

THE INFLUENCE OF SOCIAL MEDIA USAGE ON ACADEMIC PERFORMANCE AMONG UNIVERSITY STUDENTS IN MALAYSIA: A CONCEPTUAL ANALYSIS

Aervina Misron^{1*}, Sharfika Raime², Lai Jia Hui¹, Wan Kai Qing¹, Teh Xiuwen¹, Wee Kai Ying¹, Tasneem Saifeldin Mansour¹

¹Faculty of Business and Management, Quest International University, Perak, Malaysia

²City Graduate School, City University Malaysia, Selangor, Malaysia

*Corresponding author: aervina.misron@qiu.edu.my

Abstract: University students are inundated with social media use in both academia and everyday life, with social media used as both an additional method for receiving learning support while simultaneously distracting from studying. Although prior research was completed on the link between social media use and academic performance, the results of this body of work have been inconsistent and fragmented, especially in developing higher education systems. The purpose of this conceptual paper is to develop an integrated conceptual framework that will assist educators and students in understanding how using social media will impact academic performance among university students in Malaysia. This framework utilises the Cognitive Load Theory and Uses and Gratifications Theory to synthesise the three identified antecedents of using social media, including time spent using social media, the purpose of using social media, and the type of social media utilised by university students. This study provides an explanation of how each of these antecedents has a different effect on the academic performance of university students. By providing this explanation, this study attempts to improve theoretical knowledge and provide actionable guidelines for educators, higher education institutions and policymakers who wish to encourage responsible and academically productive use of social media by university students.

Keyword: Social Media Usage, Academic Performance, Cognitive Load Theory, Use and Gratifications Theory, Malaysia Higher Education

INTRODUCTION

University students now have the ability to connect through many music streaming and video networking platforms (e.g., YouTube, WhatsApp, Facebook, Instagram, TikTok) that were previously considered just recreational sources for peer-to-peer interaction. Students are now using social media networks as access points to further assist them with their studies by collaborating and sharing information with other students and using them as supplemental resources within their studies. Within the past few years, there has been significant research reporting that university students within university settings, specifically drawn to digital mediated learning environments, rely heavily upon social media platforms to assist them with their study-related tasks (Sengupta & Vaish, 2024; Slof et al., 2021).

Social media penetration rates among those aged 18-29 years old in Malaysia are among the highest of Southeast Asian total youth engagement levels (Malaysian Communications and Multimedia Commission, 2023; Statista, 2024). This level of social media penetration serves to increase students' efforts toward academic success in many different ways. For example, most university students in Malaysia have fully integrated social

media platforms into their study routines (i.e., utilising the different features of social networking platforms for group members collaborating on group projects, interacting with instructors, or accessing educational content) (Kasuma et al., 2018; Lane, 2024). Though using social media as a source to coordinate with classmates can enhance students' educational experience, many students and educators are concerned about the effects excessive usage of social media has on being able to manage time or remain focused on their studies.

Although considerable empirical research has been reported, there remains significant uncertainty concerning how students who utilise social media and their academic performance. For instance, while some studies indicate that academic collaboration and information-seeking behaviours through social media are positively correlated (Liu et al., 2022), other studies indicate that entertainment and social gratification derived from social media usage negatively correlate with academic performance (Alshalawi, 2022; Ohara, 2023), hence, making it crucial to clarify under what conditions social media usage can support or reduce academic performance. Therefore, developing a conceptual framework that clarifies how and under what conditions use of social media networks can support or undermine academic performance should help support further empirical research in exploring the relationship between social media usage and academic performance, specifically within the Malaysian higher education context.

PROBLEM STATEMENT AND RESEARCH GAP

Research on social media use by university students has been growing, however, numerous limitations remain. First, most studies on university students' social media usage consider all types of social media activity as a single entity, failing to differentiate between various forms of engagement. This oversight makes it challenging for researchers to determine how specific aspects of social media use such as time spent, purpose of usage, and types of platforms used, impact cognitive levels and students' academic performance (Nabung, 2024). Additionally, past research on social media and students' academic performance has been inconsistent. While some studies suggest that social media enhances academic performance by serving as a collaborative tool and providing greater access to information (Liu et al., 2022), other findings link social media use to distractions that reduce study time and negatively affect academic performance (Salari et al., 2025; Zhao, 2023). These inconsistencies indicate a lack of theoretical integration regarding why social media can be beneficial in some contexts while detrimental in others.

