

# Study on the Willingness to Continue Using Online Learning Behaviour in the Platform Economy

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## Abstract

**With the booming Internet economy, there are an increasing number of online learning platforms, and the number of users using these platforms for learning is growing every year. However, less than 30% of users are actively using these platforms, so it is important to understand users' willingness to use them continuously. In order to investigate the causes of users' low activity on online learning platforms, this paper develops a theoretical model on the factors influencing users' willingness to use these platforms consistently with the aid of expectation confirmation theory and self-determination theory.**

## Keywords

**Online Learning Platforms; Expectation Confirmation Theory; Self-determination Theory.**

## 1. Introduction

With the growth of the Internet, an increasing number of individuals are choosing to learn online, and the number of users of these platforms is growing year over year. Online learning platforms had 342 million users as of December 2020, making up 34.6% of all Internet users, with students making up 21% of all Internet users, according to the China Internet Information Center's 47th Statistical Report on the Development Status of the Internet. According to data, there were 128 education platform APPs with 120.15 million active users by the end of February 2021, making up 27% of users of online learning. This data demonstrates that even while there are a lot of people using online learning platforms, only a tiny percentage of those people can utilize them constantly for learning, and this limits the ability of these platforms to improve. The propensity to continue using online learning behavior is thus important to research in the context of the platform economy.

Online learning is a method for individual users to obtain educational materials via the Internet, on a particular online learning platform, or to achieve synchronous learning between teachers and students, or between users who share similar interests in various locations, through a virtual network. Online learning is more convenient for university students and they are more motivated to study new skills and information to develop themselves as a result of the low cost of access to online learning resources. According to statistics, 1.18 billion people participated in online learning as 1,454 colleges achieved online commencement in the first half of 2020. Online learning platforms have become standard learning aids for students who are acclimating to the Internet era, and e-learning materials and online interactive methods will become an essential part of the infrastructure being built in higher education. In order to determine whether university students are willing to continue using online learning in a platform economy, we use them as the study's target audience. This leads us to some recommendations for how online learning platforms should be run.

The expectation confirmation model is one of the more popular studies on the ongoing usage of information systems [1-4]. According to this paradigm, a person has specific expectations about an information system or the outcomes of utilizing it before using it for the first time. Whether or not an individual's expectations are met after utilizing an information system affects that person's satisfaction with the system and, consequently, his or her intention to keep using it. The expectation confirmation model has the ability to explain a user's willingness to continue using an information system, but it is unable to identify the specific dimensions of the user's expectations. It is obvious that an information system's nature, qualities, and intended use all influence what people expect from it. Individual users, for instance, will have higher standards for service quality when using a mobile instant messaging platform. As a result, the confirmation of individual users' expectations of service quality during the use of the platform can have a significant impact on individual satisfaction and, consequently, their willingness to continue using the platform [5]. As a result, we examine the continuing usage of online learning platforms by analyzing the expectations that different users have for using the platform in light of its key features.

According to certain studies, the reasons why different users are motivated to use different types of information systems differ. For instance, Xu et al. contend that information systems can be categorized as either hedonistic or pragmatic, with a difference in the influence of hedonistic and pragmatic motivations on individual users [6]. Similar to how learning behavior differs from general system usage behavior, it has its own distinctiveness. In the eyes of the general public, it is a behavior that is supported and encouraged, and this social aspect motivates students' psychological acceptance of and demand for the learning behavior. However, the lack of excitement in the learning process tends to demotivate students, which eventually results in less effective learning. Contrarily, greater motivation during the learning process can aid people in concentrating and boosting their motivation for learning, improving their learning effectiveness [7]. As a result, one of the major factors affecting people's learning behavior is their drive to learn [8]. Online learning methods are also very different from traditional classrooms in that students' learning status shifts from passive to independent learning and the learning mode shifts from teacher-centered knowledge instillation to interactive mode between students and teachers, reducing reliance on teachers' lectures and promoting independent learning. Individual users use online learning platforms more for their psychological demands for learning behavior because online learning offers a larger degree of liberty. This psychological need can be separated into three categories, according to Self-Determination Theory (SDT): competence, autonomy, and relationship requirements. Self-Determination Theory is a theory of behavioral motivation that contends that people have basic psychological needs, such as the need for competence, autonomy, and relationships, and that meeting these needs makes people more motivated to act, which in turn leads to the occurrence of behavioral outcomes [9]. Although the self-determination theory has been extensively studied in the context of learning motivation, it has received less attention in studies on the continued use of information systems. The majority of studies that have employed self-determination theory [10] have concentrated on its motivating impacts on internal and external motivation, while psychological needs-based studies have been less prevalent.

