

Peer Review

Review of: "Driving Factors for the Adoption of Blockchain: A Focus on Startup Entrepreneurs"

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Summary of the Paper:

This study explores the online learning behavior adoption of Generation Z (Gen Z) students in South African higher education institutions (HEIs). The author proposes a novel Online Learning Behaviour Adoption Model (OLBAM), which is theoretically grounded in established models such as TAM, UTAUT, and TRI, and informed by empirical evidence collected from a survey of university students. The work is positioned within the context of increasing digitalization in education, particularly in the aftermath of COVID-19, and addresses the critical question of how Gen Z students adopt and interact with online learning systems.

Strengths:

Topical Relevance and Contextual Importance:

The research addresses a pressing issue in post-pandemic education: the digital adaptation of students, specifically Gen Z, who are both tech-savvy and uniquely challenged by structural inequalities in South Africa. The study's regional focus on South African HEIs contributes important localized insights that are underrepresented in global ed-tech literature.

Conceptual Contribution – OLBAM Framework:

The development of the OLBAM model is commendable. It synthesizes key components from widely used technology adoption theories (TAM, UTAUT, TRI) and tailors them to the educational context. The resulting multi-stage framework—covering initiation, perception, intention, and actual use—is logically structured and provides a sound basis for interpreting student behavior in online learning environments.

Empirical Support and Data Integration:

The paper employs a quantitative approach to validate the proposed model using primary survey data. The survey sample is reasonably large, and the analysis integrates descriptive and inferential statistics to assess adoption levels and behavioral patterns across various demographic groups.

Practical Implications:

The study offers clear recommendations for HEI administrators, educators, and policymakers. By understanding how Gen Z students perceive and adopt online learning, institutions can better tailor their systems to improve engagement and retention.

Weaknesses and Areas for Improvement:**Model Justification and Theoretical Integration:**

While OLBAM is conceptually promising, the paper does not sufficiently explain how each component from TAM, UTAUT, and TRI is adapted or modified to suit the online learning context. A more critical and analytical discussion of existing models—and why they fall short without modification—would strengthen the foundation for OLBAM.

Hypotheses Development and Operationalization:

The paper references hypotheses related to constructs within the model, but these are underdeveloped. There is limited justification for each hypothesis, and the theoretical linkage between constructs (e.g., technology readiness and perceived ease of use) is sometimes assumed rather than demonstrated through literature support. Clarifying each construct and its role in the model—along with providing relevant citations—would enhance theoretical rigor.

Methodological Clarity:

Sampling and Data Collection: The sampling strategy, including selection criteria, distribution method, and response rate, is not clearly discussed. The paper should elaborate on how representativeness was ensured and whether biases (e.g., urban vs. rural student access) were mitigated.

Instrument Design: Although a survey was used, the development and validation of the instrument (e.g., pre-testing, reliability measures) are not thoroughly described.

Statistical Analysis: More robust statistical techniques (e.g., SEM or CFA) could be employed to assess the model's fit and relationships between variables. Currently, the analysis relies on basic descriptive statistics and correlation, which limits the explanatory power of the findings.

Structure and Language Quality:

Some sections, especially the literature review, suffer from redundancy and a lack of critical synthesis. The writing style could be improved for clarity and academic tone, with careful proofreading to eliminate grammatical and typographical errors.

Lack of Comparative Insight:

The study would benefit from comparative references to similar Gen Z adoption behaviors in other developing or African contexts. This would help situate the findings within broader regional or global trends.

Recommendation:**Major Revision**

While the topic is timely and the model promising, the manuscript requires substantial revision in terms of theoretical development, methodological transparency, and analytical depth. Empirical validation is a strong point, but it needs to be supported by a clearer explanation of the model's constructs, better-developed hypotheses, and more rigorous analytical techniques.

Specific Suggestions for Revision:

Enhance the literature review by critically comparing existing adoption models and identifying their limitations in the context of Gen Z online learning behavior.

Strengthen the theoretical justification for each component of the OLBAM and provide clearer definitions of key constructs.

Elaborate on the research methodology, particularly the survey design, sample selection, and measures for ensuring validity and reliability.

Where possible, apply more advanced statistical modeling to test the OLBAM empirically.

Rework the hypotheses to clearly align with theoretical constructs and explain how each will be tested.

Revise the manuscript for improved coherence, conciseness, and language quality.

Conclusion:

This paper addresses an important and underexplored area in higher education technology adoption research. With significant revisions, it has the potential to make a meaningful contribution to understanding how Generation Z students in South Africa engage with online learning environments.

Declarations

Potential competing interests: No potential competing interests to declare.