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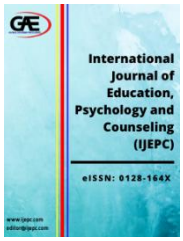

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UNDERSTANDING THE INFLUENCE OF DIGITAL HABITS AND SOCIAL FACTORS ON ACADEMIC PERFORMANCE

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Abstract:

Private higher education institutions in Malaysia play a vital role in producing digitally skilled workers that can support the Malaysia Education Blueprint, Malaysian Qualifications Framework, Industry4WRD and MyDIGITA, while also achieving the outcomes of the Sustainable Development Goals. However, these institutions face several significant issues including not developing 21st century skillsets (e.g., critical thinking, self-regulation and responsible use of technology) consistently among their students. This conceptual paper reconceptualises academic performance as being determined mostly by demonstrable employability skills/competencies and not by academic results. This research will then consider how well constructs such as digital well-being, digital self-control, satisfaction with life, digital homo-ignorance, and social anxiety can predict students' success at private higher education institutions (HEIs). Using Social Cognitive Theory (SCT) as a theoretical foundation, the proposed conceptual framework will delineate how there are reciprocal relationships among personal factors, digital environments, and self-regulatory behaviours of students, with self-efficacy being the primary mechanism for achieving lifelong success. The research has the potential to contribute

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to academia by providing a performance discourse which is inclusive of both the digital and the socio-psychological dimensions while also providing valuable information for policymakers and HEIs to assist in reframing their curricula, digital hygiene, information literacy and student well-being interventions. The research helps mitigate urgent gaps in employability, improves the competitiveness of institutions, to underpin Malaysia's aspirations as a leading education hub. This paper is limited in its conceptual nature, thus potential research is warranted to empirically test this framework, encompassing broader student populations, advanced quantitative methods and longitudinal designs. Ultimately, the framework demonstrates that HEIs need to develop holistic graduates that are digitally balanced, with cognitive expertise, emotional robustness, and future preparedness.

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Keyword:

Academic Performance, Digital Habits, Satisfaction with Life, Social Anxiety, Social Cognitive Theory.

Introduction and Research Background

The advancement of Malaysia's higher education sector is widely recognised as a critical component of the nation's socio-economic progress and its ability to remain competitive in an increasingly globalised economy (Ooi, 2025). Both public and private higher education institutions (HEIs) contribute substantially to this national agenda by broadening educational opportunities, attracting international students, and producing graduates equipped to support digital innovation and transformation across diverse industries (Mohamad Fadzil et al., 2022). To facilitate these aspirations, the Malaysian government has introduced several strategic policy frameworks that emphasise graduate employability, lifelong learning, and digital competencies as key drivers of a high-value, innovation-led economy. Among the most prominent initiatives are the Malaysia Education Blueprint (Higher Education) 2015–2025, the Malaysian Qualifications Framework (MQF), Industry4WRD, and the Malaysia Digital Economy Blueprint (MyDIGITAL). Collectively, these policies seek to strengthen human capital development and prepare graduates for the demands of an evolving digital and knowledge-based society. Furthermore, these national priorities are closely aligned with the United Nations Sustainable Development Goals (SDGs), particularly SDG 3 (Good Health and Well-being), SDG 4 (Quality Education), and SDG 8 (Decent Work and Economic Growth).

In addition, the growth of technology in education has dramatically changed how university students learn. The initiation of smart phone technology and website based social media platform as well as the progression into almost fully mobile computing experience (mobile Google search and mobile AI Web services) has fundamentally changed how students find information, connect with each other, and take part in daytime learning activities (Shahzad et

al., 2024). Although the changes presented by these developmental technologies may provide students more flexible, inclusive, and tailored approaches to learning, there are many challenges created by the changes that will limit a learner's ability to be successful, including but not limited to digital distraction; decreased self-regulation; excessive/overwhelming availability of information; avoidance of complex decision making while working in an online environment; heightened comment anxiety in social/evaluative circumstances (Li et al., 2024; Marsh et al., 2024; Shahzad et al., 2024). These challenges are reported to exist within many private higher educations in Malaysia. This will impact students and stakeholders in terms of determining competitiveness and expectational satisfaction of their institute of higher education and of the students who attend their institute and the employability of those who graduated (Moo & Wan, 2023).

