

# Conceptual Framework Of Gamification Effects On The Motivation, Enjoyment And Academic Performance Of Accounting Students In Learning Introductory Accounting At Libyan Universities

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**Abstract:** Although gamification leads to better learning experience when properly applied in the educational setting, it is however, not applied in many institutions in the Libyan education context. Therefore, this study aims to identify the effects of gamification on accounting students' motivation, enjoyment and academic performance in learning introductory accounting at Libyan universities. This conceptual framework aims to utilize the current literature to present a discussion on using gamification in learning introductory accounting in these universities. The conceptual framework is discussed based on the Theory of Gamified Learning and Competency Theory. The conceptual framework emphasizes on the need for identifying the positive effect of gamification on students' motivation, enjoyment and academic performance in learning introductory accounting at Libyan universities.

**Keywords:** Gamification, accounting students, students' motivation, students' enjoyment, students' academic performance.

## I. Introduction

During the last few decades, rapid advancement in information and communication technology has positively affected daily human life. It has shown a lot of improvements in diverse fields such as the economy, medicine, and particularly in the field of education. As a result, universities have utilized advanced technologies such as educational web-based environments, mobile applications, personal computers, and mobile devices as learning tools to facilitate the instructional process and improve learning

outcomes. The high increase in smartphone use has motivated for the development of mobile applications that mainly target the entertainment aspect since young people spend huge time using the smartphone for playing electronic games. Therefore, researchers and educators tend to exploit this aspect in increasing the level of engagement and enjoyment of the learning process for the students (Chen & Kuo, 2019).

Indeed, a massive amount of literature on this topic has defined the term gamification to describe the use of game elements and game-

design techniques in non-game contexts for the purpose of enhancing students' engagement in the learning process and in solving problems (Sailer et al., 2017), (Buckley & Doyle, 2016), (Stott & Neustaedter, 2013), (Toda et al., 2019), (Park et al., 2019), (Dichev & Dicheva, 2017), (Huang et al., 2019), (Yildirim, 2017), (Zatarain Cabada et al., 2018). Gamification is a suitable solution for such a problem, and a powerful approach that is positioned to provide a variety of advantages over the traditional lecture pedagogy for motivating and engaging the students in the learning process. Gamification transfers the tedious and serious knowledge process into a gamified flow with the purpose of providing a more enjoyable and entertaining learning environment for the students to educate, train, or change their behaviour. Consequently, gamification can be helpful toward students (Ed et al., 2019). Moreover, it is also effective in improving students' knowledge of accounting principles, encouraging competitiveness and teamwork, enhancing and is also more motivational than the traditional approaches (Mardiyatul & Wan, 2018). Studies conducted in several countries, universities, and schools found that there is a positive effect in using gamification in the educational process (Hursen & Bas, 2019), (Huang et al., 2019; Özdener, 2018; Sánchez-Martín et al., 2017; Tsay et al., 2018a; Yildirim, 2017; Zatarain Cabada et al., 2018), (Subhash & Cudney, 2018). However, some studies have reported on the negative effects of gamification in the educational process (Micarelli et al., 2016; Toda et al., 2018). Yet, some other studies have concluded that there are both effects, positive and negative, in using gamification in the educational process (Subhash & Cudney, 2018; Zhonggen, 2019).

In Libya, particularly, the students are not motivated in studying accounting, and their performance often unsatisfactory due to their bad perception of the field. Besides that, the use of traditional approaches in teaching accounting are

monotonous and lacking in enjoyment for the students (Al Mahjoub, 2017; Amarif et al., 2018; Al- Nehwi et al.2018; (Masli, 2020); (Mosbah, A. Y. S., Cowton, C., Drake, J., & Teviotdale, W, 2022). The emergence of this problem has created a need for finding a path that motivates the students to learn and raise their achievement level, and to help instructors to make their students interested in the topics they teach, and help them to achieve their goals and attain success. Therefore, the problem of this study lies in determining the extent to which the use of the gamification approach affects the educational process and whether this approach has an effect on students' motivation to learn the introductory accounting course, their enjoyment in studying it, and their performance in this course by identifying the appropriate characteristics of the games to be applied in the educational process, Besides that, this study aims to determine whether teaching style has an effect on the relationship between the use of gamification and the need for the instructors' to be competent in IT skills.

