Unlocking LinkedIn adoption for higher education students: findings from PLS-SEM and NCA

Nurhafihz Noor, Ashley Tong and Zahirah Zainol

Nurhafihz Noor is based at James Cook University – Singapore Campus, Singapore, Singapore. Ashley Tong is based at Newcastle Australia Institute of Higher Education Pte Ltd, Singapore, Singapore. Zahirah Zainol is based at Curtin University – Singapore, Singapore, Singapore.

Abstract

Purpose – *LinkedIn offers multiple benefits to higher education students to build their careers. However, there is a lack of understanding of the factors which are significant and necessary to increase its adoption among such students. Having this granular understanding enables developers to design the platform more effectively. This study aims to investigate the factors affecting the adoption of LinkedIn for higher education students.*

Design/methodology/approach – *Using the partial least squares structural equation modeling (PLS-SEM) and necessary condition analysis (NCA), the authors analyzed the results from a self-administered survey of 120 higher education students with a model integrating subjective norm with variables from the value-based adoption model (VAM).*

Findings – *Subjective norm and perceived usefulness were found to be significant factors for increasing LinkedIn adoption. However, perceived enjoyment remained a necessary condition for higher education students to adopt LinkedIn.*

Originality/value – *This study contributes to the technology adoption and higher education literature on using social networking services for higher education marketing. To the best of the authors' knowledge, this research is also among the first to examine the necessary factors affecting the adoption of LinkedIn among higher education students using the NCA. It further proposes a practical multi-stakeholder three-stage blueprint to increase LinkedIn adoption.*

Keywords *Value-based adoption model, Subjective norm, Higher education, Career management, Perceived value, Social media*

Paper type *Research paper*

Received 28 January 2025
Revised 9 April 2025
Accepted 6 May 2025

© Nurhafihz Noor, Ashley Tong and Zahirah Zainol. Published by Emerald Publishing Limited. This article is published under the Creative Commons Attribution (CC BY 4.0) licence. Anyone may reproduce, distribute, translate and create derivative works of this article (for both commercial and non-commercial purposes), subject to full attribution to the original publication and authors. The full terms of this licence may be seen at http://creativecommons.org/licences/by/4.0/legalcode

1. Introduction

Social networking services (SNS) remain a global phenomenon, drawing many users to utilize such platforms to share their thoughts and emotions. In 2024, there were over five billion social media users worldwide, spending an average of almost two hours daily on their SNS (WeAreSocial, 2024). The adoption of SNS offers a wide range of benefits, including enhanced collaboration among connected friends, greater convenience in communication, improved employee productivity in interactions between businesses and their customers and the advancement of multi-channel retailing (Heidemann *et al.*, 2012; Jang *et al.*, 2015).

Among SNS, LinkedIn stands out as the world's largest professional network with an estimated ad reach of over one billion LinkedIn users consisting of almost a quarter aged 11–24 and half aged 25–34 (WeAreSocial, 2024). LinkedIn distinguishes itself from most social media platforms by prioritizing business connections between users and industry professionals and facilitating the exchange of experience and knowledge (Pena *et al.*, 2022). For both undergraduate and postgraduate students, LinkedIn serves as a valuable platform to showcase their professional profiles, including education, skills, competencies

Downloaded from http://ftp.nowpublishers.com/yc/article-pdf/26/7/172/10325544/yc-01-2025-2411en.pdf by guest on 26 May 2026

and work experience (Ruparel *et al.*, 2020). This unique focus supports the holistic professional development of higher education students (López-Carril *et al.*, 2020).

López-Carril *et al.* (2022) demonstrated that the pedagogical use of LinkedIn positively impacts undergraduate student engagement and interactions. It allows students to follow companies, apply for job opportunities and present their public profiles to talent and human resource managers (Knight, 2019). The platform also helps students expand their professional networks and overcome networking challenges while enhancing their professional and career-oriented activities (Gerard, 2012). Furthermore, LinkedIn enables current students and recent graduates to establish a professional online presence, thereby improving their employability prospects (Slone and Gaffney, 2016).