In the context described above, the present research is intended to explore these emerging challenges in relation to students' academic performance, as defined by the acquisition of skill-based competencies, rather than just measuring their academic performance through traditional means (e.g., grades) (Pascarella et al., 2001). Academic achievement is measured according to 21st century skills including learning, literacy and life skills, which are now regarded as necessary for all jobs regardless of sector (Stauffer, 2022). In addition, this research explores how these competencies differ among students' digital experiences and psychosocial well-being based on five antecedent factors. The first is digital well-being, which includes the responsible and balanced use of technology to maximise the benefits of that use while minimising any negative effects resulting from that use (Arslankara et al., 2022). The second will be digital self-control, meaning the ability to control one's impulses and to choose long-term goals at the expense of immediate needs (Biedermann et al., 2024). The third is satisfaction with life, which reflects a cognitive evaluation of one's overall life quality and satisfaction (Mohd Fauzi et al., 2024). The fourth element of digital homo-ignorance describes the tendency to turn away from or ignore available knowledge; despite its availability (O'Brien et al.,2023). The fifth factor is social anxiety which is defined as a long-term feeling of fear regarding being in or engaging in a social situation with someone who could potentially evaluate how we perform in that situation (Ifenthaler et al., 2023). These five factors can be viewed together to produce a complete model that can help explain how students operate in digital contexts and how their experiences within those digital environments might assist or hinder their development of the competencies, skills, and capabilities that employers will look for when seeking to employ new people in national workforce development.

Research Problem Statement

Private higher education institutions (HEIs) in Malaysia face significant management challenges at the intersection of their educational mission and sustainability in a global marketplace to achieve strong academic outcomes through applying and developing demonstrable skills and competencies. This has proved a challenge as many academic programmes do not consistently achieve 21st-century skills attainment in their students, despite significant policy support for outcome-based education (Moo & Wan, 2023) and graduate employability (Tee et al., 2024). Critical thinking, information literacy, collaboration, self-management, and responsible use of technology are some of the key competencies frequently cited by employers as deficiencies in graduates from Malaysian private HEIs and are areas of strong emphasis in the Malaysian Qualifications Framework (MQF), the Malaysia Education Blueprint and MyDIGITAL initiatives (Osman et al., 2025). As soon as academic performance is considered beyond grading and viewed as achievement of skills and competencies, these

performance deficiencies become increasingly evident and thus create an urgent need for higher education management to take action to rectify the issues associated with developing 21st-century skills in their students.

Additionally, the contemporary digital learning environment has exacerbated these issues. Low levels of digital self-control may lead to procrastination, excessive multitasking and disengaged learning behaviour (Deng et al., 2024). Similarly, low levels of digital well-being may increase fatigue, decrease cognitive focus and increase emotional stress (Neagu & Vieriu, 2025). Furthermore, digital homo-ignorance can also occur through avoidance of trusted information sources as well as difficulty differentiating between competing information sources (Mayiwar et al., 2025). Besides, low levels of life satisfaction can negatively affect students' motivation, engagement and persistence to learn (Aydin et al., 2024). Therefore, these related areas will impede development of the foundational competencies needed to adaptively learn throughout the 21st century (e.g., learning agility, information, media and technology literacy), in addition to critical life skills (e.g., adaptability, initiative and social awareness), all directly associated with academic achievement in this research. The potential negative implications of unmanaged digital and psychosocial challenges are most significant within private HEIs (higher education institutions), where student experience and graduate outcomes are critical to the institution's reputation and long-term viability through ongoing enrolment growth. Thus, failure to effectively manage these challenges ultimately decrease program effectiveness and competitive advantage (Carvalho, 2024).

