# University Students' Offline-Online Learning Switching Behavior in the New Norm

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**Abstract**
**Purpose:** The COVID-19 pandemic situation worldwide has caused many schools and institutions of higher learning to switch to fully online teaching and learning, including Malaysia. The sudden switch from offline learning to online learning is causing challenges for academicians and students. Therefore, the study aims to investigate the factors affecting the university students' transition from offline to online learning by using push-pull-mooring theory to explain the switching behavior.
**Design/methodology/approach:** The study is cross-sectional and focuses on university students who switched from physical to online learning during the COVID-19 pandemic. It is a correlational research design using a quantitative research method. Convenience sampling will be used for quick and cost-effective data collection. The sample size of 119 will be chosen using G*Power to ensure adequate statistical power and avoid issues associated with a small sample size.
**Research limitations/implications:** This paper is a conceptual paper without having the findings to be shared. The study relies on self-reported data that will be collected through questionnaires, which may be subject to response bias and social desirability bias. Additionally, the research focuses exclusively on Malaysian Public University students, which may limit the generalizability of the findings to a broader population. Furthermore, the study assumes that the push-pull-moorings theory comprehensively covers all factors influencing switching behavior, potentially overlooking other relevant variables. The cross-sectional design of the study also restricts the ability to establish causality and track changes over time. Finally, while convenience sampling expedites data collection, it may introduce selection bias, as it may not accurately represent the entire student population. These limitations should be taken into account when interpreting and applying the research findings.
**Practical implications:** The findings of this study shall provide deep insight point of view from student perspective how they feel on online and offline learning. This study may also contribute to a better alliance of formal and informal support systems in education field. Moreover, the research output will contribute significantly not only to the corpus of knowledge as an understanding to the importance of comprehensive context towards the determination of the best factor in online and offline study. The recommendations to be

developed at the end of the research will be a list of factors that can be considered by the government in gearing ideas in developing comprehensive strategies towards applying the best practice for Malaysia education. This will also allow for policy advise and reform suggestions to further strengthen the Malaysian education.

**Originality/value:** The research on university students' offline-to-online learning switching behavior utilizing the push-pull-mooring theory holds significant originality and value in the field of education and behavioral psychology. By focusing on Malaysian Public University students, the research offers a unique cultural perspective, potentially uncovering nuances in switching behavior that may differ from other regions. Overall, this research adds valuable knowledge to the ongoing discourse on educational adaptability and contributes to the enhancement of learning environments in the digital age.

**Keywords**: Offline learning, online learning, switching behavior, push factor, pull factor, moor factor

## Introduction

In year 2019 world has been outbreak with the virus of COVID-19. World Health Organization (WHO) has declared COVID-19 as a pandemic which has badly affected the global economy. Since the pandemic, people lifestyle has been change including education institution. According to Taneja and Dutt (2021) many educational institutions are forced to shut down, which has impacted a large fraction of world's student population. The educational institutions suddenly have switched to online mode of teaching instead of face-to-face teaching. Since face-to-face teaching-learning cannot take place in this time of crisis, the situation has led to forced resortation to online-learning or e-learning (Dhawan, 2020). This new learning mode gives the flexibility to connect at any time from any place. This sudden shift has impacted the learning behavior of students to a large extent. People can access information anytime and anyplace that would normally be available only through a traditional classroom (J. Chen, Liu, Chang, Gui, & Na, 2020). Furthermore, online learning is gaining popularity, but users can easily find alternatives and switch between learning platforms. According to Y. Li, Nishimura, Yagami, and Park (2021) online learning applies innovative technologies and facilitates, such as smart devices and online technologies, to realize sustainability in education. Due to that, during the pandemic, online education customers had increased significantly (Oraif & Elyas, 2021) and the marketing development of the online learning market. In order to occupy the market, online learning platforms mostly launch free live classes and other activities to attract customers to experience its services. There are various virtual platforms which are being used by the various institutions like Google classrooms, Google Meet, Zoom, Cisco Webex, Microsoft Teams. There are two ways into which online learning can be categorised, synchronous learning and asynchronous learning. While asynchronous learning is not structured (Huang, Liu, Tlili, Yang, & Wang, 2020), synchronous learning gives the flexibility of live interaction with the instructor (Gua, 2020).

