PENERAPAN *FLIPPED CLASSROOM* PADA MODEL PEMBELAJARAN *7E LEARNING CYCLE* DALAM PEMBELAJARAN DARING MATERI MOMENTUM DAN IMPULS UNTUK MENINGKATKAN KEMAMPUAN KOGNITIF DAN *ATTITUDES TOWARDS PHYSICS*

TESIS

diajukan untuk memenuhi sebagian dari syarat untuk memperoleh gelar Magister Pendidikan Fisika

Oleh

Sariaman Siringo Ringo

NIM 1803578

PROGRAM STUDI MAGISTER PENDIDIKAN FISIKA

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Oleh
Sariaman Siringo Ringo
S.Pd. UNJA Jambi, 2017

Sebuah Tesis yang diajukan untuk memenuhi salah satu syarat memperoleh gelar Magister Pendidikan (M.Pd.) pada Sekolah Pascasarjana Universitas Pendidikan Indonesia

HALAMAN PENGESAHAN TESIS

SARIAMAN SIRINGO RINGO

PENERAPAN *FLIPPED CLASSROOM* PADA MODEL PEMBELAJARAN *7E LEARNING CYCLE* DALAM PEMBELAJARAN DARING MATERI MOMENTUM DAN IMPULS UNTUK MENINGKATKAN KEMAMPUAN KOGNITIF DAN *ATTITUDES TOWARDS PHYSICS*

disetujui dan disahkan oleh

Penguji I

Dr. Achmad Samsudin, M.Pd.
NIP. 198310072008121004

Penguji II

Dr. Andhy Setiawan, M.Si
NIP. 197310131998021001

Penguji III

Dr. Selly Feranie, M.Si
NIP. 197411081999032004

Penguji IV

Dr. Didi Teguh Chandra, M.Si
NIP. 195910131984031001

Mengetahui,
Ketua Program Studi Pendidikan Fisika

Dr. Taufik Ramlan Ramalis, M.Si.
NIP. 195904011986011001

HALAMAN PERNYATAAN

Dengan ini saya menyatakan bahwa tesis dengan judul "Penerapan *Flipped Classroom* pada Model Pembelajaran *7E Learning Cycle* dalam Pembelajaran Daring Materi Momentum dan Impuls untuk Meningkatkan Kemampuan Kognitif dan *Attitudes towards Physics*" ini beserta seluruh isinya adalah benar-benar karya saya sendiri. Saya tidak melakukan penjiplakan atau pengutipan dengan cara-cara yang tidak sesuai dengan etika ilmu yang berlaku dalam masyarakat keilmuan. Atas pernyataan ini, saya siap menanggung risiko/sanksi apabila di kemudian hari ditemukan adanya pelanggaran etika keilmuan atau ada klaim dari pihak lain terhadap keaslian karya saya ini.

Bandung, 14 Januari 2021

Yang menyatakan,

Sariaman Siringo Ringo
NIM. 1803578

PENERAPAN *FLIPPED CLASSROOM* PADA MODEL PEMBELAJARAN *7E LEARNING CYCLE* DALAM PEMBELAJARAN DARING MATERI MOMENTUM DAN IMPULS UNTUK MENINGKATKAN KEMAMPUAN KOGNITIF DAN *ATTITUDES TOWARDS PHYSICS*

Sariaman Siringo Ringo

Email: sariamanring@upi.edu

ABSTRAK

Pandemi Covid-19 saat ini menyebabkan sebagian besar aktivitas pembelajaran harus dilakukan secara daring. Namun, pelaksanaan pembelajaran daring yang telah dilaksanakan masih belum berlangsung dengan maksimal. Penelitian ini bertujuan untuk menentukan pengaruh penerapan *Flipped Classroom* pada model pembelajaran *7E Learning Cycle* dalam pembelajaran daring materi momentum dan impuls pada kemampuan kognitif dan *attitudes towards physics* peserta didik. Penelitian yang dilakukan merupakan penelitian pre-experimental yang menerapkan *one-grup pretest-posttest design.* Jumlah partisipan dalam penelitian ini, yaitu 24 peserta didik yang terdiri dari 11 laki-laki dan 13 perempuan dengan rentang umur 15-17 tahun. Instrumen penelitian yang digunakan yaitu soal esai materi momentum dan impuls yang berjumlah 9 butir soal dan skala sikap *attitudes towards physics* yang terdiri dari 15 pernyataan. Data kemampuan kognitif dan *attitudes towards physics* yang diperoleh dari kedua instrumen dianalisis secara Rasch model. Berdasarkan nilai rata-rata *Rasch gain*, penelitian ini menunjukkan bahwa nilai rata-rata peningkatan kemampuan kognitif dan *attitudes towards physics* peserta didik adalah sebesar 4,31 logit dan 0,21 logit secara berurutan.

Kata kunci: *Flipped Classroom*, *7E Learning Cycle*, Pembelajarang daring, Kemampuan kognitif, *Attitudes towards physics*

THE IMPLEMENTATION OF FLIPPED CLASSROOM COMBINED WITH 7E LEARNING CYCLE IN ONLINE LEARNING OF MOMENTUM AND IMPULS TO INCREASE COGNITIVE ABILITIES AND ATTITUDES TOWARDS PHYSICS

Sariaman Siringo Ringo

Email: sariamanring@upi.edu

ABSTRACT

The current Covid-19 pandemic causes most learning activities to be carried out online. However, the implementation of the online learning that has been carried out is still not running optimally. This study aimed to determine the effect of Flipped Classroom combined with 7E Learning Cycle in online learning of momentum and impulse on students' cognitive abilities and attitudes towards physics. This research was a pre-experimental study that applied a one-group pretest-posttest design. The number of participants in this study, namely 24 students consisting of 11 boys and 13 girls aged 15-17 years. The research instrument used was an essay test consisting of 9 items and an attitude scale towards physics which consisted of 15 items. Data of cognitive abilities and attitudes towards physics obtained from the two instruments were analyzed using the Rasch model. Based on the class-average Rasch gain, this study showed that the average value of the increase in cognitive abilities and attitudes towards physics of students were 4.31 logit and 0.21 logit respectively.

Keywords: *Flipped Classroom, 7E Learning Cycle,* Online learning, Cognitive abilities, *Attitudes towards physics*

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DAFTAR ISI

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