Failure to address these performance disparities may generate a range of adverse consequences for students, institutions, and the broader national development agenda. One potential consequence is the stagnation or decline of graduate employability (Malay Mail, 2024), which could undermine the objectives articulated under SDG 4 and SDG 8, as well as MyDIGITAL's aspiration to cultivate a highly skilled and digitally competent workforce. In addition, declining levels of student satisfaction and retention may emerge as a significant concern (Ong & Ramasamy, 2024), particularly for private HEIs that rely heavily on tuition fees as a primary source of financial sustainability. Beyond student-related outcomes, prolonged performance deficiencies may weaken institutional reputation and reduce competitiveness within both local and international higher education markets (Ong & Ramasamy, 2024), thereby challenging Malaysia's ambition to strengthen its position as a leading regional education hub and provider of world-class higher education. Furthermore, continued divergence from the learning outcome orientation advocated by the MQF and the Malaysia Education Blueprint's emphasis on producing holistic, entrepreneurial, and balanced graduates may expose institutions to quality assurance challenges and reduce opportunities for accreditation recognition (Carvalho, 2024; Osman et al., 2025).

Addressing this managerial problem requires the development of an evidence-based framework capable of explaining the relationships among students' digital behaviours, psychosocial well-being, and skill-based academic performance. Accordingly, this research seeks to empirically examine the influence of digital well-being, digital self-control, satisfaction with life, digital homo-ignorance, and social anxiety on the acquisition of 21st-century skills in Malaysia's private HEIs. Through this investigation, the research aims to identify the factors that most strongly contribute to competency development and academic performance among students. The anticipated findings will provide valuable guidance for the design and implementation of targeted interventions, including curriculum enhancement initiatives, digital hygiene programmes, self-regulation strategies, information literacy training, and student well-being

International Journal of Education, Psychology and Counseling
IJEPC
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support services. Ultimately, such interventions have the potential to strengthen institutional performance, support compliance with national policy priorities, and contribute to Malaysia's broader human capital development agenda while advancing commitments towards the sustainable development goals.

Literature Review

Digital Well-being

The concept of digital well-being refers to how consciously and balanced an individual engages with digital technology (e.g., the internet, smartphones, etc.). It also covers the advantages and disadvantages that can come from using these technologies in a way that optimises their potential benefits and minimises negative outcomes that can occur when using technology excessively. The negative outcomes can be fatigue associated with prolonged screen viewing or feelings of being overwhelmed by the amount of information one must process (ArslanKara et al., 2022). Some evidence suggests that some types of unhealthy digital behaviours (e.g., spending too much time in front of computer/TV screens, compulsively checking social media accounts, and using distracting apps) may lead to decreased levels of focus, difficulties in being able to think clearly when learning new things, and increased burnout levels in students (Leonhardt et al., 2025; Siddiq et al.., 2025). In contrast, there is also a growing body of research indicating that students with higher levels of digital well-being (e.g., students who practice mindfulness, adhere to the principles of digital hygiene, and intentionally manage their online/offline activities experience higher levels of concentration and more positive learning experiences (Osborne et al., 2023). Based on these findings, properly using digital technology has the potential to improve student cognitive engagement and overall educational experience and, as such, result in improved learning outcomes.

From the perspective of Bandura's (1986) Social Cognitive Theory (SCT), digital well-being can be understood as an outcome of the dynamic and reciprocal interaction between learners and their digital environments. Through continuous engagement with digital technologies, individuals acquire knowledge, adapt behaviours, and develop competencies by observing, modelling, and mastering effective digital learning practices. As learners gain confidence in their ability to navigate digital environments, their self-efficacy is strengthened, enabling them to transform technologies that may otherwise serve as sources of distraction into tools that support learning and skill development. For example, students may utilise applications for deliberate practice, engage with collaborative platforms to facilitate meaningful interaction, or employ artificial intelligence tools to enhance learning effectiveness and competency acquisition. Within this framework, SCT highlights how behavioural adjustments in digital environments, together with learners' beliefs regarding their ability to exercise control over technology use, shape learning trajectories and influence the development of competencies and capabilities over time.

There is a growing amount of research on digital well-being; however, there are still many critical gaps in the knowledge base. Much of the existing research looks at very high-level indicators of well-being (e.g., screen time) and does not separate out how students use digital technologies for passive consumption (e.g., watching movies, playing video games, etc.) from how they use them for achieving goals or engaging with the digital world on a meaningful way (Bahar et al., 2024). As a result of this approach, most researchers have not been able to capture the complexities of students' digital lives and therefore do not fully understand how the various

patterns of technology usage can influence students' educational success. While there has been substantial empirical inquiry on the relationship between digital well-being and general outcomes such as academic satisfaction, psychological well-being, or overall experience as a student, comparatively little research has examined the role of digital well-being on the development of 21st century skills and competencies that are becoming increasingly important to today's higher education institutions and labour market (Maskun et al., 2025).