Furthermore, the inconsistent operationalisation of social media use and academic performance within Malaysian literature has resulted in conflicting results. Many studies have measured the intensity or frequency of social media use through self-report measures without adequately differentiating between academic and non-academic activities, as well as considering platform affordances and context of use (Liu et al., 2022; Zhao, 2023). Consequently, studies with similar levels of social media engagement have yielded both positive and negative academic outcomes, complicating the derivation of coherent conclusions. Notably, academic performance has typically been assessed in terms of GPAs, without considering cognitive or behavioural domains (e.g., attention,

learning engagement, study efficiency), which may be more responsive to social media effects (Shafiq & Parveen, 2023). Thus, measurement inconsistencies highlight the need for a more comprehensive conceptual framework to establish connections between social media use orientations and cognitive processes. This framework could explain how social media can facilitate learning in some instances while serving as a source of distraction and cognitive overload in others among Malaysian university students.

RESEARCH QUESTIONS

Based on the background of this study, together with the identified issues and research gaps, this study aims to address the following research questions (RQ):

- RQ1: What is the relationship between the amount of time spent on social media and academic performance among Malaysian university students?
- RQ2: What is the relationship between the purpose of social media use (academic vs non-academic) and academic performance among Malaysian university students?
- RQ3: What is the relationship between different types of social media platforms and academic performance among Malaysian university students?

RESEARCH OBJECTIVES

In line with the research questions, this study formulates both general and specific research objectives (RO), as follows:

General Objective

The primary objective of this study is to conceptualise and describe how the usage of social media impacts the academic achievements of Malaysian university students, focusing on various aspects of social media (time spent, usage purpose and platform type) affect students' academic engagement and achievement through cognitive processes.

Specific Objectives

Based on the research questions, the research objectives state the main goals and intentions of this study, which are specified as follows:

- RO1: To examine the relationship between the amount of time spent on social media and academic performance among Malaysian university students.

- RO2: To examine the relationship between the purpose of social media use (academic vs non-academic) and academic performance among Malaysian university students.
- RO3: To examine the relationship between different types of social media platforms and academic performance among Malaysian university students.

HYPOTHESIS OF THE STUDY

Based on the research objectives and the proposed conceptual framework, the following hypothesis are formulated:

- H1: Greater time spent on social media is negatively associated with academic performance among university students in Malaysia.
- H2: Social media use for academic purposes is positively associated with academic performance among university students in Malaysia.
- H3: Platforms oriented toward academic communication and information sharing are positively associated with academic performance among university students in Malaysia.

SCOPE OF THE STUDY

The scope of this study includes undergraduate and postgraduate students attending Malaysia higher education institutions (HEIs) who utilise social media. In this study, academic performance is identified as the dependent variable and is broadly defined to encompass learning effectiveness, concentration and level of achievement. There are three proposed independent variables: the amount of time spent using social media, the purpose for using social media (academic vs non-academic) and the specific type of social media platform. This study aims to provide a conceptual framework and proposition to facilitate future empirical research in the context of Malaysia higher education.

SIGNIFICANCE OF THE STUDY

This study carries both theoretical and practical significance:

Theoretical Significance

By integrating the Cognitive Load Theory and Uses and Gratifications Theory, this study enhances existing literature on educational psychology and media psychology regarding the impacts of social media on academics. Through the integrative conceptual framework, this study expands on prior research, which typically focused on social media study through a single theory or a single aggregate measure of how users interact with it, as well as providing a theoretical lens for understanding how social media may facilitate learning or lead to a cognitive

overload. Therefore, this integrated approach will also provide future empirical studies with a means to examine the empirical validity of these theory-based relationships in many different types of educational environments.

Practical Significance

The proposed conceptual framework of this study can be a valuable resource to educators and other institutions that intend to leverage the benefits of social media for educational purposes while minimising its potential negative implications. Insights into how the amount of time spent on, purpose for using, and types of social media platforms impact on students' academic success, will assist educators and curriculum design officers in developing instructional materials and plans, implementing digital literacy, as well as institutions in creating appropriate policies. Policy makers will find this information useful for establishing appropriate digital well-being strategies within HEIs.