Since the effectiveness of gamification has not yet been studied in the accounting department of Libyan universities, this study therefore aims to investigate the effects of gamification on accounting students' motivation, enjoyment, and their performance at Libyan universities (Al Mahjoub, 2017; Amarif et al., 2018; Al- Nehwi et al.2018); (Masli, 2020); (Mosbah, A. Y. S., Cowton, C., Drake, J., & Teviotdale, W, 2022).

## 2. Problem Statement

The problem statement could be summarized by the figure below:

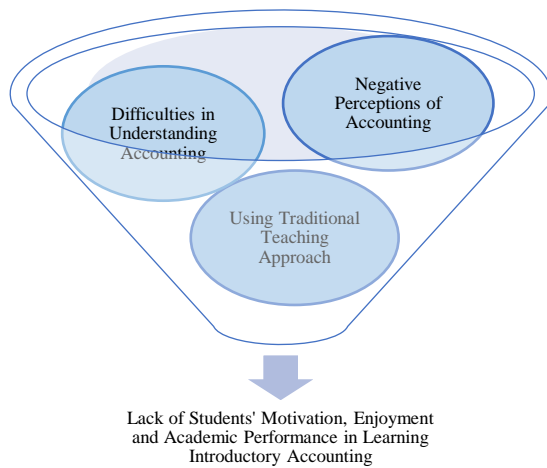


Figure 1. Problem Statement

The solution could be summarized by the figure below:

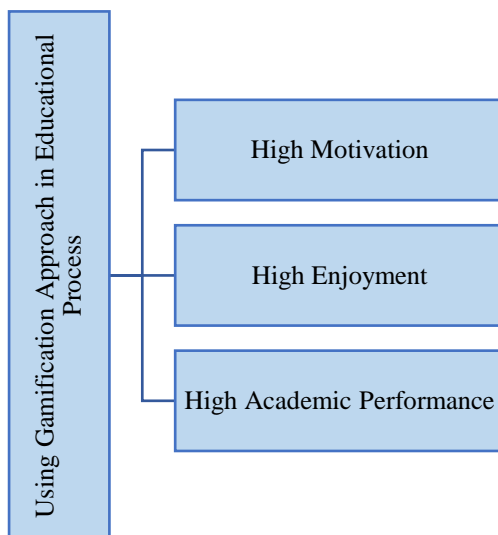


Figure 2. Solution

### 3. Literature Review

The conceptual framework of this study is developed using dependent and independent variables. Below is the detailed explanation on each of these variables:

#### Using Gamification

According to some previous studies, the term game is identified as “a system in which players engage in an artificial conflict, defined by rules, that results in a quantifiable outcome” (Sailer et al., 2017).

Gamification is defined as using game-based mechanics and game thinking to engage people, motivate action, promote learning, and solve problems (Buckley & Doyle, 2016). Besides that, gamification is also defined as an education platform, which aims to increase the motivation and performance of the learners (Hursen & Bas, 2019). Among the most important characteristics of educational games are the following: free download applications, easy to use, applied in learning different subjects, scalable, utilization of multiple-choice questions, and characterized by excitement and encouragement. These characteristics vary, and are developed based on several factors, the most important of which are the technological progress of the country in general, and the technological progress of the education sector, and in particular the universities (Hamari et al., 2014); (Hanus & Fox, 2015); (Barata et al., 2017); (Pechenkina et al., 2017); (Qu et al., 2017); (Toda et al., 2018); (Zhao, 2019); (Hursen & Bas, 2019); (Acosta-Medina et al., 2020); (Acosta-Medina et al., 2021); (Panis et al., 2020).