The lack of clarity about how digital well-being supports competency development means that research examining this link is not sufficiently developed. Specifically, little research has been published about how digital policies and practices at Malaysia-based private HEIs differ, which may impact how digital well-being translates to meaningful competency development within these institutions. As a result, current existing research is insufficient to answer the question of how digital well-being influences students' ability to gain skills and competencies in Malaysia's higher education system. To address this knowledge gap, more research needs to be conducted to clarify both conceptually and operationally what is meant by digital well-being and to develop a more comprehensive empirical foundation demonstrating the impact of digital well-being on competency acquisition in Malaysian private HEIs. This would provide a stronger theoretical framework for understanding this construct and its contribution to supporting skill acquisition and educational achievement in the Malaysian higher education context (Bahar et al., 2024; Devisakti et al., 2024).

Digital Self-Control

Numerous studies (e.g., Biedermann et al., 2024; Deng et al., 2024) about how to self-regulate in an educational setting show that impulse control, concentration, and how well a student arranges their study activities affect their performance in school. These examples indicate that a student has many opportunities to use self-control methods, such as managing time, engaging in concentrated study periods, and resisting interruption and distractions, as a means of enhancing their learning and achieving the necessary level of skills and competencies (Biedermann et al., 2024; Park et al., 2025). Most of these researchers conclude that students intentionally avoid multitasking behaviours, plan out their study schedules, and use strategies to establish and enhance their ability to manage their attention while completing their set responsibilities, report a greater depth of learning and see a greater transfer of knowledge into applied tasks, within the same timeframe as the 'acquisition of skills and competencies' expected from academic performance in this research.

According to the SCT framework, self-efficacy and behavioural capability lie at the centre of successfully regulating oneself. A student who is self-efficacious in managing digital distractions will demonstrate self-regulation through managing distractions by developing strategies to reduce interruptions while engaged in deliberate practice (Omar et al., 2023). The students' mastery experience of being able to concentrate successfully regardless of digital distractions strengthens their level of self-efficacy for digital self-management, and supports their continued practice of self-regulatory behaviours, and cumulative skill acquisition. Observational learning also assists students in employing self-regulation strategies to model the successful management of their digital habits when they are taught to observe how other students or experienced adults manage digital distractions effectively (Senin et al., 2023).

International Journal of Education, Psychology and Counseling
IJEPC
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Despite the findings of these studies, there remain several gaps in current research. For one thing, much previous research has only defined self-control broadly (e.g., time management), leaving out a comprehensive, stand-alone definition of digital self-control as it relates to phone (e.g., apps), social media, and AI tools (Biedermann et al., 2024). Secondly, most studies measured academic performance based on grades and academic achievement, while most definitions of 'academic performance' do not consider 21st century competency skills (i.e., critical thinking, digital literacy, collaborating) (Csernoch et al., 2024). Thirdly, there are very few studies focused on the dynamics of digital self-control and skills acquisition in Malaysian HEIs, the student population is different from students in other countries, the curriculum structure differs, and the level of economic pressure (due to local vs global competition) is impacting the skills requested of graduates (Halim et al., 2024). Therefore, these gaps support the need to examine digital self-control as an indicator of academic performance based on skills in Malaysian private universities.

Satisfaction with Life

Life satisfaction is an overall evaluation of an individual's current situation, which can be related to enhanced levels of motivation and perseverance as well as to cognitive resources available to facilitate learning (Mohd Fauzi et al., 2024). Research in the field of educational psychology supports the association between life satisfaction and increased intrinsic motivation, improved emotional self-regulation, and a more optimistic disposition toward academic challenges for students who are more satisfied with their lives (Mohd Fauzi et al., 2024). The psychological benefits of these behaviours contribute to maintaining engagement in the learning process, the desire to accept difficult assignments, and the ability to bounce back from disappointments, all of which support the progressive acquisition of advanced skills and competencies (Wang et al., 2025).