LinkedIn provides diverse opportunities for classroom engagement, allowing students to develop their professional profiles and interact with key industry stakeholders (López-Carril *et al.*, 2025). Cohen *et al.* (2019) demonstrated that integrating LinkedIn into education fosters critical thinking, collaborative discussion, research skills, analytical reasoning and content creation that is aligned with academic and professional goals. Additionally, Habets *et al.* (2021) emphasize LinkedIn's role in advancing career readiness and employability among university students. López-Carril *et al.* (2021) further illustrated this through a structured LinkedIn-based intervention for sport management undergraduates, which improved students' perceptions of the platform as a vital career development and networking resource. Bridgstock (2019) highlighted LinkedIn's potential as a pedagogical tool for enhancing connectedness learning and employability, detailing specific affordances that support each of the five connectedness capabilities. Despite these promising findings, Healy *et al.* (2023) argue that research on LinkedIn's pedagogical impact remains fragmented, with inconsistent evidence regarding its efficacy in career and employability learning.

Despite the importance of LinkedIn for higher education students, the literature surrounding the factors that affect the adoption of LinkedIn for this important user group remains scant. While prior studies have explored LinkedIn's pedagogical impact (Cohen *et al.*, 2019; López-Carril *et al.*, 2022) and career-related outcomes (Habets *et al.*, 2021; Healy *et al.*, 2023), the literature remains limited in explaining what specific motivational factors influence students' adoption of the platform. Existing research has focused narrowly on theoretical frameworks (Carmack and Heiss, 2018), examined LinkedIn learning rather than core platform adoption (Hazzam *et al.*, 2024) or relied on qualitative insights (Florenthal, 2015) without quantitatively assessing which system features (utilitarian vs hedonic) are most critical for student engagement. While the value-based adoption model (VAM) has been widely applied to various digital platforms, its application to LinkedIn, particularly within higher education, remains limited. Existing research has primarily focused on general SNS use (Heidemann *et al.*, 2012; Jang *et al.*, 2015), leaving a gap in understanding how LinkedIn's unique professional affordances align with VAM constructs in academic contexts. Addressing these gaps, this study applies the VAM to LinkedIn adoption in a higher education context, offering a more comprehensive understanding of the cognitive, social and emotional factors influencing students' adoption behavior.

Given LinkedIn's role as the world's largest professional network (WeAreSocial, 2024), understanding what drives higher education students to adopt LinkedIn is crucial for both educators and practitioners. Therefore, this study seeks to identify the necessary factors that encourage student adoption and bridge the gap between career-readiness priorities (Uncles, 2018) and actual platform usage, helping universities and LinkedIn optimize their strategies for student engagement. It also provides empirical evidence beyond limited theoretical models to guide platform enhancements that align with students' professional transition needs. By addressing these gaps, this research highlights actionable insights for improving LinkedIn's adoption and educational integration, ultimately enhancing career readiness for higher education students.

Downloaded from http://ftp.nowpublishers.com/yc/article-pdf/26/7/172/10325544/yc-01-2025-2411en.pdf by guest on 26 May 2026

Thus, the purpose of this research is to investigate the adoption intention and factors driving the adoption of LinkedIn among higher education students. This study aims to answer the following research questions: Q1. What are the significant factors that affect the adoption intention of LinkedIn among higher education students? and Q2. What are the necessary factors that can manifest the student's adoption of LinkedIn?

While several studies have used the partial least squares structural equation modeling (PLS-SEM) to uncover significant adoption factors of SNS (Alshurideh and Kurdi, 2023; Nahedh Alsehani *et al.*, 2024), to the best of our knowledge, very few studies have examined the necessary factors affecting the adoption of LinkedIn among higher education students using the necessary condition analysis (NCA) (Richter *et al.*, 2020). Adopting the key factors from the Value-based Adoption Model (VAM) (Kim *et al.*, 2007) with the social component relevant to students being subjective norm, results from our study reveal that while perceived fee and perceived enjoyment are not significant factors in the adoption of LinkedIn among higher education students, a level of perceived enjoyment is necessary for the adoption intention of LinkedIn to manifest. Thus, our study contributes to the literature on the use of SNS for higher education marketing beyond student recruitment (Cingillioglu *et al.*, 2024).

