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I-CReST 2025: 121-085 – Exploring the Factors Influencing University Students' Adoption of Online Learning Platforms: A Conceptual Study Based on the Value Adoption Model (VAM)

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ABSTRACT

In the fast-changing technological environment, users worldwide are transitioning from traditional methods to digital solutions. This phenomenon has forced higher learning institutions to heavily rely on online learning platforms to complement or substitute traditional classroom teaching methods. However, students' willingness to adopt digital or online learning platforms varies significantly. This conceptual study utilised the Value Adoption Model (VAM) as a base model to investigate the key determinants that influence students' adoption of online learning platforms in higher education. Drawing from VAM's key constructs—perceived benefits (enjoyment and usefulness) and perceived sacrifices (technical complexity and cost concerns)—this paper proposes a conceptual framework to examine how these factors contribute to perceived value, which ultimately shapes the intention to adopt online learning platforms. The proposed study contributes to the existing literature by offering a comprehensive conceptual insight into the factors influencing online learning platforms adoption for universities, policymakers, and ed-tech developers to enhance online learning adoption by focusing on maximising benefits and minimising sacrifices.

Keywords: Online learning; perceived value; perceived benefits; perceived sacrifices; Value Adoption Model

1. INTRODUCTION

In recent years, online learning platforms have emerged as a fundamental component of higher education worldwide. The shift from traditional face-to-face learning to hybrid or fully online instruction has required students, educators, and institutions to rapidly adapt to new digital pedagogies. This paradigm shift has resulted in an explosion of digital learning solutions, including Learning Management Systems (LMSs) such as Moodle, Blackboard, Canvas, and proprietary platforms such as Coursera, edX, and Google Classroom. As universities increasingly integrate these platforms into their curriculum, a pressing concern arises, what factors influence students' decisions to adopt or reject these platforms as effective educational tools?

While much attention has been paid to the technical infrastructure, institutional readiness, and pedagogical transformation, relatively less focus has been directed toward understanding students' behavioural intentions and perceived value in adopting these platforms. A mere availability of technology does not guarantee its effective adoption. In fact, the rate of technology adoption varies widely across contexts, often depending on users' psychological, contextual, and experiential factors [1], [2]. The success of online learning initiatives thus centres on understanding these subtle dimensions of user adoption.

In this conceptual paper, the Value Adoption Model (VAM) developed by [3] were employed to explore the cognitive and affective processes through which university students evaluate the adoption of online learning platforms. The VAM framework, different from other adoption models such as the Technology Acceptance Model (TAM) or the Unified Theory of Acceptance and Use of Technology (UTAUT), focuses explicitly on the perceived value, derived from the trade-off between perceived benefits and perceived sacrifices. This model is particularly relevant in educational settings, where both intrinsic and extrinsic motivations, as well as technical barriers, influence user behaviour [4], [5].

The model is composed of three central constructs which are:
Perceived Benefits (PB) – comprising both extrinsic usefulness (academic performance) and intrinsic enjoyment (engagement, flexibility).
Perceived Sacrifices (PS) – comprising technical complexity, time costs, and monetary or infrastructural barriers.
Perceived Value (PV) – the cognitive evaluation of whether the benefits outweigh the sacrifices.

Higher education students today are digital natives who are expected to be technologically adept. However, empirical studies have shown that students often encounter various psychological, infrastructural, and pedagogical barriers that inhibit effective adoption[6], [7]. In low- and middle-income countries such as Malaysia, Indonesia, and Nigeria, limited internet access, device affordability, and low self-efficacy further complicate adoption efforts [8], [9], [10].

Moreover, while online learning platforms are praised for their flexibility, scalability, and personalisation, they often lack the immediacy of classroom interaction, which may reduce motivation and emotional engagement [11], [12]. Students are likely to conduct a cost-benefit analysis—either consciously or subconsciously—before committing to fully utilising these platforms.

Thus, this study aims to:
1) Propose a conceptual model based on the VAM framework to understand student adoption of online learning platforms in higher education.
2) Linking perceived benefits and sacrifices to perceived value and adoption intention.
3) Provide a foundation for future empirical studies aimed at validating the model in real-world educational contexts.

This research contributes to both theoretical and practical domains. Theoretically, it expands the application of VAM into the higher education context, which remains relatively underexplored. Practically, it offers actionable insights for educators, policymakers, and developers to enhance the effectiveness and acceptance of digital learning solutions.

2. LITERATURE REVIEW AND PROPOSITION DEVELOPMENT

2.1 Value Adoption Model (VAM)

The Value Adoption Model [3] offers a value-centric view of technology acceptance. It posits that user adoption is primarily determined by perceived value, which itself is a function of perceived benefits and perceived sacrifices. This value-based approach provides a nuanced understanding of user motivation and decision-making, especially in complex environments such as online education. While other models, such as TAM and UTAUT, have been extensively applied in e-learning research [13], they often overlook the cost-related and

emotional trade-offs associated with technology adoption. VAM, in contrast, considers both intrinsic and extrinsic factors that influence user perceptions, making it suitable for this study.

2.2 Perceived Sacrifices (PS)

Technical Complexity refers to the perceived difficulty in navigating and using online learning platforms. Despite being digital natives, students may find some platforms unintuitive, leading to frustration and resistance[6], [7]. Complexity discourages adoption and reduces perceived value. Cost and Infrastructure Barriers include the need for stable internet, compatible devices, and occasionally paid subscriptions. These issues are especially pertinent in developing economies where digital inequality is a critical concern [8], [10]. Time Investment also represents a sacrifice. Online platforms often require students to self-manage their schedules, which can be demanding and overwhelming.