However, the challenges associated with the online teaching-learning cannot be overlooked (Kebritchi, Lipschuetz, & Santiague, 2017). Although the use of online learning in higher education has become more common over the last decade, the onset of the COVID-19 pandemic provided little time for instructors and students to prepare for the abrupt shift to online education platforms (Blizak, Blizak, Bouchenak, & Yahiaoui, 2020). Educators had to quickly convert their curricula and laboratories into online versions, while also ensuring equitable access to technology and internet connectivity for all students. Teaching and learning in a post-COVID-19 era present unique opportunities and challenges from an

economic research standpoint. There are many challenges' that need to be faced by educator nor the students. It is not only guaranteeing equal access to technology and internet connectivity for all students but also creating dynamic and interactive virtual learning experiences that foster active student engagement. Moreover, educators must grapple with the issue of affordability in online education, especially for students hailing from diverse socioeconomic backgrounds. Lastly, it is crucial to take into account the emotional well-being of students within a remote learning setting. While the challenges of online education cannot be overlooked, it is important to recognize the advantages that online learning brings. Online learning platforms have gained immense popularity during the pandemic due to their flexibility and convenience. Not only do they allow learners to access information anytime and from anywhere, but they also provide innovative technologies and tools that enhance the overall educational experience.

As a result of the pandemic, online teaching models have become the norm in higher education (Xue, Li, & Xu, 2022). This sudden shift to online learning has brought about significant changes in learning styles, platforms, accessibility, and the delivery of information (Fawaz & Samaha, 2021). The need for a rapid transition to online learning has provided both students and educators with firsthand experience of various eLearning approaches that they may not have otherwise encountered. This experience has offered learners and educators a more comprehensive understanding of online learning, allowing them to discover their personal eLearning preferences and evaluate the educational value associated with it. Therefore, this study aims to delve deeper into the factors that influence university students' transition from traditional classrooms to online learning platforms by using push-pull-mooring theory to explain the switching behavior. Previous studies related to the transfer behavior from off-line to online education mainly used Push-Pull-Mooring Model, and these studies all discussed students' switching intention from off-line to online learning (C.-L. Lin, Jin, Zhao, Yu, & Su, 2021; H. Xu, Wang, Tai, & Lin, 2021). Unlike other theories in the marketing or information system fields, by including fixed factors such as usefulness, confirmation, satisfaction, and continuance intention in the expectation confirmation model, the PPM framework does not mandate fixed variables for the push, pull, or mooring effects. In this emergency suspension of classes, many research conceptions did not follow the basic situations or assumptions set by other theories. By using the PPM, we only need to consider the uniqueness of the research background and then determine the push, pull, and mooring factors of different topics, which is more appropriate to explore the transfer of university students from offline to online learning. Previous research that used the PPM model to discuss related issues shows that the main push and pull factors are dissatisfaction (I. C. Chang, Liu, & Chen, 2014; Su & Wu, 2021; Tang & Chen, 2020; Y. C. Xu, Yang, Cheng, & Lim, 2014; K. Z. K. Zhang, Cheung, & Lee, 2012), and alternative attractiveness, respectively (Jung, Han, & Oh, 2017; Su & Chen, 2020; Susanty, Handoko, & Puspitasari, 2020; Tang & Chen, 2020). However, switching intention is still affected by many factors (Hou & Shiau, 2020). By exploring their engagement levels, we hope to gain a better understanding of their switching behavior and uncover key insights.

