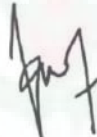


Thesis:

The Effect of Problem Based Learning Model on Students Learning Outcomes In the Material of Work and Energy class X of Senior High School N 1 Tanah Pinem

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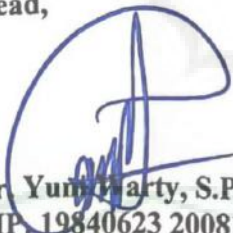
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BIOGRAPHY



Silvani Br tarigan, the author of the Thesis entitled *The Effect of Problem Based Learning Model on Students Learning Outcomes In the Material of Work and Energy class X of Senior High School N 1 Tanah Pinem*, was born in Lau Peranggunen on August 30th 2001. The author is the first child of Salmon Tarigan (father) and Devi Br Perangin-angin (mother). The author started his academic education at SDN 046579 Lau Peranggunen and graduated

in 2012, continued her study to SMPN 1 Tanah Pinem and graduated in 2015. The author continued her study to SMAN 1 Tanah Pinem and graduated in 2019. The author was accepted in Bilingual Physics Education Study Program at Universitas Negeri Medan in 2019 through independent exam. The author declared to have passed the thesis defense examination and is entitled to use a bachelor's degree in education (S.Pd).



PREFACE

In the name of Allah SWT, the most gracious and the most merciful. Praise and gratitude to Allah SWT for all the mercy and grace, may sholawat and salam to our Prophet Muhammad SAW so that this thesis can be completed well. The thesis entitled “Effect of Problem Based Learning Model on Students Learning Outcomes In the Material of Work and Energy class X of Senior High School N 1 Tanah Pinem” was submitted as one of the requirements to obtain a bachelor’s degree (S1) of Physics Education Study Program, in Faculty of Mathematic and Natural Science, Universitas Negeri Medan.

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13. The author would also like to thank my boyfriend Josua Bastanta Ginting, my sister Vedrina Oktari br Tarigan, Yenni Prisca br Tarigan, Erin Natasya br Tarigan, Noviola br Tarigan, my classmates in Bilingual Physics 2019, especially Icak and Novia who are always ready to help in every process of this.

Finally, the author expresses his gratitude for all the support and assistance from various parties in order to complete this thesis. Hopefully, this thesis can be useful for readers.

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