

## ACKNOWLEDGEMENT

The greatest praise and thankfulness to the Almighty God, Jesus Christ for His grace and blessing who always provide health, spirit, strength and everything to the author in finishing this thesis well and accordance to the planning time.

This thesis, "*The Development of Innovative Learning Material of Chemical Equilibrium with Active Learning and Multimedia*" has been arranged to obtain the degree of Sarjana Pendidikan in Department of Chemistry, Faculty of Mathematics and Natural Sciences (FMIPA), State University of Medan (UNIMED).

In this opportunity, the author would like to express the great appreciation to Prof. Drs. Manihar Situmorang, M.Sc., Ph.D., as the thesis supervisor, Prof. Dr. Ramlan Silaban, M.Si., Dr. Simson Tarigan, M.Pd., and also Nora Susanty, S.Si, Apt., M.Si as the thesis examiners and also to Dr. Iis Siti Jahro, M.Si., as the author's academic supervisor for their valuable time spent in giving guidances, advices, motivations, comments and suggestions during the process of finishing this thesis and as a coordinator of bilingual program. The author also says thanks to Dr. Asrin Lubis, M.Pd, as the dean Faculty of Mathematics and Natural Sciences, State University of Medan, then Nora Susanty, S.Si, Apt., M.Sc, as the secretary of Bilingual Program. Great thanks to Drs. Jamalum Purba, M.Si., Prof. Dr. Retno Dwi Suyanti, M.Si., Drs. Ajat Sudrajat, M.Si., as the expert lecturer to standarize the module. And also thanks to Sir Syamsuddin as bilingual staff for his helping in administrative assistance and kindness. And also to the head master of SMAN 1 Sidikalang namely Drs. Alben Sianturi, SMAN 1 Berastagi namely Alberto Colia, M.Pd., and head master of SMAN 1 Perbaungan namely Drs. Suhairi, M.Pd.

The author's gratitude also to all of students who have rendered their time to standarize the module as a sample of research, the student in second year of SMAN 1 Sidikalang, SMAN 1 Berastagi, SMAN1 Perbaungan who have given their helping and their support to finishing this research.

The deepest and special gratitude, appreciation and love to my wonderful mommy L. br. Sinaga and J. Silaban for their countless love, supports, prays, motivation and careness and also to my beloved sisters, Elfrina Silaban, Yossie Silaban, Rachel Silaban, then to my beloved brother Oscar Silaban for their supports. And also special thanks to my beloved auntie Aspita Sinaga and Ronald Rajagukguk for their loves and great motivations.

Special thanks also goes to my friends Lady Boangmanalu, Fany Sihite, Evi Simanjuntak, Novel Tamba, Marianna Silaban, Arif Lase (Bil Chem'12) that have accompany me during the research. I also would like to thanks for all of my friend in BILINGUAL CHEMISTRY 2012, and everyone who cannot be mentioned his/her name for their support and friendship during my academic years.

Finally, the author hopes this thesis would be useful for everyone who like to explore more about the learning material and the innovation and integration to learn chemical equilibrium notably and chemistry generally. May God bless us forever.

Medan, June 2016

The author,

Ernita Putry Silaban