According to SCT, satisfaction with one's life impacts many other personal aspects that can determine motivation and self-efficacy (Kadum & Karpudewan, 2025). Students who perceive life positively as well as viewing themselves as being competent to do so, are likely to have optimistic expectations of themselves with regard to how successful they will be in completing their studies. These amiable beliefs about themselves may enhance their ability to persist and to be proactive in seeking assistance when necessary and engaging in strategic learning behaviours (Kadum & Karpudewan, 2025). In addition to enhancing the motivation of students, satisfaction with life may also serve to protect against the negative impact of distracting digital media and stress caused by social circumstances, which supports the deep learning and experiential development needed to acquire 21st century skills (Chong & Guan, 2022).

There is still a great deal of research to be done connecting the satisfaction with life level to competency-based academic performance at the higher education level. Most prior studies (e.g., Chong & Guan, 2022; Shahzad et al., 2024; Wang et al., 2025) have primarily measured factors, such as grades achieved by students, risk of dropping out of college or mental health concerns as possible predictors of the students developing competencies, rather than directly measuring the students' developing concrete skills (e.g., critical thinking ability, ability to work collaboratively with others; digital literacy). Additionally, the majority of studies that have been completed were either conducted in Western parts of the world or through public universities (e.g., Abd Malek & Ahmad, 2023; Cynthia & Chong, 2023) and very few studies exist that focus on institutional dynamics within Malaysia's Private HEIs, and how life circumstances (e.g., financial stressors, balancing academic and work requirements, international students)

International Journal of Education, Psychology and Counseling
IJEPC
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could play a significant role in shaping students' life satisfaction levels and associated effects. Therefore, more research is needed to examine the relationship of the satisfaction with life as a predictor of competency outcomes in Malaysian private HEIs and determine the potential mediating effects of variables (e.g., self-efficacy) in this relationship.

Digital Homo-Ignorance

Within the present research, digital homo-ignorance is conceptualised as an individual's propensity to avoid accessible information, dismiss contradictory evidence, or refrain from making decisions when confronted with complex informational environments (O'Brien et al., 2023). Research on information avoidance and motivated reasoning has consistently demonstrated that such tendencies can restrict exposure to corrective feedback, reduce opportunities for perspective-taking, and weaken critical engagement with available information, thereby limiting the development of higher-order cognitive capabilities (Cavlovic et al., 2024). In educational contexts, students who repeatedly avoid complex, uncertain, or cognitively demanding digital information may be more susceptible to knowledge deficiencies, poorer critical evaluation abilities, and less developed problem-solving skills (Cavlovic et al., 2024). Consequently, persistent information avoidance may hinder the acquisition of competencies required for academic success, lifelong learning, and effective participation in increasingly knowledge-driven societies.

From the perspective of Social Cognitive Theory (SCT), digital homo-ignorance may be interpreted as the product of reciprocal interactions among personal characteristics, environmental influences, and behavioural responses. Individuals with limited information-processing self-efficacy and negative expectations regarding the outcomes of information seeking may be more likely to avoid contradictory viewpoints or refrain from seeking clarification when engaging with digital content (Mayiwar et al., 2025). Such behaviours restrict opportunities for observational learning, including exposure to models of critical appraisal, analytical thinking, and information evaluation. At the same time, information avoidance constrains behavioural capability and reduces access to mastery experiences that are essential for strengthening competence and self-confidence (Mayiwar et al., 2025). Through this mechanism, digital homo-ignorance may impede the development of key academic competencies and weaken performance in learning activities that require critical thinking, informed judgement, and evidence-based decision-making.

Although the theoretical foundation supporting this relationship is compelling, empirical evidence examining the effects of information-avoidance behaviours within digital environments on competency-based academic outcomes remains relatively limited. Existing research has largely concentrated on specific domains, particularly health-related decision-making (Jia & Li, 2024) and political information processing (Bilandzic & Gall, 2024), while comparatively less attention has been directed towards students' learning behaviours and the implications of information avoidance for the development of 21st-century competencies. Furthermore, there remains a shortage of empirical research within Malaysian private HEIs, particularly regarding the role of cultural, curricular, and pedagogical factors in either amplifying or mitigating tendencies towards digital homo-ignorance (Devisakti et al., 2024). As digital technologies continue to play an increasingly central role in learning, information access, and academic engagement, a deeper understanding of digital homo-ignorance has become increasingly necessary. Addressing this gap will contribute to a clearer understanding of how information avoidance influences students' critical literacies, problem-solving

International Journal of Education, Psychology and Counseling
IJEPC
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Volume 11 Issue 63 (June 2026) PP. 824-841
capabilities, and practical competencies, which are essential components of academic performance and graduate preparedness within the Malaysian higher education sector.