LITERATURE REVIEW

Academic Performance

Academic performance remains a significant factor influencing students' social media usage in Malaysian HEIs. Recent studies indicate that social media's impact on academic performance varies based on the intensity of use, the purposes for which it is used, and the level of self-regulation (Mohd Saat et al., 2024; Samsudin et al., 2024). Research in Malaysia has found that excessive engagement with non-academic social media, particularly for entertainment, displaces study time, diverts attention, and disrupts sleep patterns, ultimately hindering overall academic achievement (Tin et al., 2024). These findings support the theory that habitual, compulsive, or poorly self-regulated social media use negatively affects students' academic performance in HEIs.

Conversely, purposeful academic use of social media, such as peer collaboration, information exchange, and communication with faculty, can enhance student engagement and indirectly boost academic performance, especially when aligned with students' study schedules and institutional expectations (Zaw & Azenal, 2021; Samsudin et al., 2024). These insights contribute to the understanding of academic performance as influenced by both behavioural and psychological factors, including the time spent on social media, the purposes of its use, and the types of platforms utilised. This conceptual paper posits that social media use significantly impacts student academic performance. Thus, more extensive and systematic empirical research in Malaysia is essential to bolster confidence in this proposition by examining how various academic uses of social media and the daily digital habits of students either facilitate or hinder their academic success.

Time Spent on Social Media and Academic Performance

Numerous studies have sought to understand how students spend their time on social media, as its usage impacts academic performance by serving as an indicator of digital engagement and, conversely, reflecting how intrusive digital engagement can be on academic success. Most research published to date demonstrates a negative correlation between the time students spend on social media and their academic performance (Sakhieva et al., 2024; Zhao, 2023). When students spend significant time on social media, they are more likely to alternate between completing academic tasks and engaging with non-academic online content, resulting in reduced sustained attention and an inability to learn effectively (Alshalawi, 2022).

In Cognitive Load Theory, the loss of sustained attention and learning efficacy is viewed as an increase in extraneous cognitive load due to the time needed to constantly process stimuli (e.g., social media notifications, messages, and news feeds) while engaging with academic content (Paas & Van Merriënboer, 2020). Furthermore, the continual fragmentation of cognitive resources means students have less working memory available for processing germane cognitive load, which is necessary for comprehension, problem-solving, and knowledge retention. Recent studies have found that even brief interruptions from social media can detrimentally impact a student's ability to achieve deep engagement with course content, leading to lower academic performance and increased superficial learning (Nabung, 2024).

The literature cautions against viewing the number of hours an individual student spends on social media as simply a negative outcome. Some research suggests that it is not the total hours spent on social media that have the most significant impact, but rather how and when it is used (Shafiq & Parveen, 2023). For instance, using social media for academic purposes, such as participating in online study groups, sharing academic resources, or reviewing instructional videos, imposes a lower cognitive burden compared to using social media for entertainment. Regardless of usage type, excessive or unregulated time spent on social media continues to create significant cognitive loads and lost opportunities for academic learning, ultimately predicting suboptimal academic performance for undergraduate students (Alshalawi, 2022; Zhao, 2023). Thus, social media usage should not be viewed solely in terms of total hours spent but as an activity with cognitive consequences for students that affects their learning efficiency and academic performance. Hence, this study proposes that:

H1: Greater time spent on social media is negatively associated with academic performance among university students in Malaysia.

Purpose of Social Media Use and Academic Performance

The academic consequences of social media use by students depend on the reasons behind their engagement with these platforms. Different motivations for using social media lead to varying levels of cognitive engagement and behavioural outcomes, influenced by how students utilise these tools. The existing literature consistently shows that using social media in an academic context, such as seeking educational materials, participating in discussions about class content, and collaborating with classmates on group projects, positively affects student

engagement and academic success (Alalwan, 2022; Liu et al., 2022; Shafiq & Parveen, 2023). When social media is intentionally aligned with learning objectives, it can enhance peer collaboration, provide timely feedback, and facilitate informal knowledge sharing among students, thereby extending the learning experience beyond the confines of a formal classroom.

