ACKNOWLEDGEMENT

First and foremost, I would like to thankful to Almighty God, Jesus Christ, who give me mercy and blessing until I can finished this thesis well. Apart of my life, my parents, ***Ayahanda* B. Siahaan** and ***Ibunda* Hervina Panjaitan**, my beloved brothers, **Herlan Idul Saputra Siahaan** and **Rockyando Siahaan**, I would like to show my greatest appreciation to them.

Foremost, I would like to express my sincere gratitude to my advisor lecturer, **Dr. Hj. Ely Djulia, M.Pd.**, who has supported me thoughout my thesis with patient, motivation, enthusiasm and immense knowledge. Her guidance help me to arrange and writtig this thesis. I give thankful because be my advisor with innovative way and highly knowledge.

Beside my advisor, I would like to thank the rest of my thesis committee: **Dr. Syahmi Edi, M.Si.**, **Dra. Melva Silitonga, MS., and Dra. Martina Restuati, M.Si.** for their encouragement and insighful comments. My sincere thanks also given to **Drs. Zulkifli Simatupang, M.Pd.**, beside as head of Biology Department but also father-liked who guide in arranging this thesis. My sincere thanks also give to others lecturer who taught and guided me during in Biology major class.

My enormous appriciation to **Mam Desy C. Sianturi, S.Pd., M.Si.** in SMA Negeri 3 Medan for giving opportunity to use her classes and guiding me to handle the classes during my research and all students in **XI Science 1 and XI Science 3 Academic Year 2014/2015** for their participation as my sample research.

Last but not least I would like offer my special thanks to my "Igreya" Small Group: **Kak Sartika, Arta Ria Siadari, Lydia Trisnawati Silalahi, Saut Haryanto Manik and Septe Vionly Ambarita,** who always give support and praying to do best in making this thesis. My best partner friend, **Rani Afrida Tarigan,** and all my **Bilingual Education 2011,** give thanks for their encouragement and motivation.

Medan, Juni 2015

Saraswati