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## **Master Thesis Defense**

<u>Entitled</u>

THE IMPACT OF DIGITAL GAMES BASED LEARNING (ABACUS) ON STUDENTS' PERFORMANCE IN FRACTION FOR FIFTH GRADE STUDENTS IN AL AIN

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## <u>Abstract</u>

ABACUS active learn is an inclusive online site for teachers and students to illustrate and learn mathematics in primary level. ABACUS is considered as an online innovation that enable the students to have the ownership of their learning through interactive activities that can be done independently in the classroom or spend their rewards in online learning games. The main objective of this study is to examine the effect of using ABACUS on students' performance of 5<sup>th</sup> grade while studying Fractions. This study designed to be tested in Al-Ain, United Arab Emirates. A quasi-experimental design was used to collect data using a pre-test and post-test tool to evaluate the effectiveness of the ABACUS active learn intervention. Eighty (n=80) participants were randomly divided into two groups of control and experimental. The results of the post- test indicated a statistically significant point of preference of using ABACUS digital based gamed learning for the experimental group over the control group. Specifically, results revealed that students who were exposed to ABACUS active learn achieved a higher average score (M= 11.93, SD= 1.738) on the overall score compared to the score (M= 9.90, SD= 1.875) of students of the control group. The research finding will facilitate further researches on the use of the Active learning on teaching mathematics. Additionally, it gives some recommendations for professional development for the implementation of ABACUS active learn in online learning for the mathematics primary teachers.

Keywords: ABACUS, Fraction, Active learn, Performance.