An Enhanced UTAUT Framework for Students Perception on Acceptance of Educational Games

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Abstract- ***The rapid improvement of technology and software, combined with the interests of millennials, has led to a boom in the study and development of instructional video games in the 21st century. This boom has led to an increase in the number of millennials interested in these fields. This is due to the fact that games offer a variety of benefits, including the fact that they are pleasant, intriguing, and motivating. A great number of efforts have been started in order to implement this kind of technology into conventional as well as unconventional educational environments. Numerous studies have been conducted on the efficacy of game design; however, academics have paid less attention to other elements that may affect how games are viewed by students. When it comes to information systems, usability research seeks to quantify user experiences with the systems in order to maximise the systems' ease of use or user friendliness, whereas user acceptance research seeks to understand both ease of use and other factors that might affect the user's decision to use the information system. Both types of research are conducted in order to maximise the systems' ease of use or user friendliness. A research model was developed by adding two additional variables, learning opportunity (LO), and enjoyment, with the UTAUT serving as the basis for the construction of the model (Enj).***

Indexed Terms- ***Educational Games, UTUAT Theory, Learning Opportunity, Enjoyment, games acceptance***

I. INTRODUCTION

People have talked a lot about the idea of using computer games as a way to learn because they are fun and interesting. This is in contrast to the straight-forward teacher-centered way of education. According to the Federation of American Scientists, it seems like a good way to teach and learn in the 21st century (FAS). Students today, who are often called "digital natives," are also more attached to technology than ever before. Gee says that games can teach 21st century skills like how to solve problems, think critically, work in a team, and work with others. Because of this, it has attracted researchers from many different fields who want to find out how games help students learn and how to put the right kinds of subject matter into games. Integration of content into games is one of the hardest parts, and as of now, there is still no proven formula. This is likely because it is hard to combine the different types of entertainment and education into one technology.

II. RESEARCH BACKGROUND

More and more people agree that the traditional technology acceptance model should be changed and made bigger so that we can better understand how people use Internet services. This study re-evaluates the usefulness of Venkatesh et al[2003. .'s User acceptance of information technology: toward a unified view. MIS Quarterly, 27(3), 425–478] work. The UTAUT model is a unified theory of how people accept and use technology. First, this study adds the ideas of trust and flow experience to the original UTAUT model to come up with a new model of how people accept technology. Second, the study looks at how the model's ability to explain different kinds of Internet services changes. For this reason, this study looks at two services—"e-learning" and "online gaming"—based on their utilitarian and hedonic qualities. Based on the results of this study, the proposed model seems to be a better way to explain how people plan to use Internet services than the original model. The importance of the model as a whole was affected by the two variables, flow experience and trust. Also, the type of Internet service changed how the independent variables affected people's plans for behaviour and how they used the Internet.

Research on information systems has shown that their acceptance is based on a number of factors across a range of adoption models. In this study, the unified theory of acceptance and use of technology (UTAUT), which brings together factors from eight different models, was used to look at how students at Hashemite University, a public university in Jordan, a developing country, planned to use and actually used Moodle, an e-learning system. We looked at four main factors that affect intention and use: performance expectations, effort expectations, social influence, and enabling conditions. Structured equation modelling techniques were used to look at the data from 370 undergraduate students. The results showed that behaviour intentions to use Moodle were affected by performance expectations and effort expectations, but not by social influence. The results also showed that students' use of Moodle is directly affected by their plans for how they will act and the conditions that make that easier. So, UTAUT is a useful tool that helps university administrators, faculty, and designers understand what makes students accept e-learning systems. This makes it easier for students to use the systems. The study will help schools set up e-learning systems, which are especially important when there is a state of emergency, like when COVID-19 happened.

It's clear that m-learning will continue to play a big part in how teaching and learning methods for education change and grow. Students' willingness to use this technology is the main thing that makes m-learning work in the long run. The goals of this research are to come up with and test a research model to find out what factors have a big impact on whether or not Egyptians want to use mobile learning for basic education. By adding two more factors to the unified theory of acceptance and use of technology (UTAUT), namely learners' autonomy (LA) and content quality design, a research model was made (CQD). The information from 386 respondents was gathered using a quantitative method called a cross-sectional survey. In this study, a method called Partial Least Squares (PLS) was used to test the model in the real world. The results showed that learners' autonomy (LA), performance expectations (PE), facilitating conditions (FC), and social influence (SI) all have an effect on their behavioural intention (BI) to use m-learning, but effort expectations (EE) did not. The study also found that content quality design (CQD) has a big effect on both performance expectancy (PE) and effort expectancy (EE) (EE). Later in this paper, we also talk about what could happen in future research and the limits of what we found.

Simulation games are used a lot in business classes, but not much is known about how they help students learn. Simulation isn't always helpful in marketing classes, and not all students like it as much as others. We use the "expectation–confirmation theory" and the "unified theory of acceptance and use of technology" to create a model to study the relationship between "Learner Satisfaction" and "Performance Expectancy" and "Effort Expectancy" with a marketing simulation game. The model is based on a survey of 173 students who played a simulation game as part of a course in a two-year graduate business programme. We also look at how Age, Gender, Course Type, Course Stage, and Recalled Performance play a role. We say that Learner Satisfaction is driven by Learner Expectations of Performance and Learner Expectations of Effort. Learner Satisfaction is also linked to how well students can remember what they learned. We talk about what our results mean for the use of marketing simulation games in business programmes and how they relate to experiential learning theory, which says that learner satisfaction is linked to learning outcomes. Using Performance Expectancy and Effort Expectancy as predictors of Learner Satisfaction, instructors can change how simulation games help students learn.

III. CONCEPTUAL FRAMEWORK

All of the ideas, meanings, and claims are related to the research questions, which are based on the research framework. This research shows that, despite changes in technology, the idea of how to measure success that has been used a lot in research is still mostly based on the Research Model Adopted.

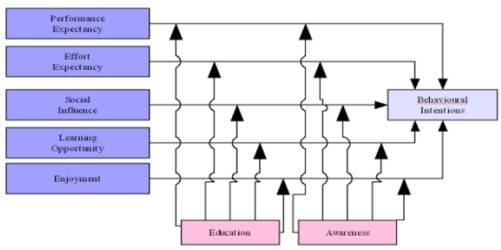

Figure 1: Research Model Adopted

CONCLUSION

Even though researchers study user acceptance a lot, most of the time it is in the context of job organisation. Less is done in the education sector, and it is even less common in educational games. It's clear that m-learning will continue to play a big part in how teaching and learning methods for education change and grow. Students' willingness to use this technology is the main thing that makes m-learning work in the long run. The goals of this research are to come up with and test a research model to find out what factors have a big impact on whether or not people want to use mobile learning for basic education in developing countries. By adding two more factors to the unified theory of acceptance and use of technology (UTAUT), called "Learning Opportunity (LO)" and "Enjoyment," a research model was made (Enj). In the future, we will use educational games to test and validate our proposed model with first-year college students from a number of Malaysian universities. This is a work in progress that tries to figure out what makes people accept educational games and how different types of students (gamers and non-gamers) accept technology in different ways.

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