the 2018 MEPS friends (especially for the Hallal Bihalal Trisky Simangunsong squad, Mula Tua Simbolon, Erwin Syahputra, and also Ito I Elkana Pakpahan) who always support each other, motivate, pray, who have enjoyed 5 years of love. and sorrow together, and thank you very much to my thesis colleagues, namely, Trisky Erwin, Mula and who are friends who help to exchange ideas, who always provide new information and encouragement, and who have provided a lot of support and motivation.
- 12. We hope that this thesis will be useful and make many contributions to the readers'

knowledge, especially regarding the subject matter studied in this thesis. I have tried my best to complete this thesis, but I realize that there are still many shortcomings both in terms of content and grammar, therefore suggestions and criticism are really needed to improve this thesis further.

Medan, January, 2024 Sincerely,

Alexander Sitinjak 4183312005

