








Assessing Key Determinants of Student Satisfaction in Open and Distance Learning: Evidence from Accounting Student

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Abstract. Open and Distance Learning (ODL) is increasingly adopted in higher education to ensure continuity of education, highlighting the need to understand factors influencing student satisfaction in online learning environments. This study investigates the effects of instructional delivery mode, Internet self efficacy, interaction, and motivation on the satisfaction of undergraduate accounting students in Malaysia. A quantitative cross-sectional design was employed using data from 429 respondents at a local public university. Descriptive analysis was performed using SPSS, and Partial Least Squares Structural Equation Modelling (PLS-SEM) was used for inferential analysis. Findings reveal that instructional delivery mode, interaction, and motivation significantly and positively influence student satisfaction, while Internet self efficacy shows no significant effect. These findings suggest that instructional delivery mode, teaching approach, and interpersonal engagement play a more critical role in enhancing satisfaction than personal technical confidence. This research presents preliminary findings from a larger ongoing study and provides practical insights for enhancing engagement and quality in ODL.

Keywords: Open and Distance Learning (ODL), Student Satisfaction, Higher Education, Accounting Students

1 Introduction

The expansion of online environments such as Open and Distance Learning (ODL) has transformed higher education globally (Levin, 2024). In Malaysia, higher education has primarily adopted ODL as an alternative method, as it provides flexible and inclusive access to education, particularly following the global pandemic (Jing et al., 2024). As ODL continues to be embedded in academic programmes, attention has shifted from its implementation to the quality of students' learning experiences.

Student satisfaction is widely recognised as a key indicator of the effectiveness and quality of ODL, given its close association with student retention, engagement, and academic performance (Elliott & Healy, 2001; Hasan et al., 2023; Mendoza-Villafaina & López-Mosquera, 2024). Given the technical nature of the accounting courses, a study by Sangster et al. (2020) has stated that students require regular interaction and feedback; hence, maintaining student satisfaction in an online learning environment is particularly important.

Although extensive research has examined student satisfaction in online learning, what remains insufficiently understood is how specific pedagogical, motivational, and interaction-related factors jointly influence satisfaction within the Malaysian accounting education context. Existing studies have largely focused on general student populations or technological aspects of online learning, with limited empirical evidence addressing accounting students, whose learning needs and expectations may differ due to the nature of the discipline. Moreover, there is a lack of clarity regarding whether students' technical confidence alone is sufficient to enhance satisfaction, or whether instructional delivery and interpersonal engagement play a more decisive role.

To address this gap, this present study investigates the effects of instructional delivery mode, Internet self-efficacy, interaction, and motivation on accounting students' satisfaction in ODL, while also assessing their overall level of satisfaction with the online learning medium. By focusing on these factors collectively, the study provides empirical evidence that clarifies which elements most strongly contribute to satisfaction in ODL-based accounting education.

This research presents preliminary findings from a larger ongoing research project investigating student satisfaction and performance in ODL among accounting undergraduates in Malaysia. The broader project aims to develop a theoretical model that captures personal, instructional, and environmental influences on learning experiences. Accordingly, the present research offers on initial empirical findings that contribute early insights into improving online teaching and learning practices in higher education.

2 Literature Review

The adoption of ODL as an educational alternative is nothing new; as Dzakiria and Christopher (2010) observed, it has been evolving over time. However, the recent pandemic has drastically accelerated its integration, leading to significant restructuring of educational systems that continues to shape Malaysia's higher education landscape

today. Academics and policymakers alike continue to explore effective modes of knowledge delivery to safeguard learning quality. Past studies have found that sustaining ODL in the long term requires strong technological infrastructure, adequate training, empathetic and creative instructional approaches, and sufficient time for transition (Ag-Ahmad, 2020; Chung & Mathew, 2020; Dhawan, 2020). Additionally, the success of online learning relies heavily on dependable platforms utilised, flexible scheduling, motivational course design, and authentic assessment strategies (Basuony et al., 2020; Dzakiria, 2012). With the objective to provide high-quality and satisfying learning experiences, assessing factors influencing accounting students' satisfaction during ODL becomes an important task.