The next section proceeds to discuss the development of the hypotheses in our study and show how the variables chosen in our model are particularly relevant to the context facing students in higher education and their adoption of LinkedIn. We will then present the results from our study, before concluding with our paper's implications for researchers and practitioners in the higher education and technology sectors.

2. Literature review and hypotheses development

2.1 Adoption intention and value-based adoption model

Drawing on the cost–benefit paradigm in behavioral decision theory, Kim *et al.* (2007) introduced VAM which posits that individuals' intention to adopt technology is determined by perceived value, evaluated through a cognitive tradeoff between the benefits and sacrifices associated with technology use. Perceived benefits include usefulness (i.e. extrinsic and cognitive) and enjoyment (i.e. intrinsic and affective), while perceived sacrifices encompass technical complexity (i.e. nonmonetary) and perceived cost (i.e. monetary).

VAM integrates elements from the Technology Acceptance Model (TAM) (Davis *et al.*, 1989) and the concept of perceived value by Zeithaml (1988) to provide a more comprehensive explanation of technology adoption in today's rapidly evolving technological landscape. Unlike TAM, which primarily emphasizes output components, VAM is considered more realistic as it incorporates input components (Lin *et al.*, 2010). This approach is frequently regarded as superior in explaining technology adoption by focusing on individuals' perceived values (Chan and Lu, 2004; Kim *et al.*, 2007). Our study suggests that the VAM components of perceived usefulness and perceived enjoyment are the primary benefits that higher education students gain from using LinkedIn.

2.2 Perceived usefulness

Davis *et al.* (1989) argued that perceived usefulness influences users' attitudes and intentions to use a product or service and plays a crucial role in their acceptance. Perceived usefulness refers to the degree to which new technology is utilized in the user's daily life or work, thereby increasing life and work efficiency (Davis *et al.*, 1992). Perceived usefulness in this study is defined as the extent to which an individual believes that using LinkedIn can improve their social and work performance. Studies related to the use of SNS continue to support the relationship between perceived usefulness and adoption intention (Zhang *et al.*, 2023; Zhu *et al.*, 2014). Based on this, we hypothesize that:

H1. Perceived usefulness of LinkedIn positively influences the adoption intention of LinkedIn.

Downloaded from http://ftp.nowpublishers.com/yc/article-pdf/26/7/172/10325544/yc-01-2025-2411en.pdf by guest on 26 May 2026

2.3 Perceived enjoyment

Perceived enjoyment refers to the extent to which using LinkedIn is considered inherently enjoyable, independent of its expected impact on performance (Davis *et al.*, 1992). It encompasses the pleasure, joy, and satisfaction experienced by users while engaging with the platform (Kim *et al.*, 2007), which in turn plays a critical role in LinkedIn adoption. Extant research has shown the positive effects of enjoyment to technology acceptance across various technological systems (Davis *et al.*, 1992). Recent studies continue to support the role of positive hedonic experiences in affecting the adoption intention of SNS (Chaihanchanchai and Anantachart, 2024; Zobeidi *et al.*, 2024). Hence, we hypothesize that:

H2. Perceived enjoyment of LinkedIn positively influences the adoption intention of LinkedIn.

2.4 Perceived fee

Perceived fee broadly refers to the monetary cost of adopting the new technologies (Kim *et al.*, 2007). Kim *et al.* (2007) argued that perceived fee has a negative impact on perceived value, thereby affecting adoption intention. Perceived fee has been shown to have a negative effect on the adoption intention for various online-based platforms, including mobile internet (Kim *et al.*, 2007) and online music (Wang *et al.*, 2013). In terms of LinkedIn, the perceived fee of using the more useful premium features of the platform may prove to be a peculiar challenge to students (Goel, 2019). Adopting this monetary sacrifice construct from VAM, we hypothesize that:

H3. Perceived fee of LinkedIn negatively influences the adoption intention of LinkedIn.