## Literature Review
### *Push Pull Mooring Theory*
The Push Pull Mooring theory is a prevalent model to explore consumer switching behavior. It explains the determinants that influence people to migrate or switch by grouping the factors into three parts: push (negative factor that encourages people to move from origin), pull (positive factor that attracts people to the new destination) and mooring (social or interpersonal factors that might facilitate or inhibit people to switch or migrate) (Bansal,

Taylor, & St. James, 2005; Lai, Debbarma, & Ulhas, 2012; H. Zhang et al., 2014). The PPM theory, originally stemming from the context of human migration, is widely accepted by scholars from diverse fields, including research focused on understanding patterns of consumer switching behavior (H. H. Chang, Wong, & Li, 2017; Hsieh, Hsieh, Chiu, & Feng, 2012; Lai et al., 2012; Nimako, Ntim, & Sciences, 2013; Sun et al., 2017; Wang, Luo, Yang, Qiao, & Management, 2019; H. Zhang et al., 2014). Y.-H. Chen and Keng (2019) asserted that the transition of learners to online education service providers represents a change in behavior, a phenomenon akin to the "push-pull-mooring" theory. This theory can serve as a theoretical framework to interpret the migration patterns involved (Y.-H. Chen & Keng, 2019). Hence, based on the theory, the offline-online learning switch among university students is driven by elements in all three categories; push, pull, mooring factors. It offers valuable insights into the university students' offline-online learning switching behavior. Prior to the pandemic, for instance, a student may have felt pushed by classroom size and pulled by online learning's allure of convenience, while his willingness to adapt to new technology provided the needed mooring force. Through this lens, it is clear that the transition is not merely a spur-of-the-moment decision. Instead, it approaches the complexity of a strategic choice, shaped by diverse internal and external influences.

***Switching Behavior***

Switching behavior is defined as consumers' choices from one provider to an alternative (H. Xu et al., 2021). It is usually associated with users' dissatisfaction with the incumbent product or service, along with their perceptions of the relative advantage of substitutes (Hsieh et al., 2012). The driving forces behind this swing can range from personal preferences, curriculum flexibility, availability of resources, or even sudden global changes (Bawa, 2016). University students' switching behavior from offline to online learning has become a subject of interest and research in recent times. This is due to the significant impact of the COVID-19 pandemic, which imposed a sudden transition from traditional face-to-face education to remote online learning. This transition itself presents challenges and can influence the behavior of university students in terms of their willingness to switch from offline to online learning (C.-L. Lin et al., 2021). Various factors contribute to university students' intention to switch from offline to online learning (Alshurideh, Al Kurdi, Salloum, Arpaci, & Al-Emran, 2023). These factors can be explored using the push-pull-mooring theory. The push-pull-mooring theory helps us understand the motivations and considerations that drive students towards or away from online learning platforms (Abumalloh et al., 2021; C.-L. Lin et al., 2021; Nayak, Bhattacharyya, Goswami, & Thakre, 2022; H. Xu et al., 2021). Push factors include the inconveniences and limitations of offline education during the current situation, such as limited communication and restrictions imposed by the pandemic. These push factors create a desire in students to seek out alternative options, such as online learning, which offers greater flexibility and convenience (J. Chen et al., 2020; Y.-H. Chen & Keng, 2019; Jin, Lin, Zhao, Yu, & Su, 2021; C.-L. Lin et al., 2021). Pull factors, on the other hand, involve the attractiveness and benefits of online learning. These include factors like ease of use, usefulness, and positive attitudes towards online instruction (Y.-H. Chen & Keng, 2019; Hsieh et al., 2012; C.-L. Lin et al., 2021). Additionally, the mooring effect plays a crucial role in students' decision-making process (Jung et al., 2017; H. Xu et al., 2021). This theory suggests that students' prior experiences, habits, and attachments to offline learning can act as barriers or facilitators in their willingness to switch to online learning (Zeng et al., 2021).
Therefore, understanding and addressing this push and pull factors together with the mooring effect are essential for universities and education providers to effectively support and encourage students in their transition to online learning.