This present research investigates the chosen factors, as past studies have identified their influence on student satisfaction in online learning environments, especially ODL. Firstly, instructional delivery mode is the method of delivering knowledge through synchronous and asynchronous learning, where the Internet serves as the primary medium for sharing materials, maintaining instructor contact, and supporting peer communication which are physically distanced (Sadeghi, 2019). However, evidence is not entirely consistent. Some studies argue that asynchronous delivery enhances flexibility but may reduce immediacy and engagement, while synchronous delivery improves interaction but increases cognitive and scheduling demands (Chung & Mathew, 2020; Dinh, 2023; Saidi et al., 2021).

Next, Internet self-efficacy which is defined as students' personal confidence in utilizing internet resources for academic-related tasks (Tsai et al., 2011). Prior research has produced mixed findings regarding its influence on satisfaction. While some studies report that higher Internet self-efficacy leads to greater confidence and satisfaction in online learning, others suggest that its effect diminishes once basic technological competence is achieved (Dinh & Nguyen, 2022; Hamdan et al., 2021; Tsai et al., 2011).

The third factor is interaction, which, as clarified by Moore (1989), refers to the engagement that occurs among peers, between learners and educators, and between learners and instructional content within an educational setting. Numerous studies have consistently demonstrated a positive relationship between interaction and student satisfaction in ODL environments (Faize & Nawaz, 2020; Hasan et al., 2023). However, challenges persist in replicating meaningful interaction online, particularly in accounting courses that traditionally rely on classroom discussion, immediate feedback, and guided practice (Sangster et al., 2020).

Lastly is motivation referring to one's intrinsic and extrinsic factors that influence the students' willingness to learn and perform (Brophy, 2004). Prior research likewise recognised it as a key determinant of engagement and satisfaction (Khairuddin et al., 2020; Rahman et al., 2021), yet its role in accounting education remains insufficiently explored, given the subject's technical and performance-oriented nature.

Despite growing research on ODL, limited empirical studies have collectively examined these factors within Malaysian accounting education, and their relative influence on student satisfaction remains insufficiently explained. To address this gap, the present study investigates the relationships between instructional delivery mode, Internet self-efficacy, interaction, motivation, and student satisfaction, leading to the following hypotheses:

- H1: Instructional delivery mode has a significant positive relationship with student satisfaction
- H2: Internet self-efficacy has a significant positive relationship with student satisfaction
- H3: Interaction has a significant positive relationship with student satisfaction
- H4: Motivation has a significant positive relationship with student satisfaction

3 Methodology

This research employed a quantitative, cross-sectional design to examine the constructs influencing student satisfaction in online learning among undergraduate accounting students in Malaysian higher education institutions. The constructs measured included instructional delivery mode, Internet self-efficacy, interaction, motivation, and student satisfaction. The survey instrument was adapted from validated questionnaires in previous studies (Bolliger & Halupa, 2012; Sun et al., 2008; Tsai et al., 2011).

Data were collected from Universiti Teknologi MARA (UiTM), which was selected due to its extensive implementation of Open and Distance Learning (ODL) across multiple campuses nationwide and its large population of accounting undergraduates. UiTM represents one of the largest public universities in Malaysia, offering a suitable institutional context for examining student satisfaction in large-scale ODL delivery.

A purposive sampling technique was employed to recruit students who had prior experience with online learning platforms, ensuring that respondents were able to provide informed evaluations of ODL. This approach was deemed more appropriate than random sampling, as the study required participants with direct exposure to online learning environments rather than the general student population. A total of 429 valid responses were obtained through an online survey. Participation was voluntary and anonymous, and informed consent procedures were followed to ensure ethical compliance.

The questionnaire used a 5-point Likert scale ranging from “Strongly Disagree” (1) to “Strongly Agree” (5). The data were analyzed using SPSS for descriptive analysis and Partial Least Squares Structural Equation Modelling (PLS-SEM) with SmartPLS 4.0 software. This analytical method was selected due to its suitability for complex models involving multiple latent constructs and smaller sample sizes (Hair et al., 2019).