In summary, there is a lack of research on the intention to continue using online learning platforms from the perspective of fundamental psychological needs, and many studies that apply the expectation confirmation model to the literature do not specify the type of expectation confirmation, have limited application domains for self-determination theory, or both. The contributions of this paper, which takes into account the features of online learning platforms, are as follows: first, from the perspective of fundamental psychological needs, combined with the expectation confirmation model, we construct a model of how individual users' perceptions of the usefulness, enjoyment, and satisfaction of using online learning

platforms in three dimensions—ability expectation confirmation, autonomy expectation confirmation, and satisfaction—influence their intention to use them continuously. The study also offers a fresh perspective on the psychological requirements of specific users, new concepts for applying self-determination theory and expectation confirmation models, and workable recommendations for platform operators and users, respectively.

## 2. Research Background

### 2.1. Online Learning

With the help of the Internet, teachers and students can learn simultaneously from different locations thanks to online learning, which is based on contemporary science and technology. The government and educators have taken notice of online learning since it is simple to use and inexpensive to access learning resources, making the ideal of equal sharing of high-quality educational resources achievable. University students are also more likely than ever to seek out online learning opportunities for self-improvement in order to get better professions as information technology continues to advance. The scope of online learning is expanding annually, according to the most recent data report published by the China Internet Network Information Center, therefore this topic has drawn the attention of many academics.

Numerous studies have been conducted on users' propensity to use online learning platforms, with particular attention paid to platform functionality [11], perceived value [12], and perceived technology performance [13]. These studies looked at people's willingness to learn online from the standpoint of technological resources, but as education is the core component of online learning, we also need to pay attention to the students themselves. According to certain studies, behavioral motivation is a significant component affecting each individual's online learning. People will learn very little if they do not have a strong incentive to do so, hence they need a strong motivation to keep going with their learning process [14]. Additionally, the shortcomings of traditional classroom instruction in higher education are even more apparent in the information age. For instance, university students often engage in passive learning for extended periods of time, which can lead to learning inertia and habituation to relying on teachers, which over time can impair students' judgment, creativity, and capacity for independent thought. Therefore, in order to increase the effectiveness of online learning for students, we must fully exploit their initiative, pique their psychological thirst for knowledge, and encourage independent learning.

In conclusion, we apply the psychological needs-based self-determination theory. This theory contends that the three fundamental psychological needs of competence, autonomy, and relationship are innate to each person rather than acquired later. It also contends that meeting these needs can result in long-lasting behavioral motivation and, ultimately, in the desired behavioral outcomes [9]. According to research on online learning that used this theory, individuals are more motivated to study when their basic psychological needs are met, and this is related to greater rates of accomplishing course objectives [15].

Online learning is more autonomous for individual users than conventional face-to-face learning is. This autonomy includes freedom in content, media, and access methods in addition to freedom in time and space [16]. In order to increase a person's propensity to keep learning, the great degree of autonomy in online learning necessitates that they have a constant psychological motivation for learning. Most users of platforms for online learning don't utilize them continuously; instead, they use them sometimes [1]. As a result, the emphasis in various learning platforms should be on how to inspire individual users to grow a willingness to keep using them [17-19]. The research of sustained usage is crucial for online learning platforms since only by encouraging users to use the platform consistently over time will it be able to succeed [20].

## 2.2. Expectation Confirmation Model

The model of expectation confirmation, which is frequently used to investigate repeat purchases and post-purchase behavior of consumers, is the foundation of the expectation confirmation model. According to the notion, a person's assessment of a thing starts before they actually buy it since they have pre-existing expectations of the product or service. The degree to which original expectations are met impacts how satisfied a person is with a product or service; satisfied people will make more purchases, whereas unsatisfied people will cease buying.

Bhattacharjee developed the expectation confirmation model and expanded expectation confirmation theory to the field of information systems. According to this paradigm, an individual's enjoyment and willingness to utilize a particular information system are both influenced by the degree of expectation confirmation they experience when using the system. Many scholars have acknowledged the usefulness of the expectation confirmation model to the study of people's propensity to continue using as researchers continue to use and enhance the model [4,21].

