

PREFACE

All praise and gratitude to God Almighty, for all His mercy and guidance so that the author is able to complete the thesis entitled “Development of TPACK-Based E-Book on Human Digestive System Material to Achieve The Scientific Literacy of Students at SMP Negeri 41 Medan”. This thesis is written to fulfill the requirements to achieve a Bachelor of Education degree in the Bilingual Science Education Study Program, Faculty of Mathematics and Natural Sciences, Medan State University.

In completing the study and writing this thesis, the author has received a lot of help both teaching, guidance and direction from various parties both directly and indirectly. For this reason, the author expresses his deepest appreciation and gratitude to:

- 1) Mrs. Dr. Ani Sutiani, M.Si., as Dean of the Faculty of FMIPA, State University of Medan and its staff.
- 2) Thesis supervisor, Mr. Dr. Hasruddin, M.Pd., who has given time in her busy schedule, providing criticism, advice and direction to the author in the process of writing this thesis until it is completed.
- 3) Academic supervisor, Mr. Dr. Simson Tarigan, M.Pd., who has guided, cared and support the author during the education at State University of Medan.
- 4) Thesis Examiners, Mr. Dr. Idramsa, M.Si., Mr. Dr. Diky Setya Dinatingrat, M.Si., and Mr. Aristo Hardinata, M.Pd., who have provided many constructive suggestions for writing a better thesis.
- 5) Validation expert Mr. Halim Simatupang, S.Pd., M.Pd., Mrs. Wina Dyah Puspita Sari, S.Si., M.Sc., Mrs. Nanda Pratiwi, S.Pd., M.Pd., and Mrs. Fitriani Lubis, S.Pd., M.Pd., who has provided many constructive suggestions for better thesis writing.
- 6) Mrs. Dame Ulina Sihombing, S.Pd., and staff who have given permission to the author to conduct research at SMP Negeri 41 Medan.
- 7) Mr. Drs. John Glora Pelawi and Mrs. Septi Dianora, S. Pd, as a mentor who has guided and assisted the author conducting research at SMP Negeri 41 Medan.

- 8) The author's beloved parents Mr. Suherman Ginting and Mrs. Petty Br Manurung. Thank you for giving me sincere love, moral and material support, encouragement and prayers to the author while studying at this university.
- 9) Author's beloved siblings: Albert Samuel P. Ginting and Rahel Namisa Br Ginting, who have given love, support, encouragement and prayers to the author while studying in this university.
- 10) My best partner; Yegly Anggitha Lumbangaol who always provides support and is a support system for the author. And also those who have accompanied and encouraged the author during the preparation of this thesis.
- 11) My best friends: who are always by my side (Jojor Yulima Turnip, Marlina Putri, Andreas Simanjuntak, Kezia Thessa Destine, and Rizky Aggasy Sihombing) who have given encouragement and shared knowledge with the writer during his education. We will definitely be successful together.
- 12) Classmates in Natural Science Education Study Program 2020 who have encouraged, sharing love and knowledge with the author during the education. We will definitely be successful together.
- 13) Friends-in-arms; The KKN Team Parbaba Dolok, Naza Mila Juwita, and Rifda Siregar have accompanied and encouraged the author during the preparation of the thesis.
- 14) All parties who have provided assistance, prayers and support which the author cannot mention one by one.
- 15) Finally, I would like to thank myself for all the efforts and hard work that have been done during the lecture process from the beginning of the lecture to the end of this lecture. Thank you for being patient with everything that you have to face, for thinking positively, for being brave along this path, thank you for not giving up even though you often feel defeated and thank you for making it to this point. I am grateful to myself for always trying to be strong in all conditions. I am grateful and appreciate every process that God has given me in the maturation stage. I want to thank myself for surviving this far and still bringing smiles to everyone.

The author realizes that this thesis is far from perfect due to the limited ability and knowledge possessed by the author. Therefore, for mistakes and shortcomings in

writing this thesis, the author apologizes and is willing to accept constructive criticism. Finally, the author hopes that this thesis can provide benefits for anyone who reads it.

Medan, 22 April 2024

Author

A handwritten signature in black ink, appearing to read 'Ayu Irinka Sari Br Ginting'.

Ayu Irinka Sari Br Ginting
IDN. 4203151008