It is classified as an independent variable for this study because it is considered as the main tool and the most important pillar on which this study relies and which tries to verify its effect on students in terms of their motivation, enjoyment and academic performance in learning accounting.

### **Students' Motivation**

Motivation is defined as the natural energy that people use in doing something. Furthermore, motivation refers to the reasons for doing something and for deciding to do something, whereas sustaining motivation refers to the effort required to sustain or persist in doing something. As a result, motivation specifies the reason people decide to do something, the duration that they are prepared to increase the activity, and their persistence in doing the activity (Han & Yin, 2016).

Students' motivation is defined as a combination of three components: motivation, desire to learn, and attitude towards learning activity. In addition to that, it is defined to include not only the amount of effort put forth, but also the emotional aspects of desire and attitude toward the learning activity. It means that students are more engaged and they exert more effort in their learning tasks (T. Hidayati et al., 2019).

### **Students' Enjoyment**

Students' enjoyment is the students' feeling of pleasure as a result of doing or experiencing something they like. It represents a positive emotion that activates the cognitive resources for them to learn and optimize their academic achievement (Simonton & Garn, 2020).

### **Students' Academic Performance**

Students' academic performance is the extent to which students have attained their short or long-term educational goal. It is the amount of learning acquired by the students, or the amount of experience and information that the students gain as a result of studying a specific subject, course or educational program, and it is the amount of what is actually acquired- as above from the educational goals (Chan et al., 2016).

Students' motivation, enjoyment, and their academic performance are classified as dependent variables since each of these variables changes according to its influence on the

independent variable, which is the use of gamification in education.

The focus of this study is on the variables of motivation and enjoyment as dependent variables, in addition to the students' academic performance because motivation and enjoyment are among the most important variables that correspond to the use of gamification as a learning method. Besides that, students' academic performance is a measure of whether or not this method is effective.

Based on previous studies, the academic performance of students has been studied alone as a dependent variable in some of these studies - which the researcher thinks are insufficient, so this study adds motivation and enjoyment. On the other hand, this study has not addressed other variables such as participation and engagement, so as not to expand the research area and thus focus on several specific variables and not on too many of them.

### **Instructor's IT skills as a mediator**

The teaching style however, it differs from one instructor to another. Some believe in gamification as an effective teaching method while others do not.

The instructor's IT skills is chosen as a mediator variable due to its direct effect on the use of the gamification method as an educational method that requires instructors who are efficient in using technology to help and lead students to apply and benefit from the gamification approach.

### **Teaching style as a moderator**

From time to time, instructors use new ideas in order to develop education, attract students' attention, and increase their desire and enjoyment of what they study. Students learn in different ways. Thus, this led to the emergence of different models of teaching methods, including the gamification method (Mardiyatul & Wan, 2018). Teaching method is the method followed by instructors to deliver information and skill to

students, which is what the teaching process aims at (Trabulsi, 2018). Therefore, teaching style is considered as a moderator variable in this study due to its impact on the relationship between students' use of gamification and its effect on their motivation to study, their enjoyment of it, and their performance in it.

These mediator and moderator variables were based on similar previous studies: (Koutsikouri et

al., 2018); (Sijde et al., 2019); (Tanaka et al., 2016); (Acosta-Medina et al., 2020); (Acosta-Medina et al., 2021); (Shah, 2017); (Mardyatul & Wan, 2018).