Social Anxiety

Social anxiety in higher education typically shows up in three main areas like worrying about what other people will think of you, being hesitant to answer in class or engage in conversation with the classmates, and avoiding engaging in group projects (Ifenthaler et al., 2023). Previous studies have also established that the higher the level of social anxiety experienced by a student, the less likely they are to engage in classroom activities, seek help when they have trouble with their academic work, and participate in group projects (Mou et al., 2024). This lack of participation can result in students missing out on opportunities that help develop and strengthen their ability to communicate effectively, work together in teams, lead others, and be competent in their studies (Mou et al., 2024). Moreover, when students avoid engaging in social interactions, they are less likely to receive peer feedback and constructive criticism and participate in experiential learning, thereby decreasing their exposure to the above-described competencies.

The Social Cognitive Theory (SCT) has a great deal of explanatory power that can provide important insight into the current relationship between social anxiety and academic performance by assessing self-efficacy and vicarious learning (Ponton & Rhea, 2006). Socially anxious students often have fewer opportunities to create mastery experiences through social and academic interactions as well as to observe models providing effective communication, collaborative learning and academic participation. As a result, perceptions of self-efficacy related to interpersonal interactions and collaborative learning tasks may become weakened (Mou et al., 2024). As socially anxious students increasingly engage in avoidance behaviour, they will also have less opportunity to acquire behavioural capabilities. This particularly true of students' learning opportunities within contexts where 21st centure skills are nurtured, practiced and evaluated (Xethakis et al., 2024). SCT further illustrates that cognitive, behavioural, and environmental factors interact continuously with one another to produce reciprocal effects (Szczuka et al., 2023). Socially demanding academic situations resulting in unsatisfactory outcomes may cause increased anxiety leading to a greater likelihood of avoidance, which creates a cycle of restrictions on developing competency in the acquisition of new knowledge and the ongoing participation in the development of sustained performance.

In terms of social anxiety, there are gaps in research on the subject in Malaysia's private HEIs, especially concerning the direct impact of social anxiety on employer-valued competencies (e.g., communication, teamwork, leadership, and problem-solving). Past studies have either focused on general academic outcomes (e.g., grade) or have primarily looked at social anxiety amongst secondary school populations (Mohamed et al., 2024). There has also been a lack of attention to the effects of contextual factors on the development of the 21st century skills amongst students. Cultural expectations surrounding submissiveness, engagement norms, and interpersonal interaction in addition to institutional factors (e.g., class sizes, teaching practices, and the growing availability of online and blended learning opportunities) may impact the development of skills by Malaysian students with social anxiety. However, there is currently sparse empirical evidence supporting the impact of contextual factors on the effect of social anxiety on the development of the 21st century skills amongst Malaysian students (Le, 2024; Zheng & Lee, 2023). Therefore, further investigation into the effects of social anxiety on skill-based academic performance is warranted to better inform pedagogically innovative practices,

International Journal of Education, Psychology and Counseling
IJEPC
EISSN : 0128-164X
Volume 11 Issue 63 (June 2026) PP. 824-841

student support services, and institutional initiatives aimed at increasing graduate competencies and employability within private HEIs in Malaysia.

This research indicates shared limitations noted across existing literature relative to five proposed constructs. One of these limitations is the practice of treating these constructs as independent rather than dependent variables influencing academic achievement. Another limitation is the traditional measurement of academic achievement, typically measured by GPA or passing rates, with comparatively less importance assigned to competency-based achievements related to the acquisition of 21st century skills. Besides, there is limited empirical research on these constructs relative to private Malaysian HEIs, preventing a better understanding of how these relationships occur within the Malaysian education system. The introduction of artificial intelligence technologies, hybrid learning environments, and digital platforms focused on algorithmic models create a need for a more contemporary empirical model that captures behaviours related to technology, including digital self-control, digital well-being, digital homo-ignorance and alongside socio-psychological variables, including life satisfaction and social anxiety. This research will simultaneously explore these variables and provide a conceptual understanding of academic performance through identifying competency-based 21st century skills relative to the acquisition and application of the identified constructs in literature. It is hope that this research will fill a void in the literature and provide useful input for individuals and organisations engaged in planning or implementing strategies to enhance quality and effectiveness of education.