4 Result

4.1 Demographic

The participants in this research were undergraduate accounting students from Universiti Teknologi MARA (UiTM) across various campuses in Malaysia. The sample included respondents from diverse geographical backgrounds, encompassing both urban and rural regions, to ensure a comprehensive representation of the student population. The majority of respondents were female, with 81.12%, reflecting the general gender distribution in higher education institutions in Malaysia (MOHE, 2020).

Most students were aged between 19 and 26 years, aligning with the typical age range of full-time undergraduate students in Malaysia (DOSM, 2021). The physical location of the students was evenly distributed for each of Malaysia's regions, with the central region having the highest at 31.23%.

4.2 Descriptive Analysis

The descriptive statistics provide a basic understanding of the students' general attitudes, perceptions, and behaviors related to their online learning experiences. Accordingly, this section presents insights derived from students' responses to the questionnaire items measuring the main constructs of this study.

Based on the result displayed in Table 1, the descriptive analysis revealed that the mean values for all constructs were above 3.41. According to Nyutu et al. (2021) and Pimentel (2010), mean scores above this threshold indicate agreement with the statements representing the measured constructs. The findings suggest that students generally viewed the instructional delivery mode used in online classes positively. They perceived themselves as competent in performing various academic-related tasks using the internet, experienced a sufficient level of interaction with peers, educators, and course materials throughout the ODL sessions, and felt practically motivated during online learning. Furthermore, students also generally agreed that they were satisfied with their overall ODL experience.

Table 1. Descriptive Analysis

Constructs	Mean	Standard Deviation
Instructional Delivery Mode	3.656	0.687
Internet Self-Efficacy	3.681	0.628
Interaction	4.010	0.559
Motivation	3.899	0.553
Student Satisfaction	3.708	0.820

4.3 Reliability and Validity

The reliability and convergent validity of the constructs were examined using the factor loadings, Composite Reliability (CR), and Average Variance Extracted (AVE). Based on Table 2, all the constructs in the research reach the recommended threshold of above 0.70 for CR and the acceptable value of above 0.50 for factor loading (Hair et al., 2019). The AVE also meets the recommendation from Hair et al. (2019) to exceed 0.50. Overall, the results indicate that the model demonstrates satisfactory reliability and convergent validity, supported by high CR values, strong internal consistency, and adequate factor loadings.

Table 2. Reliability and Convergent Validity

Constructs	Item	Factor Loading	AVE	CR
Instructional Delivery Mode	10	0.556 - 0.860	0.522	0.914
Internet Self-Efficacy	8	0.691 - 0.830	0.445	0.935
Interaction	18	0.554 - 0.964	0.599	0.922
Motivation	11	0.593 - 0.784	0.476	0.890
Student Satisfaction	7	0.788 - 0.877	0.671	0.934

For discriminant validity the rule of thumb is that the Heterotrait-Monotrait (HTMT) ratio should be below 0.90 to confirm discriminant validity (Franke & Sarstedt, 2019). Based on Table 3, the HTMT values are below the 0.90 threshold, indicating that the model does not suffer from any issues related to discriminant validity.

Table 3. Discriminant Validity

Constructs	1	2	3	4	5
Instructional Delivery Mode					
Internet Self-Efficacy	0.742				
Interaction	0.592	0.676			
Motivation	0.808	0.900	0.679		
Student Satisfaction	0.857	0.783	0.550	0.885	

4.4 Inferential Analysis

This study applied PLS-Predict (Shmueli et al., 2016) to assess the model's predictive power. The Q^2 value exceeded zero, and all PLS-LM comparison results were negative, indicating that the model demonstrates strong predictive capability. For the results of the regression analysis and hypothesis testing, the significance levels of the path coefficients were used to assess the hypothesized relationships among the constructs in the proposed model.