## 2.3. Self-determination Theory

Self-Determination Theory (SDT) is a theory of behavioral motivation that contends that both internal and external motivations influence how people behave. External motivation is when a person acts in order to achieve a certain goal, whereas internal motivation is when a person acts because they love the action or are interested in it. The opposite of internal motivation, which refers to someone doing solely for their own delight rather than for the benefit of the behavior's results, is external motivation [23]. Perceived usefulness was used as a variable to measure individual users' external motivation, and perceived enjoyment was used to measure individual users' internal motivation. Davis et al. [22] also demonstrated that individuals' willingness to behave is influenced by both external and internal motivation. The consequence of using an information system is valued to the particular user, according to perceived usefulness. When someone perceives pleasure while using an information system, they are feeling good.

Additionally, self-determination theory categorizes needs into competence, autonomy, and relationship needs in order to ensure the healthy development and efficient functioning of the individual's psyche [22]. It defines needs as an innate tendency at the psychological level of the individual, which is considered to be something that the individual is born with rather than something that is formed later. The satisfaction of these three fundamental psychological needs, according to Ryan and Deci, also results in the individual maintaining or even increasing his or her internal motivation to perform a behavior and acting spontaneously. Secondly, if an individual's initial motivation to perform a behavior is because the outcome will allow the individual to receive a reward or avoid punishment, then the individual's motivation to perform the behavior will remain the same or even increase if the satisfaction of these three basic psychological needs is met. As a result, the individual will act spontaneously and follow his or her own internal interests. In addition, if the individual has a clear life goal for the future, the satisfaction of basic psychological needs can promote or strengthen this life goal and increase the likelihood of achieving it. When these three basic psychological needs are met, external motivation can be internalized or integrated, changing the source of motivation for the individual to perform the behavior. In other words, meeting fundamental psychological needs might help a person internalize motivation and be more persistent in changing a behavior.

Hartnett et al. [24] tested the validity of SDT applied to online learning research and found that basic psychological need satisfaction had a more significant impact on course outcomes than internal and external motivation. Through experimental experiments, Wang et al. [25] collected data on the results of online and offline learning separately and discovered that need

satisfaction significantly affected motivation. Additionally, Ryan and Deci [22] propose that meeting people's fundamental psychological needs for relationships, competence, and autonomy can effectively inspire people to take part in activities that are conducive to their own growth. So, in addition to having a theoretical foundation, the application of self-determination theory to the study of continuous use of online learning platforms broadens its scope of use. In order to examine how three different types of demand expectation confirmation affect a user's continued use of online learning platforms from the perspectives of competence, autonomy, and relationship, respectively, this paper combines self-determination theory and the expectation confirmation model.

### **2.3.1. Confirmation of Competence Expectations**

An individual's expectation of his or her capacity to execute a task is referred to as ability expectancy [26]. According to certain studies, goal avoidance and ability expectancy are negatively correlated; if a person has a higher anticipation of his capacity to fulfill a learning objective, he will be less inclined to avoid it [27]. Fatimah et al. [29] discovered that procrastination was negatively correlated with ability expectations and intrinsic motivation, that high ability expectations could reduce procrastination, and that procrastination was caused by a fear of failure. However, he also discovered that procrastination could be reduced by ability expectations and intrinsic motivation. Therefore, if a person may sense that high competence expectations are being met when using an online learning platform, or if competence expectations are met, he will be compelled to use the platform again.

### **2.3.2. Confirmation of Autonomous Expectations**

Expectations of autonomy are those that people would behave in the learning process in accordance with their surroundings and innate values [23]. According to several research [30], which are consistent with Ryan and Deci's findings [23], students' motivation is facilitated in the classroom by the environment's support for autonomous learning. Autonomy expectations-the gap between adolescents' internal expectations of autonomous behavior and the reality that parents do not want their children to make autonomous decisions-are now primarily used to study parent-child relationships and adolescent mental health [31-32]. This lower autonomy expectation confirms that it is harmful to adolescents' mental health. The participants in our study were university students, who make up a portion of the adolescent population. As a result, university students who experience a high level of internal confirmation of autonomy during the learning process on an online platform will likely feel need-satisfaction and pleasure, which will encourage them to use the platform for learning again. As a result, the online learning platform's support of autonomous behavior and creation of a setting where people can get validation of their independent expectations may encourage them to use it again.