In contrast, non-academic social media use typically serves purposes like entertainment, staying in touch with friends, or distracting oneself from responsibilities. Such activities can increase distractions, reduce the time available for studying, and ultimately lead to lower academic performance. Empirical studies indicate that entertainment-driven social media use fosters habitual checking and passive consumption of content while encouraging multitasking, all of which impede sustainable attention and deep learning (Alshalawi, 2022; Zhao, 2023). For instance, when users engage with social media for entertainment, they introduce extraneous stimuli into their working memory, competing for limited cognitive resources with academic tasks. This results in fragmented learning experiences and diminished academic focus.

The distinction between academic and non-academic social media use is aptly explained by Uses and Gratifications Theory. According to this theory, the impact of media depends on the individuals' reasons and needs for consuming it. Students actively select media channels based on their goals, whether to gather information, establish social connections, or seek entertainment (Katz et al., 1973). In higher education, research has shown that when students use social media for information-oriented purposes, they tend to experience positive academic outcomes. Conversely, when they seek gratification through entertainment or social interaction, their academic performance is likely to decline (Liu et al., 2022; Shafiq & Parveen, 2023). Thus, understanding the purpose behind a student's engagement with social media offers a more comprehensive view of its impact on academics than merely measuring usage frequency. This distinction underscores the importance of differentiating between productive and non-productive engagement in postsecondary education. Therefore, it is postulated that:

H2: Social media use for academic purposes is positively associated with academic performance among university students in Malaysia.

Type of Social Media Platforms and Academic Performance

The type of social media students use has a substantial and far-reaching impact on their overall academic performance. Different social media platforms, also referred to as "forms of social media", offer varying designs, means of interaction, and educational affordances. For instance, messaging-based platforms (e.g., WhatsApp, Telegram) are widely adopted by students for academic interactions. These platforms enable quick information exchange, peer discussions about coursework, and coordination of group projects. More importantly, evidence shows that messaging-based platforms facilitate collaboration, provide feedback on student work, clarify academic tasks, and offer peer support during collaborative efforts. As students utilise these messaging platforms for communication, their level of engagement and academic performance improves (Liu et al., 2022; Tang & Hew, 2020). Similarly, video-sharing platforms like YouTube offer students a wealth of educational content,

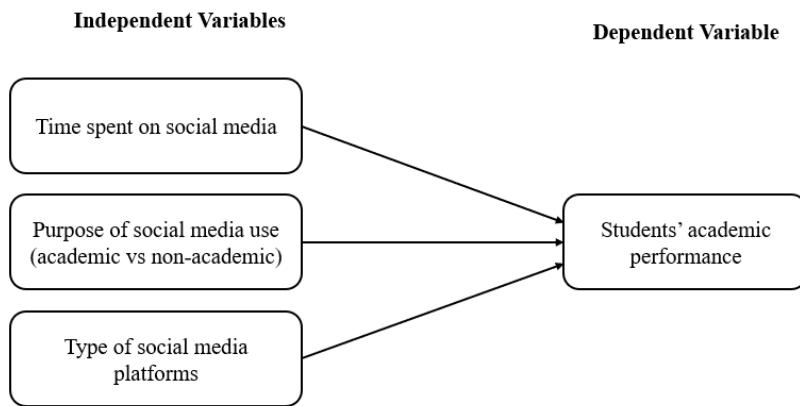
including recorded lectures and instructional tutorials, which enhance their formal classroom experience and promote self-paced learning when aligned with course objectives (Alshalawi, 2022; Shafiq & Parveen, 2023).

In contrast, visually driven platforms that are algorithmically curated (e.g., TikTok, Instagram) do not promote academic engagement or communication; instead, they are designed for entertainment and rapid consumption of large volumes of content. These platforms encourage habits of continuous scrolling through feeds of short videos, with constant notifications that promote habitual checking and passive engagement. This detracts from the ability to maintain sustained attention and engage in in-depth learning (Mujica et al., 2022; Zhao, 2023). The design features of visually driven social media create excessive extraneous cognitive load by introducing frequent distractions that interfere with the cognitive resources necessary for academic processing. Furthermore, it is essential to note that different platform designs (e.g., type of content, speed of interaction, algorithmic recommendation systems) generate varying cognitive demands and levels of relevance for academic learning. Therefore, distinguishing between platform types is crucial when examining the relationship between social media use and academic performance, as not all platforms possess the same educational and cognitive properties and effects. Thus, this study proposes that:

H3: Platforms oriented toward academic communication and information sharing are positively associated with academic performance among university students in Malaysia.