2.5 Subjective norm

Subjective norm refers to the perceived social pressure to engage in a specific behavior (Ajzen, 1985). This construct has been incorporated into various technology acceptance models suggesting that social factors and societal perceptions influence behavioral intentions (Venkatesh *et al.*, 2003). In LinkedIn, subjective norm pressures can come from the belief students have that key individuals, such as their teachers and future employers expect them to maximize the use LinkedIn for professional purposes including creating online resumes, expanding their professional networks and ultimately securing their jobs upon graduation. Meta-analysis research indicates that subjective norm can significantly influence behavioral intention and perceived usefulness (Schepers and Wetzels, 2007). Research in the context of SNS also suggests the role of subjective norm in affecting adoption intention (Kamboj and Sharma, 2023) and perceived usefulness (Izuagbe *et al.*, 2019). Based on these, we hypothesize that:

H4. Subjective norm of using LinkedIn positively influences the adoption intention of LinkedIn.

H5. Subjective norm of using LinkedIn positively influences perceived usefulness of LinkedIn.

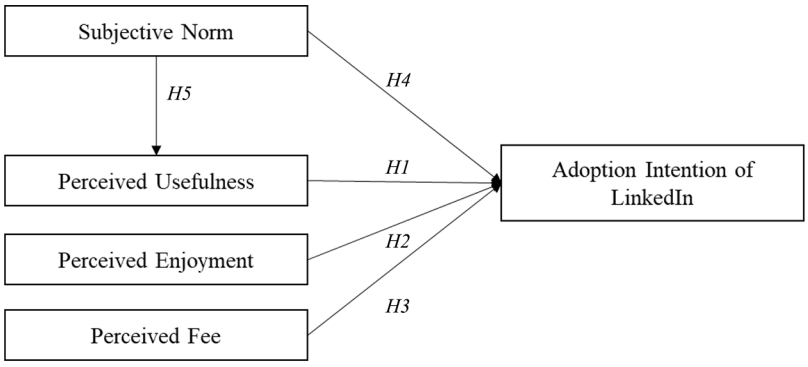
Figure 1 shows the conceptual framework integrating the variables and hypotheses in our study.

3. Methodology

The study received an ethics exemption from the institutional human ethics research committee as the risks of identifiability of data, data management, secondary use of information and data sharing were mitigated due to the research design. This included ensuring that no survey questions could reveal the identity of participants and that data collected was anonymous. No new scales were created in this study, and the measures used were adapted from extant scales that have been validated in the literature.

Downloaded from http://ftp.nowpublishers.com/yc/article-pdf/26/7/172/10325544/yc-01-2025-2411en.pdf by guest on 26 May 2026

Figure 1 Conceptual framework



Source: Created by the authors

Specifically, we adapted the constructs of perceived usefulness and perceived fee from Hsu and Lin (2018), subjective norm from Erdmann *et al.* (2023), and perceived enjoyment and adoption intention from the seminal VAM creation study by Kim *et al.* (2007). Table 1 details the item measures used in this study.

Nonrandom purposive sampling using online surveys was used as it was a practical and efficient means to obtain the required data from our population members of interest [i.e. higher education students (Lim, 2024)]. Accordingly, we distributed a self-administered survey to higher education students in Singapore across two universities affiliated and thus accessible to the study coauthors over one month. Singapore has one of the highest social media penetration rates globally, with widespread LinkedIn usage among students and professionals (WeAreSocial, 2024). According to Digital 2024 report, Singapore ranks 10th globally in social media adoption, with 5.13 million registered social media user identities (85% of the population) actively using these platforms (WeAreSocial, 2024). As of 2024, 17% of Singaporeans use social media for professional networking or work-related research, and users spend an average of 47 min per month on LinkedIn (Meltwater, 2024). Its tech-savvy population ensures that findings reflect normalized digital networking behaviors.

Section 1 of the survey contained profiling questions, LinkedIn usage questions as well as an instructional manipulation check asking the respondents to select "Others" to improve

Table 1 Survey items

Construct	*Item measures*	*Adapted from*
Perceived usefulness	PU1 Using LinkedIn improves my career PU2 Using LinkedIn enhances my career PU3 Using LinkedIn helps me get information useful for my career	Hsu and Lin (2018)
Perceived enjoyment	ENJ1 I have fun interacting with LinkedIn ENJ2 Using LinkedIn provides me with a lot of enjoyment ENJ3 I enjoy using LinkedIn	Kim *et al.* (2007)
Perceived fee	FEE1 The fee that I have to pay for the use of LinkedIn is too high FEE2 The fee that I have to pay for the use of LinkedIn is not reasonable FEE3 I am not pleased with the fee that I have to pay for the use of LinkedIn	Hsu and Lin (2018)
Subjective norm	SN1 People important to me think I should use LinkedIn SN2 It is expected that people similar to me use LinkedIn SN3 People I respect and admire expect me to use LinkedIn	Erdmann *et al.* (2023)
Adoption intention	INT1 I plan to use LinkedIn in the future INT2 I intend to use LinkedIn in the future INT3 I predict I would use LinkedIn in the future	Kim *et al.* (2007)

