ABSTRAK

Nadiya Rahma Aliyasari (1222050099): Penerapan Game Edukasi *Math Tower Race* Berbasis *Roblox* terhadap Peningkatan Pemahaman Konsep Matematis Peserta Didik SMP Ditinjau dari *Self Confidence.*

Pemahaman konsep matematis peserta didik SMP pada materi persamaan linear satu variabel masih belum optimal, salah satunya karena pembelajaran kurang melibatkan peserta didik secara aktif, di samping faktor *self confidence* yang turut memengaruhi keberhasilan belajar matematika. Penelitian ini bertujuan mengetahui keterlaksanaan pembelajaran menggunakan game edukasi *Math Tower Race* berbasis *Roblox*, perbedaan peningkatan pemahaman konsep antara kelas yang menggunakan game edukasi dan kelas konvensional, perbedaan pencapaian berdasarkan tingkat *self confidence*, serta interaksi antara model pembelajaran dan *self confidence* terhadap pemahaman konsep matematis. Penelitian menggunakan pendekatan kuantitatif dengan metode quasi eksperimen *(nonequivalent control group design)* pada peserta didik kelas VII MTs Al-Amin Tanjungsari (kelas eksperimen dan kontrol) yang ditentukan melalui total sampling, dengan data dikumpulkan melalui tes pemahaman konsep dan angket *self confidence*, lalu dianalisis menggunakan uji-t dan ANOVA dua arah. Hasil penelitian menunjukkan keterlaksanaan pembelajaran berkategori sangat baik; peningkatan pemahaman konsep kelas eksperimen (kategori tinggi) berbeda signifikan dibanding kelas kontrol (kategori sedang); terdapat perbedaan pencapaian signifikan berdasarkan *self confidence*; serta terdapat interaksi signifikan antara model pembelajaran dan *self confidence*, dengan manfaat terbesar dirasakan peserta didik dengan *self confidence* rendah, sehingga game edukasi *Math Tower Race* berbasis *Roblox* terbukti meningkatkan pemahaman konsep matematis peserta didik SMP.

Kata Kunci: Game Edukasi, *Math Tower Race*, Pemahaman Konsep Matematis, *Roblox, Self Confidence.*

ABSTRACT

Nadiya Rahma Aliyasari (1222050099): ***The Implementation of the Roblox-Based Educational Game Math Tower Race on the Improvement of Junior High School Students Mathematical Concept Understanding Viewed from Self Confidence.***

Students understanding of mathematical concepts among junior high school students on the topic of one variable linear equations is still not optimal, partly due to learning that does not actively engage students, in addition to self confidence, which also plays an important role in supporting success in learning mathematics. This study aims to determine the implementation of learning using the Roblox-based educational game Math Tower Race, the difference in the improvement of mathematical concept understanding between students using the educational game and those using conventional learning, the difference in achievement based on self confidence levels, and the interaction between the learning model and self confidence toward mathematical concept understanding. This study used a quantitative approach with a quasi-experimental method and a nonequivalent control group design. The research sample consisted of seventh-grade students of MTs Al-Amin Tanjungsari, divided into an experimental class and a control class, determined through total sampling. Data were collected through a mathematical concept understanding test and a self confidence questionnaire, then analyzed using a t-test and two-way ANOVA. The results showed that the implementation of learning was in the very good category; there was a significant difference in the improvement of concept understanding between the experimental class, which was in the high category, and the control class, which was in the moderate category; there was a significant difference in achievement based on self confidence levels; and there was a significant interaction between the learning model and self confidence on mathematical concept understanding, with the greatest benefit felt by students with low self confidence. Thus, the Roblox-based educational game Math Tower Race is improving junior high school students' understanding of mathematical concepts.

Keywords: *Educational Game, Math Tower Race, Mathematical Concept Understanding, Roblox, Self Confidence.*