The Underpinning Theory

The proposed research framework is represented in Figure 1. Social cognition theory (SCT) was developed by Albert Bandura during the early 1980's. It is used as the structure through which the proposed research framework will be developed and is based upon Bandura's experiences and observations of researchers in the field of social cognition, including their development of theories related to human behaviour, the way people relate to one another, and the ways in which people are motivated. From Bandura's research, he concluded that human behaviour is influenced, and shaped, by the reciprocal relationship between three "agents" or "factors", the person's unique characteristics (e.g., personal traits, beliefs, etc.), their environment, and their actions or behaviours.

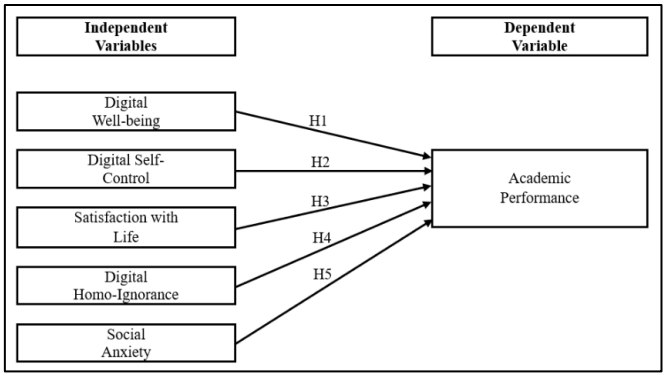

Figure 1: Proposed Research Framework

Source: Bandura (1986)

International Journal of Education, Psychology and Counseling
IJEPC
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Volume 11 Issue 63 (June 2026) PP. 824-841

According to Bandura, the first two agents act on the final agent, and all three affect the outcome of any human behaviour. Specifically, Bandura (1977) describes self-efficacy as being an important part of SCT because self-efficacy affects the amount of effort an individual applies to a task, how long they work on that task before giving up (persistence), and how well they ultimately perform the task they are working on (performance). Because of this, SCT serves as a useful framework for understanding the relationships among digital well-being, self-regulated learning, and social-psychological factors, and how these relationships will influence and determine students' academic achievements.

H1: Digital self-regulation and academic performance.
SCT explains this relationship through the role of self-efficacy in self-regulation. Students who believe they can control digital distractions (e.g., phones, social media, or gaming) are more likely to regulate their behaviour and sustain attention on academic tasks. This sense of control supports better learning outcomes, showing how self-regulation guided by self-efficacy directly enhances performance.

H2: Digital well-being and academic performance.
Digital well-being is the way students regulate their digital environment to avoid stress or overload. The SCT principle of reciprocal determinism posits that the digital environment influences student behaviours. Nevertheless, students with high self-efficacy usually can manage the digital environment in a way that allows them to saviour or have healthier engagements. The outcomes of students' ability to regulate how technology influences their mental status allows their focus and motivation improves their academic outcome.

H3: Satisfaction with life and academic performance.
SCT recognises personal constructs like optimism and life-satisfaction as important for motivation, determination, and persistence. Students who express life-satisfaction will tend to have a more optimistic outcome expectation, thereby expressing confidence in their abilities, and more resilient to adverse or hostile learning conditions. Greater self-efficacy leads to greater efforts in academics which translates directly to academic performance.

H4: Digital homo-ignorance and academic performance.
From an SCT perspective, actively avoiding or lack of confidence interacting with digital information indirectly implies expectation for negative outcomes and low self-efficacy. Such maladaptive behaviours limit students' opportunities for learning subsequently, hindering students from developing the digital and academic skills needed for success in academic settings. This avoidance behaviour has adverse effect on academic success as (SCT) posits behaviour, cognition, and environment are working together to generate outcomes.

H5: Social anxiety and academic performance.
SCT explains that social learning occurs through observation, interaction, and mastery experiences. Students with high social anxiety may avoid group discussions, presentations, or collaborative learning opportunities, thereby reducing their chances to build self-efficacy in social and academic contexts. This avoidance leads to weaker participation, lower confidence, and ultimately, poorer academic performance.

