FOREWORD

Praise and gratitude to the Lord Jesus Christ for giving His grace, so that the author can complete this thesis well. There are many challenges that the researcher faces while completing this thesis, but when the researcher surrenders and hopes for Him, he always intervenes to help the researcher to complete this thesis.

The title of this thesis is The Development of Vertebrates Diversity Booklet at Siantar Zoo as A Learning Resource on Biodiversity Topic Grade X SMAN 1 Pematangsiantar, that needed to achieve a Bachelor of Education degree in the Bilingual Biology Education Program, Faculty of Mathematics and Natural Sciences (FMIPA), Medan State University (Unimed).

The author realizes that the preparation of this thesis will not be completed without the support of various parties, either directly or indirectly. Through this opportunity, the author would like to express his gratitude to all parties who have helped in the preparation of the thesis, namely:

- 1. Prof. Dr. rer. nat. Binari Manurung, M.Si, as a Thesis Supervisor, for his extraordinary guidance, motivation, and direction, so that all stages in the preparation of this thesis can be passed well until the end.
- 2. Dr. Ely Djulia, M.Pd., Dr. Widya Arwita, S.Pd., M.Pd., dan Dr. Diky Setya Diningrat, S.Si., M.Si, as an Examiner Lecturer, and also Prof. Dr. Melva Silitonga, M.S. as may academic supervisor who has given a lot of criticism and suggestions for improvement starting from the proposal seminar to the exam stage to maintain the thesis, so that this thesis can be completed properly.
- Drs. Lazuardi, M.Si., Ahmad Shafwan S. Pulungan, S.Pd., M.Si., dan Dr. Hasruddin, M.Pd. for his invaluable assistance through the validation of research instruments.
- 4. Bona Sihombing, M. Pd, as the Principal and Anna Togi Hutabarat, S. Pd as a Biology Teacher at SMAN 1 Pematangsiantar, with his help, was willing to accept and give the author the flexibility to conduct research at the school. As well as for the 10th grade IKM 8 AND 10 IKM 12 who are happy to be the author's research sample.

- 5. Dear family, Mr. Asan Royan Saragih, Mrs. Saina Berutu, and Ms. Lia Nurmaya Saragih, who always give the author encouragement, prayers, and inspiration, so that the writer can be at this stage until completing this thesis. May the Lord Jesus always bestow health and happiness in our families.
- 6. My dear friends, SIP IN (Juwita Perdede, Nindya Zayani Ekaputri, Trisnawaty br Lingga, Salamah Harahap), and Novia Remember Manalu who has become my family overseas, who always helps, accompanies and gives encouragement to me, may good things always come to us.
- 7. My comrades-in-arms, ABEFRYN (Bunga Tambunan, Yasikha Sianipar, Fernando Sitorus, Rimelni Sidabutar, Eben Ezer Sinaga, and Agata Sinurat), who always supported me, even though they were separated by distance and time. I wish all of us always in God's protection and success wherever we are.
- 8. My dear classmates, BESP 2020, who have been with me from the beginning to the end of my education, hopefully what we hope can be achieved.
- 9. My solid colleague, KKN Si Ogung-Ogung, for all the support and enthusiasm that the writer always receives, may we all always be under God's protection and succeed until the end of our college.
- 10. Author, Nawi, who has been able to be cooperative in doing this final project. Thank you for always thinking positively when the situation is sometimes unfavorable, and always trying to believe in yourself, until finally I am able to prove that I can account for what I have started to the end.

The author realizes that this thesis still has shortcomings and limitations, however, while hoping for constructive criticism and suggestions, the author hopes that this thesis can be useful for related parties, especially the UNIMED Biology department.

Medan, 29 July 2024

Author