

Thesis:

**The Analysis of Group Division in The Thinking Aloud Pair Problem Solving (TAPPS) Learning Model to Improve Students Learning Outcomes on Momentum and Impuls Topic**

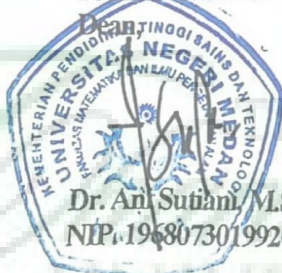
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## ORIGINAL STATEMENT PAGE

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If at a later date it is known and it can be proven that this thesis manuscript contains elements of plagiarism, I am willing if this thesis is canceled and processed following applicable laws and regulations (Law No. 20 of 2003, article 25 paragraph 2 and article 70).

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**FINAL THESIS PUBLICATION APPROVAL PAGE FOR ACADEMIC  
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As an academic community member of the State University of Medan, I, the undersigned:

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## BIOGRAPHY



Nursyahadah, the writer of a thesis entitled “The Analysis of Group Division in The Thinking Aloud Pair Problem Solving (TAPPS) Learning Model to Improve Student Learning Outcomes on Momentum and Impulse Topic”, was born in a small village called Sihepeng Opat on December 12, 1999. The writer is the eighth child (out of eight siblings) of Ali Marwan Hasibuan (Father) and Rosmaida Nasution (Mother). The writer started formal education at SD Negeri 001 Sihepeng in 2006 and graduated in 2012. After elementary school, the author continued her studies at MTs. S. Al-washliyah Sihepeng and graduated in 2015. Then for further education, the author attended MAN 3 Mandailing Natal majoring in science and graduated in 2018. After that, through the SNMPTN, the author was termed to become one of the students in the Bilingual Physics Education Study Program, Faculty of Mathematics and Natural Sciences, State University of Medan. On April 22, 2025, the author was declared to have passed the thesis defense exam, and used a *Sarjana Pendidikan* (S.Pd) degree. During his studies at Unimed, the author was active in various national and international seminar activities, the Indonesian Red Cross Student Activity Unit 25<sup>th</sup> batch, became a committee at several events on campus and other extracurricular activities. The most memorable achievement that the author has ever achieved is getting a medal for Volunteer Activities in Simalungun during the 2022 Indonesian Red Cross Volunteer Gathering in North Sumatera, and participating in other volunteer activities such as distributing aid during the eruption of Mount Sinabung, flooding in Medan-Binjai. The author completed his final study for 7 years, but during that time, the author received a lot of valuable experiences and memories to remember.