In summary, SCT provides an integrative explanation for the framework by showing how personal beliefs (self-efficacy), environmental influences (digital context), and behaviours (self-regulation, avoidance, engagement) continuously interact to shape academic

International Journal of Education, Psychology and Counseling
IJEPC
EISSN : 0128-164X
Volume 11 Issue 63 (June 2026) PP. 824-841
performance. This makes the researchers believe SCT is a comprehensive lens to ground the proposed research framework.

Expected Outcomes and Research Significance

This research is expected to provide a clearer understanding of how digital wellbeing, digital self-control, satisfaction with life, digital homo ignorance and social anxiety collectively influence academic performance in higher learning institutions. By adopting Social Cognitive Theory (SCT) as the underpinning theory, the study anticipates demonstrating how personal agency, environmental influences, and behavioural regulation interact in shaping students' acquisition of 21st-century skills. Theoretically, the paper contributes to the growing body of literature by positioning academic performance not merely as grades but as competencies and employability-driven skills that resonate with Malaysia's national higher education agenda and global demands.

The study also carries significant practical implications. For policymakers, it is expected to offer evidence that supports the design of more holistic digital wellbeing strategies underlined in Malaysia's National Higher Education Strategic Plan and aligned with SDG 4 (Quality Education) and SDG 3 (Good Health and Well-Being). For private higher learning institutions, the outcomes will shed light on how digital habits, psychological wellbeing, and self-regulation strategies can be embedded into teaching, counselling, and institutional support systems to enhance students' lifelong learning capabilities and reduce academic underperformance. Importantly, the study addresses the pressing need for universities to prepare graduates who are not only technically skilled but also emotionally resilient and digitally balanced, thus better equipped for the workforce.

Limitations and Recommendations for Future Research

As the proposed theory has yet to be tested empirically, there are limitations to this conceptual model. The proposed framework includes digital well-being, self-regulation, satisfaction with life (SWL), digital ignorance (DI), and social anxiety within a higher education context, but without any data to base the proposed framework on, its overall generalisability will be limited. In fact, a large part of the underpinning literature is drawn predominantly from Western contexts, which may not capture the realities of Malaysian universities' cultural and structural contexts as accurately as needed. Thus, this framework should be considered a guide for future empirical investigations instead of a finalised model.

To overcome the limitations of this study, future studies are recommended to test the proposed model with different groups of students across the institutions of higher education in Malaysia. Quantitative methods such as structural equation modelling (SEM) might test the strength and significance of the proposed relationships while longitudinal measures would help to assess changes to students' digital well-being and academic performance over time. In addition to this, qualitative methods such as focus groups or in-depth interviews may enrich quantitative findings by providing more nuanced accounts of students' experiences of digital well-being and self-control.

Future studies may also consider possible moderators and mediators (e.g., cultural orientation, socio-economic factors, and institutional support) to further explore how contextual factors might influence the proposed relationships in the model. Comparative studies could also be

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conducted between (e.g., between public and private universities) or across Malaysia and other ASEAN countries, to examine how cultural norms and institutional practices shape student outcomes. Finally, future researchers might consider including the emerging constructs of digital resilience, AI-dependence, and technostress as part of the framework structure to enhance, deepen, and expand the current framework, ensuring its relevancy and responsiveness toward changes in digital realities in higher education.

Conclusion

The academic performance of students has traditionally been examined through cognitive abilities. However, advancements in technology, digital wellness and socio-psychological aspects have caused researchers and professionals to consider the importance of self-control when measuring the success of students. This paper aims to create a new conceptual model that emphasises the development of holistic, future-ready graduates while addressing the numerous gaps in literature regarding the link between digital wellness and socio-psychological factors within the context of private Malaysian higher education.

The development of the new model will provide both theoretical and practical contributions to the understanding of academic accomplishment, in particular how to meaningfully improve academic success amongst privately funded institutions in Malaysia by moving beyond traditional academic support systems and into a holistic perspective. This paper will provide the groundwork for future empirical research testing, validating, refining and expanding on the new model, thus developing academic success practices within higher education.

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