### **2.3.3. Confirmation of Relationship Expectations**

The idea that people will connect with others in their environment is known as a relationship expectation [23]. Online interactions with others might satiate people's psychological need for relationships and increase their propensity to stick with the platform, according to Yuan Yuan's study of online learning experiences. Additionally, Andel et al. [33] came to the conclusion that users' pleasure is significantly impacted by the social characteristics of online learning systems. If someone uses an online learning platform to connect with others or perhaps start a social relationship, the relationship expectations the site creates are confirmed, which motivates the person to utilize the platform again.

### 3. Research Model and Proposals

#### 3.1. Perceived Usefulness

A user's willingness to use an information system indefinitely is determined by his or her behavioral goals, which are in turn determined by how valuable they believe the information system to be [34]. In reality, a user's willingness to use a system increases in direct proportion to how beneficial the user believes the information platform to be. In this era of rapid knowledge change, university students are especially in need of online learning platforms' ability to expand user knowledge and improve professional abilities. Therefore, we can hypothesise that:

Proposal 1. Perceived usefulness significantly influences college students' willingness to continue using online learning platforms.

#### 3.2. Perceived Happiness

According to Barnes' research, individual users' intrinsic motivation has a significant role in their decision to engage in certain behaviors in virtual environments [35], such as finding the online classroom experience enjoyable. The majority of modern online learning platforms contain entertainment components, like entertaining classroom interactions. University students experience enjoyment during this procedure, which gives them intrinsic desire to keep utilizing the platform. As a result, it is likely that college students' feelings of enjoyment and fun influence their inclination to use the platform going forward, with the following hypothesis:

Proposal 2. Perceived happiness significantly influences college students' willingness to continue using the online learning platform.

#### 3.3. Satisfaction

The emotional or psychological condition of the user as they experience using an online learning platform is referred to as satisfaction. Satisfaction is a key attitude aspect that affects a person's motivation to continue using, according to Bhattachejee's expectation confirmation model [2]. According to research, user satisfaction is one of the major determinants of whether or not they will continue to use a particular service. For instance, in a study by Oghuma et al. [5] individuals' willingness to use a mobile instant messaging platform was significantly influenced by their level of satisfaction with the service. Therefore, this study makes the following suggestion:

Proposal 3. Satisfaction of university students significantly influences their willingness to use online learning platforms consistently.

#### 3.4. Confirmation of Demand Expectations

The expectation confirmation model states that before utilizing the online platform, users have expectations regarding their learning results, and after using the platform, university students have confirmation values regarding their actual learning outcomes.

##### 3.4.1. Confirmation of Competence Expectations

The phrase "confirmation of competency expectations" is the process of verifying that university students can execute activities after using a learning platform. Confirming competency expectations can boost university students' self-esteem, inspire them to continue learning, and make them more satisfied with the platform. It has been demonstrated that a person's intrinsic drive and competency requirements are related [36]. High expectations for competence will increase motivation in the learning behavior domain. Therefore, in the learning process, it will increase university students' satisfaction with the platform and encourage them to use it again when actual perceptions of students' competence are higher

than expectations, i.e., when competence expectations are confirmed at a higher level. As a result, this paper suggests the following:

Proposal 4a: Competence expectation confirmation significantly affects college students' perceived usefulness.

Proposal 4b: Competence expectation confirmation significantly affects college students' perceived happiness.

Proposal 4c: Acknowledgement of competence expectations significantly affects college students' satisfaction.

### **3.4.2. Confirmation of Autonomous Expectations**

The degree to which university students' expectations of participating in independent study are confirmed is referred to as autonomous expectations confirmation. The confirmation of autonomous expectations can improve students' engagement in the learning process and increase their integration into the classroom. Students will then grow to enjoy learning new things and feel satisfied with the platform. For instance, student participation and engagement can result in student motivation and ultimately successful online learning. Therefore, a university student will feel more satisfied with the platform and inspired to utilize it again when they sense a high level of reinforcement of their own autonomous expectations. This essay makes the following recommendations in light of the aforementioned arguments:

Proposal 5a: Autonomous expectation confirmation significantly affects college students' perceived usefulness.

Proposal 5b: Autonomous expectation confirmation significantly affects college students' perceived happiness.

Proposal 5c: Autonomous expectation confirmation significantly affects college students' satisfaction.