For a clearer conceptual framework, the following figure has been drawn:

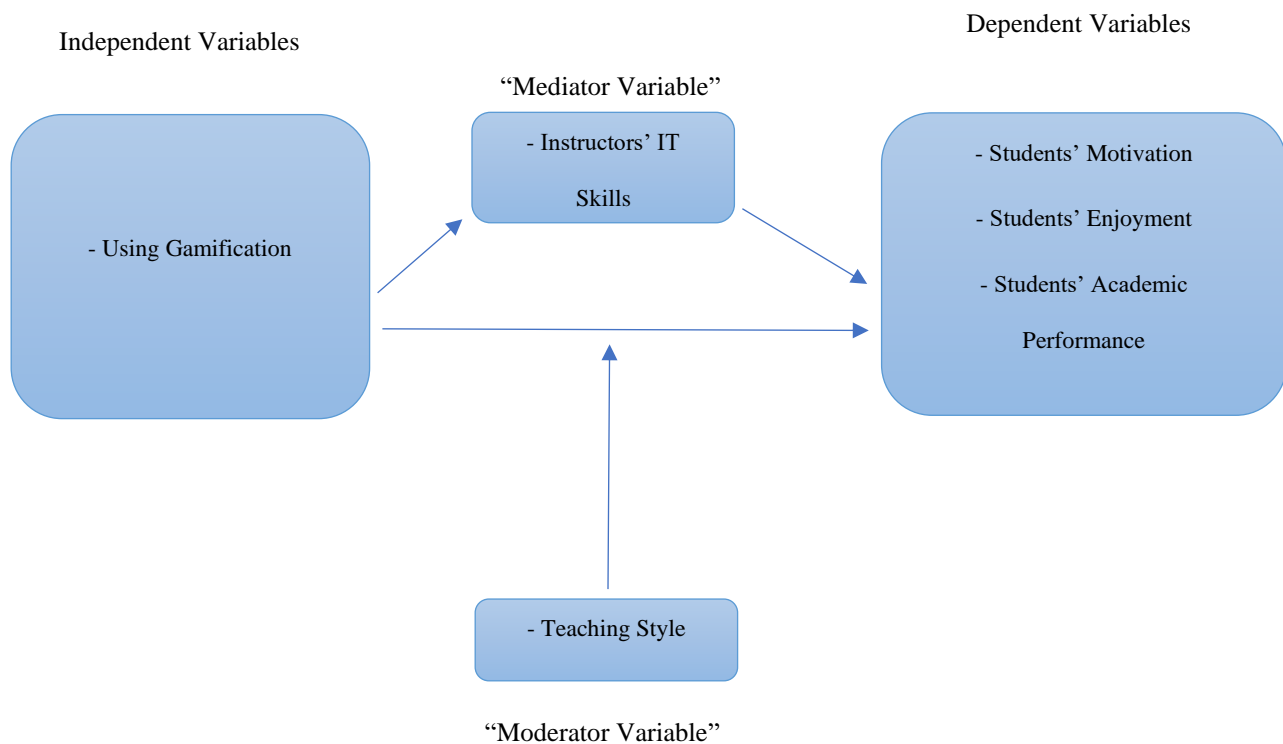


Figure 3. Conceptual Framework

#### 4. Underpinning Theories

The study is based on the following theories:

##### 4.1. Theory of Gamified Learning

Based on this theory, gamification is the use of features of a game outside the context of a game with the aim of influencing behaviors or attitudes related to learning. Behaviors and attitudes affect

learning through the elements of the game and the quality of its design (Landers, 2014). This theory provides a framework that researchers can focus on through the use of games by using elements of the game to achieve quality education (Ma & Oikonomou, 2017). This theory has been adopted in many previous studies related to this current research (Ma & Oikonomou, 2017), (Muñoz et al., 2019), (Sanchez et al., 2020), (Sailer & Sailer, 2021). Looking at the aforementioned theory, it is

applied to the current study within the following aspects (Landers, 2014); (Sailer & Sailer, 2021): using gamification, students' motivation, enjoyment, and their academic performance.

## 4.2. Competency Theory

Another theory that forms the basis of the study is the Competency Theory that focuses on the instructor's competency in using IT skills. Views competence as the ability in using knowledge, and personal skills in studying (Jankvist, 2019).

In addition to that as mentioned in the study of (Bergsmann et al., 2015) the competency theory consists of three main dimensions that can be summarized as follows: competence areas, competence levels, and competence development. This theory is applied to the current study within the following points: the instructors' IT skills, and their teaching style.

