ACKNOWLEDGEMENT

Alhamdulillahi Robbil A'lamin....

First and foremost, praise and thanks to be Allah SWT, the almighty, who has granted countless blessing, knowledge and opportunity to the writer, so that I have been finally able to accomplish the thesis.

Apart from the efforts of me, the success of this thesis depends largely on the encouragement and guidelines of many others. I take this opportunity to express my gratitude to the people who have been instrumental in the successful completion of this thesis.

The writer hardly knows where to start expressing the gratitude but for sure the gratitude goes to all those who have assisted her in the process of completing this thesis. it would be impossible to list all names but several people deserve her sincere and special thanks.

I would you like to show my greatest appreciation to Syarifuddin, M.Sc, Ph.D. as the thesis supervisor. I can't say thank you enough for her tremendous support and help. I feel motivated and encouraged every time. I attend her meeting without her encouragement and guidance this thesis would not have materialized.

I gratefully acknowledges the deepest gratitude to Drs Tri Harsono, M.Si, the head of Biology Department, Prof.Dr.Herbet Sipahutar M.Si, M.Sc the coordinator of Bilingual Program, Dr.Iis Siti Jahro, M.Si the secretary of coordinator of bilingual program and Mr Syamsuddin for his administrative assistance.

I enormous appreciation is addressed to Dr. rer. nat. Binari Manurung, M.Si, Drs. Tri Harsono, M. Si., Dr. Fauziyah Harahap, M.Si., as her examiners, for the valuable inputs to be included in this thesis and generously spent precious tine in giving the guidance, encouragement, suggestion, and comments for this thesis.

The writer gratefully acknowledges the deepest gratitude to Dra. Meida Nugrahalia, M.Sc as the Academic Advisor.

I am indebted to Dr. Hasruddin, M.Pd and Drs. Lazuardi, M.Si as evaluator for her research instruments, for their constructive comments and suggestion for the improvement of this study. I also in enormous intellectual debt to all lectures of Biology Education Bilingual Program, who has become my inspiration during the academic years and also during the completion of this thesis.

Special thanks are extended to Nizamuddin S.Ag, headmaster of SMA Islam Al ulum Medan, Biology teacher of grade ten , Dra Utari Manja, for the corporation during research. I am grateful for his constant support and help. Also to students class X-A and X-B SMA Islam Alulum Medan.

Finally, she will forever indebted to my beloved parents Drs. M.Najamuddin LY and Dra. Riswani N for having given her unfailing support and encouragement during the academic year and the completion of this thesis, I also thank for all of my family give support me to finished my education. Especially 11Th Family : Risnally Fitri S.Pd, Kamaruzaman S.H, Abdullatif Rusdi S.Pd, Hafsah S.Pd, Zulfahmi, Syukriyah S.Pd, Ahmad Tohir, Siti Rahmah S.Pd and my young brother Ahmadsyah Hasibuan.

Last but not least the guidance and support received from my community "RELANG" Siti Indriyani, Devi wanie and Siti Aini N Siregar. Her also in everlasting of all my best friends Siti Indriyani, Nurazizah, Ridwan Daulay, Kamalia and M. Bilal Anwar, And all friends from biology Bilingual program class of 2009 for their friendship and corporation.

It would be difficult to find adequate words to convey how much she owes the people. Lots of loves and thanks to all of you.

The writer has tired to finish this thesis as a good as possible, but she is aware there are still many weaknesses of both content and grammar of this thesis. Hopefully, this thesis would be useful to the reader. May Allah Bless Us

> Medan, July 2013 The writer

Syamsiah 409342031