Source(s): Created by the authors

Downloaded from http://ftp.nowpublishers.com/yc/article-pdf/26/7/172/10325544/yc-01-2025-2411en.pdf by guest on 26 May 2026

the quality of survey responses (Oppenheimer *et al.*, 2009). Section 2 contained the measure items that respondents had to rate using a 7-point Likert scale from 1 = strongly disagree to 7 = strongly agree.

Out of 300 students who clicked and began the survey, 120 passed the instructional manipulation check and completed the survey. Thus, the final sample contained 120 responses with 63 female (52.5%) and 57 male (47.5%). 85 (70.8%) of the respondents were undergraduates while the remaining 35 (29.2%) were postgraduate students. These sample characteristics satisfied our research design requirements as our population of interest for this study was higher education students, and 120 responses met the PLS-SEM minimum sample size requirement of ten times the largest number of structural paths to our latent construct of LinkedIn adoption intention (Hair *et al.*, 2011). Most respondents (90 students or 75.0%) were aged 18–24 while the rest (30 students or 25.0%) were 25–34. These are representative of the top two age groups in terms of LinkedIn ad reach (WeAreSocial, 2024). As for LinkedIn usage experience, most respondents had used LinkedIn in less than 1 year (51 students or 42.5%), followed by 1–2 years (25 students or 20.8%). Table 2 summarizes the profile of the respondents in our study.

4. Findings and analysis

We assessed our model using PLS-SEM with SmartPLS 4. The PLS-SEM method was suitable for our study which explored a new model and had a relatively small sample size (Hair *et al.*, 2019). An assessment of the model fit using the Standardized Root Mean Square Residual (SRMR) value indicated that our model met the threshold value of 0.08 (Benitez *et al.*, 2020). There was sufficient indicator reliability as all factor loadings were above 0.708 (Hair *et al.*, 2019). Our model also showed sufficient internal consistency reliability as all Cronbach's alpha and composite reliability values were above 0.70 (Hair *et al.*, 2019). Convergent validity was achieved as all average variance extracted (AVE) values met the cutoff of 0.50 (Benitez *et al.*, 2020). Results of the reliability and convergent validity tests are shown in Table 3.

Table 2 Profile of respondents

Category	*Frequency*	*%*
Gender		
Male	57	47.5
Female	63	52.5
Total	120	100.0
Level		
Undergraduate	85	70.8
Postgraduate	35	29.2
Total	120	100.0
Age		
18–24	90	75.0
25–34	30	25.0
Total	120	100.0
LinkedIn Usage Experience		
Less than a year	51	42.5
1–2 years	25	20.8
3–4 years	4	3.3
5–6 years	2	1.7
Never used LinkedIn	38	31.7
Total	120	100.0

Source(s): Created by the authors

Downloaded from http://ftp.nowpublishers.com/yc/article-pdf/26/7/172/10325544/yc-01-2025-2411en.pdf by guest on 26 May 2026

Table 3 Reliability and convergent validity results

Item	*Loading*	*Cronbach's alpha*	*Composite reliability*	*AVE*
Perceived usefulness		0.89	0.93	0.81
PU1 Using LinkedIn improves my career	0.92			
PU2 Using LinkedIn enhances my career	0.89			
PU3 Using LinkedIn helps me get information useful for my career	0.90			
Perceived enjoyment		0.88	0.93	0.81
ENJ1 I have fun interacting with LinkedIn	0.92			
ENJ2 Using LinkedIn provides me with a lot of enjoyment	0.90			
ENJ3 I enjoy using LinkedIn	0.88			
Perceived fee		0.78	0.86	0.67
FEE1 The fee that I have to pay for the use of LinkedIn is too high	0.75			
FEE2 The fee that I have to pay for the use of LinkedIn is not reasonable	0.82			
FEE3 I am not pleased with the fee that I have to pay for the use of LinkedIn	0.88			
Subjective norm		0.80	0.88	0.72
SN1 People important to me think I should use LinkedIn	0.85			
SN2 It is expected that people similar to me use LinkedIn	0.86			
SN3 People I respect and admire expect me to use LinkedIn	0.83			
Adoption intention		0.93	0.95	0.87
INT1 I plan to use LinkedIn in the future	0.94			
INT2 I intend to use LinkedIn in the future	0.93			
INT3 I predict I would use LinkedIn in the future	0.93			