CONCEPTUAL FRAMEWORK AND UNDERPINNING THEORY

The proposed conceptual framework as presented in Figure 1 explains how social-media-use impacts the academic performance of university students through three primary factors: time spent on social media, purpose of use and types of social media platforms used. While academic performance is undertaken broadly (i.e., measuring the extent to which a student succeeds academically), it is viewed to include a students' effectiveness in learning, the amount of concentration dedicated to learning, and the ability to successfully complete the academic tasks. The framework is grounded by Cognitive Load Theory and Uses and Gratifications Theory. The Cognitive Load Theory explains how the amount or type of information coming into the brain affects a student's ability to learn, while Uses and Gratifications Theory explains how students' goal influences how the media will affect them. The integration of these two theories provide insight into how social media use affects the academic performance of these students.

Figure 1*Conceptual Framework*

RESEARCH IMPLICATIONS

This research enhances our understanding of the relationship between social media and academic performance by integrating motivational and cognitive perspectives within a framework that combines Uses and Gratifications Theory with Cognitive Load Theory. The presented model does not assume that social media is entirely positive or negative. Instead, it illustrates the interplay between students' motivation to use social media and the cognitive demands resulting from their usage patterns and platform characteristics. By merging the cognitive load perspective with Uses and Gratifications Theory, researchers who have previously reached conflicting conclusions about the role of social media, as either an enabler of learning or a barrier to academic success, now have a theoretical basis for their findings. Moreover, the framework categorises three characteristics of social media (time spent, purpose of use, and platform type) as separate yet interdependent variables, laying the groundwork for future research to conduct similar studies across various educational and cultural contexts, thereby expanding and evolving the current theory.

From a practical standpoint, the proposed framework aids in developing effective practices, policies, and procedures for educators, higher education institutions, and policymakers in managing social media use to support student success. By understanding how different forms of engagement with social media affect cognitive load and learning outcomes, educators can design instructional strategies that leverage social media for collaboration, communication, and informal learning while minimising distractions. Additionally, educators have a responsibility to teach digital literacy and self-regulation skills that will help students manage their social media usage effectively. At the institutional and policy levels, creating balanced digital well-being guidelines based on this framework will enable institutions to navigate the potential benefits of social media for educational purposes while mitigating the risks of cognitive overload and behavioural disruption. Consequently, the digital well-being framework can assist institutions in developing more equitable and student-centred methodologies that inherently promote sustainable digital citizenship.

CONCLUSION

This conceptual analysis explores the relationship between social media use and academic performance among Malaysian university students. It employs a consolidated framework that examines the interplay between the time spent on social media, the purpose of its use, and the type of platform utilised. Additionally, it offers insights into when social media can be beneficial and when it may be detrimental to the learning process. The framework elucidates how these factors, time spent on social media, usage purpose, platform choice, and the associated motivational processes, can collectively influence a student's academic performance. Building on Cognitive Load Theory and Uses and Gratifications Theory, this framework provides a comprehensive approach to understanding the impact of social media on universities in Malaysia.

ACKNOWLEDGEMENTS

The authors would like to express their sincere appreciation to all individuals who contributed, directly or indirectly, to the completion of this study. The authors also acknowledge the support and encouragement provided by Quest International University and City University Malaysia, which facilitated the conduct of this research.

DISCLOSURE STATEMENT

The authors report no potential conflict of interest with respect to the research, authorship or publication of this article.

ORCID

Aervina Misron ID: <https://orcid.org/0009-0006-5104-2800>

Sharfika Raime ID: <https://orcid.org/0000-0003-2649-0610>

REFERENCES

Alalwan, N. (2022). Actual use of social media for engagement to enhance students' learning. *Education and Information Technologies*, 27(7), 9767-9789.

Alshalawi, A. S. (2022). Social Media Usage Intensity and Academic Performance among Undergraduate Students in Saudi Arabia. *Contemporary Educational Technology*, 14(2).

Kasuma, S. A. A., Saleh, M. S. M., Akhiar, A., & Ismail, Y. M. B. (2018). Malaysian university students' preferences of social media and LMS in academia. *International Journal of Virtual and Personal Learning Environments (IJVPLE)*, 8(1), 51-67.