Proposition 1 (P1): Perceived sacrifices (technical complexity, cost, and time investment) have a significant negative relationship with perceived value.

2.3 Perceived Benefits (PB)

Perceived Usefulness refers to the degree to which students believe that an online platform enhances their learning outcomes and academic efficiency. Studies consistently show that usefulness is a strong predictor of behavioural intention in digital learning [14], [15]. Students view platforms offering seamless access to lectures, assessments, and feedback more favourably. Perceived Enjoyment, on the other hand, is linked to intrinsic motivation, learning for the sake of enjoyment, curiosity, or engagement [16]. In online environments, where face-to-face interaction is minimal, enjoyment is vital in sustaining motivation and preventing dropout.

Proposition 2 (P2): Perceived benefits (usefulness and enjoyment) have a significant positive relationship with perceived value.

2.4 Perceived Value (PV)

Perceived value acts as the central mediator in the VAM. It represents the trade-off between benefits and sacrifices. A high level of perceived value increases the likelihood of adoption. [17] and [4] confirm that perceived value is a significant predictor of behavioural intention in online environments.

Proposition 3 (P3): Perceived value has a significant positive relationship with the intention to adopt online learning platforms.

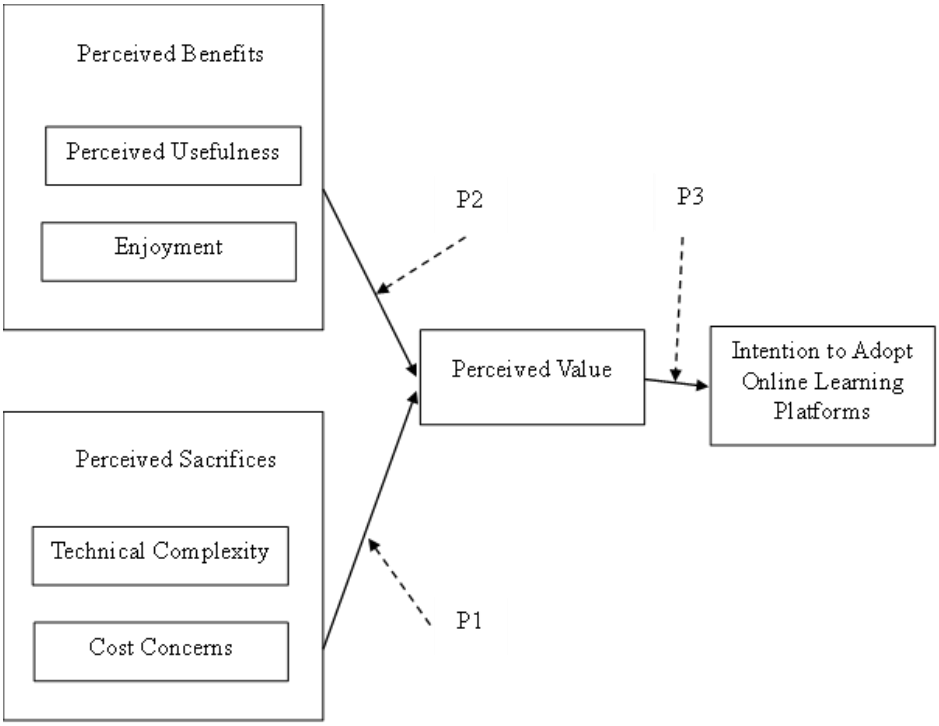

Fig. 1. Proposed conceptual framework

3. METHODOLOGY

This study is conceptual in nature and draws its justification from prior empirical findings and theoretical frameworks. Conceptual studies generally do not depend on conventional data. Rather, they are developed by adapting, reviewing, and analysing existing research, theories, or ideas derived from earlier empirical investigations [18]. According to [18], the main goal of conceptual studies is not to do statistical analysis but to gain a better understanding of the ideas and theories that explain the topics being examined. The evidence used in these studies mainly comes from previous research and literature reviews instead of new data collection. This study examined various research studies, and several important references helped shape the conceptual model. This way of working is ideal for conceptual studies because it offers new insights into how performance expectancy, effort expectancy, and behavioural intention are related.

4. CONCLUSION

This conceptual paper offers a different application of the Value Adoption Model (VAM) to the context of online learning platform adoption among university students. As digital education continues to grow, understanding the cognitive, emotional, and contextual factors that influence student behaviour becomes increasingly important. The VAM framework provides a robust view through which to examine these dynamics, emphasising the balance between perceived benefits and perceived sacrifices.

The model underlines that perceived usefulness and enjoyment significantly raise the perceived value of online platforms. On the other hand, barriers such as technical complexity, cost concerns, and time burden serve as sacrifices that reduce this perceived value. Consequently, students are more likely to adopt online learning platforms if they perceive that the benefits substantially outweigh the sacrifices involved.

This study holds theoretical value by expanding the VAM into the educational technology domain, a relatively underexplored area. It challenges educators and platform developers to look beyond mere functionality and examine psychological value creation. For policymakers and institutions, the findings suggest that any intervention aimed at increasing online learning adoption must address both ends of the value spectrum: enhance benefits and reduce sacrifices. For instance, universities can enhance perceived usefulness by integrating platforms seamlessly with course management systems and academic calendars. Training workshops can improve ease of use and reduce complexity, especially for new users. Subsidies or free access can address cost-related concerns, particularly in low-income or rural student populations.

Future empirical studies should test this model across different student cohorts, universities, and socio-economic contexts to validate its robustness. Comparative studies between developing and developed countries can further enrich the discourse. In conclusion, fostering a high perceived value among students is critical to the success of online learning platforms. This conceptual model can guide future research, curriculum design, and digital infrastructure planning in higher education.

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