The findings show that three of the four constructs studied, which are instructional delivery mode, interaction, and motivation, have a significant positive relationship with student satisfaction during ODL except for Internet self-efficacy, as the p -value is higher than 0.05. Instructional delivery mode was found to have a significant positive direct relationship with student satisfaction ($\beta = 0.449$, $p < 0.000$), which supports H1. Next, H3 is also supported, as interactions showcase a significant positive direct relationship with student satisfaction ($\beta = 0.150$, $p < 0.002$). Lastly, motivation displayed a significant positive direct relationship with student satisfaction ($\beta = 0.381$, $p < 0.000$), supporting H4. In contrast, H2 was not supported because Internet self-efficacy does not have a significant relationship with student satisfaction. Figure 1 shows the results of the model and includes the hypothesis that was tested.

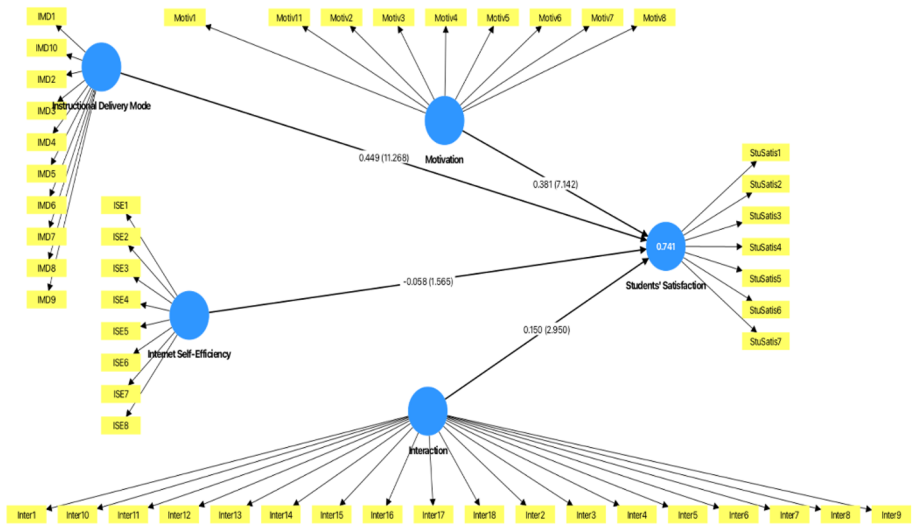


Fig. 1. Model showing structural path coefficients of hypothesized relations

5 Discussion

For the inferential analysis, all results demonstrated a significant and positive relationship with student satisfaction, except for the construct Internet self-efficacy. The first hypothesis which dictated that there is a significant and positive relationship between instructional delivery mode and student satisfaction was supported by the empirical finding suggesting the importance its role in shaping students' learning experiences in an online environment which aligns with findings by Fabriz et al. (2021) and Dinh (2023). Secondly, the factor interaction also demonstrated a significant positive relationship with satisfaction. This supports previous studies by Hamdan et al. (2021) and Azizan et al. (2023), which found that active interaction between students and educators, as well as peer-to-peer communication, enhances engagement and promotes a sense of community. Thirdly, motivation also was shown to have significantly influence satisfaction. This is consistent with the work of Khairuddin et al. (2020) who argued that intrinsically motivated students tend to perform better and reported having higher satisfaction levels while Basuony et al. (2020) established that external influences aid in reducing the demotivation. However, Internet self-efficacy did not exhibit a significant effect on satisfaction in this research's findings which align more closely with studies by Kuo et al. (2014) and Torun (2020). The findings suggest that students may already possess sufficient digital competence, thereby reducing the influence of Internet self-efficacy on satisfaction.

6 Conclusions

This research aimed to examine the key factors influencing student satisfaction with ODL among accounting students in the post-pandemic context. The research investigated the roles of instructional delivery mode, Internet self-efficacy, interaction, and motivation. The results revealed that instructional delivery mode, interaction, and motivation had significant and positive impacts on student satisfaction, while Internet self-efficacy did not show a statistically significant effect. These findings suggest that while technical competency is important, student satisfaction in ODL is more deeply shaped by pedagogical design, opportunities for meaningful interaction, and the ability to maintain learner motivation.

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