**The Push Factors**

Push effects refer to the negative factors that encourage people to leave the origin (Stimson & Minnery, 1998). These could be the difficulties encountered in traditional leaning, like rigid schedules, financial constraints, or lack of course availability, which effectively nudge students towards online learning. Previous literatures have demonstrated the influence of push effects in switching to a new service (Hou & Shiau, 2020; Jung et al., 2017; C.-Y. Li & Ku, 2018). Moreover, several studies discussed push effects involved different concepts (C.-Y. Li & Ku, 2018; Susanty et al., 2020; Tang & Chen, 2020). However, this study considers the students' switching intentions to adopt online learning in the context of COVID-19 pandemic. Therefore, the dimensions of push effect variables in this study include cave syndrome, COVID-19 danger, learning convenience, and service quality to analyze the influence of push effect on the switching intention. The following hypothesis was formulated:

**H1    Push factors has a positive impact on the students' switching behavior.**

**The Pull Factors**

Pull factors mainly involve influences in promoting people to move from one place to another (Lee, 1966). It is the factor that drives switching intention, which is produced when the provided platforms or services are more satisfactory (Tang & Chen, 2020; H. Xu et al., 2021; Y. C. Xu et al., 2014). Similarly, from the perspective of service, more satisfactory service quality leads to a stronger pull effect that urges consumers to switch to a new service (Keaveney, 1995). In the literature on marketing and information systems, the concept of pull mainly uses alternative attraction to explain the user's willingness to switch from offline to online consumer behavior (T.-C. Lin & Huang, 2014). Elements like flexibility, accessibility, and a variety of resources serve to attract students towards online learning platforms. Therefore, this study considers that the pull effect variables which drive students to switch to online learning in the context of COVID-19 pandemic, including enthusiasm, facilitating condition, perceived ease of use, perceived usefulness/functional value and perceived behavioral control. The following hypothesis was formulated:

**H2    Push factors has a positive impact on the students' switching behavior.**

**The Mooring Factors**

Mooring factors refer to the personal and social impacts that may prompt a potential resident to leave or stay in their place of residence (Moon, 1995). In other words, the factors are associated with the migration behavior, which can either hinder or facilitate the decision behavior. In the context of this study, the mooring factors of online learning are the influencing factors that encourage students to leave or stay in physical classrooms. Switching costs are regarded as a crucial mooring factor; they are important explanatory variables for switching behavior regarding platforms (H. H. Chang et al., 2017; Cheng, Lee, & Choi, 2019; Jung et al., 2017; Y. C. Xu et al., 2014) and a decisive factor that determines and regulates customer satisfaction (Burnham, Frels, & Mahajan, 2003). According to Y.-H. Chen and Keng (2019) and Liao et al. (2019), switching cost affects mooring in online learning environments. In addition, variety seeking is another mooring factor (Jung et al., 2017). It refers to the tendency to seek diversity in selecting goods and services (Kahn, 1995). Its influences on consumers are wide-ranging, from everyday choices, such as what to eat, to more important decisions, such as what to do during a vacation (Broniarczyk, Hoyer, & McAlister, 1998; Kahn, 1995; McAlister & Pessemier, 1982; Redden & Hoch, 2009). Moreover, another mooring factor is involuntary choice (Jung et al., 2017). It refers to the

situations where users have no choice (Jung et al., 2017). Thus, this study considers that the individual factors such as switching cost, variety seeking, and involuntary choice. The following hypothesis was formulated:

**H3      Mooring factors has a positive impact on the students' switching behavior.**

**Theoretical Framework**
Based on the above discussion, a theoretical framework was developed where the push factors, pull factors, and mooring factors were proposed to be the impetuses to switch from offline to online learning, as shown in Figure 1.
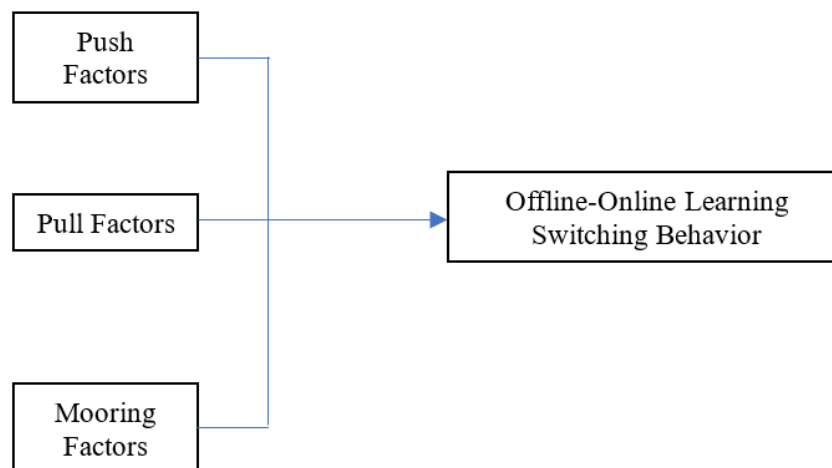


Figure 1: Theoretical Framework of University Students' Offline-Online Learning Switching Behavior

**Method**
A quantitative study approach will be utilized in this study to achieve the stated research objectives.  The research design for this study is a correlational study. For this study, the researcher tried to investigate the factors that influence students' switching behavior using push-pull-mooring theory.  The population of this study is the undergraduate students in a public university in Klang Valley, Malaysia.  All respondents who will take part in this study should have an experience in studying both online and offline mode.  Meanwhile, the sampling technique that will be applied in this study is convenience sampling. Convenience sampling can be defined as a type of non-probability sampling, which involves the subjects being drawn from the part of the population which was close to hand. In determining the minimum sample size for this study, G*Power software is employed.  The researcher calculates the sample size by using the G*Power 3.1.9.4. Thus, the setting measured in this study is as follows:  Effect size  $f2$: 0.15,  $\alpha=0.05$, and the number of predictors=3 (push factors, pull factors, and mooring factors). The power was set at 95%. Thus, the sample size required for this study is 119.
This research study has received ethical approval from the Faculty Research Ethics Committee under the Faculty of Business and Management.  Four constructs were measured in this study: push factors, pull factors, mooring factors, and offline and online switching behavior. The constructs were measured using a five-point Likert scale ranging from 1 strongly disagree to 5 strongly agree.  Appropriate items modification was performed to fit the context of the study and validated by experts in the area of study. A reliability test was conducted prior to the actual data collection to ensure the consistency of the measure. Based

on the pilot test of 30 respondents, the internal consistency value for all constructs met the minimum requirement of 0.700. Meanwhile, to collect the data, an online survey was designed using Google Forms, and the invitation to participate in the study was sent through emails and WhatsApp.

## Conclusion

The offline-online learning switch among university students has dramatically altered the educational landscape. Grasping the dynamics behind this transition is fundamental to optimizing students' experiences and outcomes in the new learning frontier. With a deeper understanding of the factors fueling the offline-online learning switching behavior among university students, educators can tailor their teaching methods to meet the learners' evolving needs. The Push-Pull-Mooring theory act as a solid framework to analyze these factors. Meanwhile, policy-makers can make informed decisions to build a flexible, inclusive education system that embraces the digital age.

To conclude, this conceptual paper has provided a comprehensive overview of the factors that determine the offline-online learning switching behavior among university students based on the Push Pull Mooring Theory. Through deeper understanding, educational institutions and policymakers can gear up to effectively provide a blended learning environment that meets the evolving needs of their students. to better understand the factors influencing students' switching behavior. University students of this digital age stand at the forefront of this radical shift in leaning models, presenting a new wave in the realm of education.

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