### **3.4.3. The Effect of Relationship Expectation Confirmation on Self-determination Motivation and Satisfaction**

Relationship expectation confirmation is the affirmation that the specific user anticipates receiving attention or being treated with kindness. For instance, if a person can learn and speak with their friends from a different area or finds other individuals who share their interests while they are learning, they will find this enjoyable. People will be satisfied with the platform as a result of this delight, which will encourage them to use it again. In contrast, weaker relationships with others during the learning process, or lower levels of relationship expectations being confirmed, will undermine people's motivation to learn, making them less inclined to use the platform again and making them feel dissatisfied with it. Based on the above arguments, the following proposal is made in this paper:

Proposal 6a: Relationship expectation confirmation significantly affects college students' perceived usefulness.

Proposal 6b: Relationship expectation confirmation significantly affects college students' perceived happiness.

Proposal 6c: Relationship expectation confirmation significantly affects college students' satisfaction.

## **4. Research Contributions**

### **4.1. Implications for Research**

First, this work examines how people's psychological requirements affect their continued use of online learning platforms from the standpoint of those needs, enhancing the continuous use research perspective. The number of people who are willing to learn online is growing every

year as a result of the characteristics of online learning, but most people only use the platform for a brief period of time. This instability in use is caused by the fact that people are not very motivated to use the platform. According to the self-determination hypothesis, people's behavioral motivation can be increased when their basic psychological needs are met. As a result, this study starts with fundamental psychological demands and broadens the research perspective on ongoing usage intention.

Second, this research deepens our understanding of individual expectations and expectation confirmation by refining the precise sorts of expectations in the expectation confirmation model in light of the context of online learning. The influence of the degree of confirmation of the overall expectation of the information system on individuals' continued use of the system has primarily been studied in existing applications of the expectation confirmation model, particularly when applied to people's continued use of information systems. Individuals use various information systems for a variety of reasons, though, as a result of the growing diversity of information systems available today. In order to target the influence of the confirmation of such expectations on individuals' behavior, it is important to analyze individuals' expectations of the system in light of its nature and characteristics while investigating the continuous use of a particular information system.

Finally, by using self-determination theory to examine the ongoing usage of information systems, this research expands the application of this theory. This paper separates the various psychological expectations of people using online learning platforms based on fundamental psychological needs, namely competence expectation confirmation, autonomy expectation confirmation, and relationship expectation confirmation, and examines their impacts on people's continued use of online learning platforms. This paper adds an application of self-determination theory to sustained use research, which has significant insights and implications for the application of self-determination theory, whereas most scholars have applied the expectancy confirmation model or its extensions in existing research on sustained use.

## **4.2. Implications for Practice**

Operators of online learning platforms must have a thorough understanding of the variables affecting each user's online learning behavior in order for these platforms to continue to evolve. This essay examines the effects of three needs and expectations on university students' internal and external motives from the standpoint of psychological needs, which in turn affects their willingness to continue using an online learning environment. Individual users' propensity to continue using an online learning platform will grow when platform operators make use of platform features to assist users perceive better degrees of usefulness and happiness.

### **4.2.1. Advice to Platform Operators**

To create a setting that meets each user's psychological demand expectations, platform operators can modify their operating tactics. As a result, users will be more likely to continue using the platform's learning resources and will experience higher demand expectation confirmation. Therefore, platform operators need to be aware of how different demand expectation confirmations affect users' willingness to continue using and incentive to learn. The three effects of demand expectation confirmation can be utilized to target the confirmation of users' demand expectations, strengthen their dependence on the online learning platform, and boost their willingness to keep using the platform, depending on the knowledge area of operation.

### **4.2.2. Advice for Individual Users**

The individual user has an innate motivation to learn because learning has always been seen as something to be proud of, which makes it different from other forms of entertainment in our daily life. In truth, a lot of people genuinely desire to take some time out of their day to learn,

but they frequently fall short of their goals because of outside influences or a lack of self-control, leaving them disappointed. The following recommendations are provided to users who are eager to study based on the phenomena of learning in contemporary society that has been mentioned: In order to better define their own requirements and expectations and locate an online learning platform that matches them, people should first actively participate in activities in the online learning environment; In order to study organically rather than forcibly, according to their own inner interests, one should secondly look for intriguing components of the learning material or discover related courses that interest them. This can lessen the discomfort associated with making yourself learn anything.

## 5. Conclusion

The expectation confirmation model and self-determination theory are combined in this paper to clarify individual users' expectations of online learning platforms, classifying their expectations as competence expectations, autonomy expectations, and relationship expectations from the perspective of fundamental psychological needs. The paper also presents several recommendations for the improvement of platform operations and individual users' online learning. It concludes by discussing the research contributions to the field of sustained usage, the expectation confirmation model, and the application of self-determination theory.

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