Katz, E., Blumler, J. G., & Gurevitch, M. (1973). Uses and gratifications research. *The public opinion quarterly*, 37(4), 509-523.

Lane, S. F. (2024). *To Post or Not to Post, That Is the Discussion: An Exploration of Students' Perceptions and Experiences with Using Online Collaboration Tools in Threaded Discussion Board Postings* (Doctoral dissertation, University of South Carolina).

Liu, S., Zaigham, G. H. K., Rashid, R. M., & Bilal, A. (2022). Social media-based collaborative learning effects on student performance/learner performance with moderating role of academic self-efficacy. *Frontiers in psychology*, 13, 903919.

Malaysian Communications and Multimedia Commission. (2023). *Internet users survey 2023*. MCMC. <https://www.mcmc.gov.my/resources/statistics/internet-users-survey>

Mohd Saat, N. Z., Hanawi, S. A., Hanafiah, H., Ahmad, M., Farah, N. M., & Abdul Rahman, N. A. A. (2024). Relationship of screen time with anxiety, depression, and sleep quality among adolescents: a cross-sectional study. *Frontiers in Public Health*, 12, 1459952.

Mujica, A. L., Crowell, C. R., Villano, M. A., & Uddin, K. M. (2022). Addiction by design: Some dimensions and challenges of excessive social media use. *Medical Research Archives*, 10(2), 1-29.

Nabung, A. (2024). The impact of multitasking with digital devices on classroom learning: A critical review on the future of digital distraction in education. *US-China Education Review*, 14(6), 369-383.

Ohara, M. R. (2023). The role of social media in educational communication management. *Journal of Contemporary Administration and Management (ADMAN)*, 1(2), 70-76.

Paas, F., & Van Merriënboer, J. J. (2020). Cognitive-load theory: Methods to manage working memory load in the learning of complex tasks. *Current Directions in Psychological Science*, 29(4), 394-398.

Sakhieva, R. G., Meshkova, I. N., Gimalev, V. G., Melnik, M. V., Shindryaeva, N. N., & Zhdanov, S. P. (2024). Exploring the relationship between social media use and academic performance. *Online Journal of Communication and Media Technologies*, 14(1), e202408.

Samsudin, S., Ismail, R., Daud, S. N. M., & Yahya, S. (2024). The prevalence and underlying factors of mental health disorders in Malaysian youth. *Journal of Affective Disorders Reports*, 15, 100706.

Sengupta, S., & Vaish, A. (2024). A study on social media and higher education during the COVID-19 pandemic. *Universal access in the information society*, 23(3), 1249-1271.

Shafiq, M., & Parveen, K. (2023). Social media usage: Analyzing its effect on academic performance and engagement of higher education students. *International Journal of Educational Development*, 98, 102738.

Slof, B., Van Leeuwen, A., Janssen, J., & Kirschner, P. A. (2021). Mine, ours, and yours: Whose engagement and prior knowledge affects individual achievement from online collaborative learning? *Journal of Computer Assisted Learning*, 37(1), 39-50.

Statista. (2024). Social media penetration rate in Southeast Asia by country. <https://www.statista.com/statistics/123456/social-media-penetration-southeast-asia/>

Tang, Y., & Hew, K. F. (2022). Effects of using mobile instant messaging on student behavioral, emotional, and cognitive engagement: a quasi-experimental study. *International Journal of Educational Technology in Higher Education*, 19(1), 3.

Tin, T. T., Kiat, T. C., Kit, H. J., Shun, L. Y., Wah, S. K., Husin, W. N. A. A. W., ... & Siddiqui, Y. A. (2024). Impact of Social Media on Undergraduate Students' Academic Performance in Malaysia. *Pakistan Journal of Life & Social Sciences*, 22(2).

Zaw, C. C., & Azenal, N. A. (2021). Association between social media addiction and mental health among International Islamic University Malaysia (IIUM) undergraduate nursing students. *INTERNATIONAL journal of care scholars*, 4(Supp1), 32-39.

Zhao, L. (2023). Social media multitasking and college students' academic performance: a situation–organism–behavior–consequence perspective. *Psychology in the Schools*, 60(9), 3151-3168.