## 4.3. Theoretical Framework of the Study

The following figure clarifies the theoretical framework:

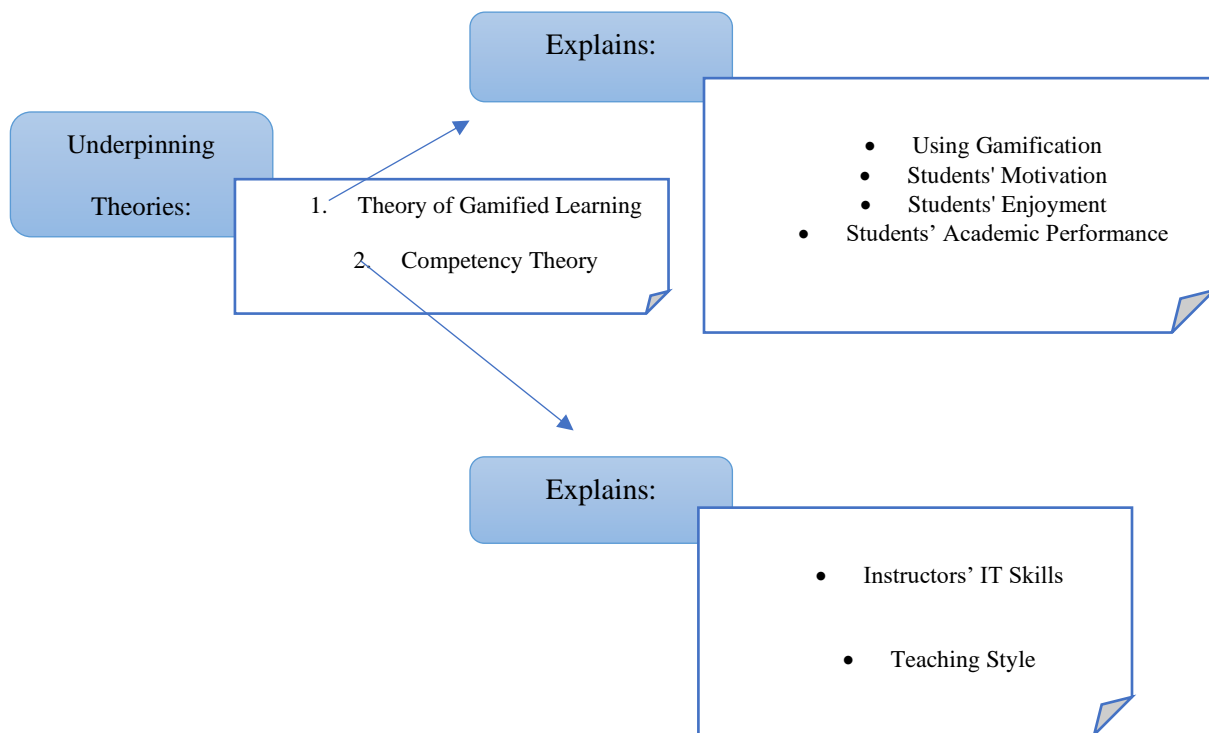


Figure 4. Theoretical Framework of the Study

## 5. Conclusion

In conclusion, this study offers a specific emphasis on using gamification in the educational process, particularly with accounting students at Libyan universities, with the aim of further improving their motivation, enjoyment and academic performance. Apart from that, this study aims to contribute to the overall knowledge base about using gamification in increasing

students' motivation, enjoyment and academic performance in learning accounting at Libyan universities to the advancement of the country and its progress. Moreover, this study will help the Libyan government, university education officials and members of the accounting faculty in Libya to pay more attention to accounting education to improve its effectiveness and meet

the requirements of the labor market in this country.

Furthermore, the variables and factors exposed to this study in learning introductory accounting at Libyan universities by using gamification will be an incentive for further research in this regard.

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**Conflicts of Interest:** The authors declare no conflict of interest.

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