Source(s): Created by the authors

Discriminant validity was assessed using the Hetero-Trait Mono-Trait (HTMT) criterion. As seen in Table 4, HTMT ratios of the correlations met the threshold of 0.85, indicating discriminant validity (Benitez *et al.*, 2020). Finally, results from a full collinearity test showed that the variance inflation factor (VIF) values were lower than 3.3, indicating no common method bias in our model (Kock, 2015).

Next, we tested the hypotheses in our model using a bootstrapping procedure with 5000 subsamples using a one-tail test at the 95% significance level. As shown in Table 5, there was a significant and positive relationship between the perceived usefulness of LinkedIn and the adoption intention of LinkedIn ($\beta = 0.29$, $p < 0.05$), thus supporting H1. However, there was an insignificant relationship between perceived enjoyment and adoption intention of LinkedIn ($\beta = 0.15$, $p = 0.06$), thus rejecting H2. Similarly, there was an insignificant relationship between perceived fee and adoption intention of LinkedIn ($\beta = -0.00$, $p = 0.49$), thus rejecting H3. In terms of the subjective norm variable, there was a significant and positive relationship to adoption intention of LinkedIn ($\beta = 0.43$, $p < 0.001$) and perceived usefulness ($\beta = 0.72$, $p < 0.001$) respectively.

Finally, we performed an NCA following the guidelines of Richter *et al.* (2020). Unlike traditional hypothesis testing which investigates if one factor affects an outcome, NCA focuses on how an outcome can be manifested (Dul, 2016). Accordingly, the NCA method creates greater analytical insights and continues to be employed in various fields including

Table 4 Discriminant validity results

HTMT matrix	*Adoption intention of LinkedIn*	*Perceived enjoyment*	*Perceived fee*	*Perceived usefulness*	*Subjective norm*
Adoption intention of LinkedIn					
Perceived enjoyment	0.69				
Perceived fee	0.17	0.21			
Perceived usefulness	0.77	0.84	0.24		
Subjective norm	0.83	0.75	0.21	0.85	

Source(s): Created by the authors

Downloaded from http://ftp.nowpublishers.com/yc/article-pdf/26/7/172/10325544/yc-01-2025-2411en.pdf by guest on 26 May 2026

Table 5 Hypotheses testing results

Hypothesis	*β value*	p-*value*	*Result*
H1: Perceived usefulness → Adoption intention of LinkedIn	0.29	0.01	Significant
H2: Perceived enjoyment → Adoption intention of LinkedIn	0.15	0.06	Not significant
H3: Perceived fee → Adoption intention of LinkedIn	−0.00	0.49	Not significant
H4: Subjective norm → Adoption intention of LinkedIn	0.43	0.00	Significant
H5: Subjective norm → Perceived usefulness	0.72	0.00	Significant

Source(s): Created by the authors

marketing and technology (Dul *et al.*, 2023). Thus, while our hypotheses tests have determined the should-have factors to achieve LinkedIn adoption, the NCA will uncover the must-have factors and the required levels necessary for LinkedIn adoption intentions among higher education students to occur (Richter *et al.*, 2020).

Using SmartPLS 4, we proceeded to calculate the latent variable scores to run the NCA. Due to the bivariate nature of NCA, we ran two NCA: the first NCA focused on the four exogenous constructs of perceived usefulness, perceived enjoyment, perceived fee, and subjective norm with the endogenous construct of adoption intention of LinkedIn, while the second NCA focused on the exogenous construct of subject norm with the endogenous construct of perceived usefulness.

Table 6 shows the NCA effect sizes while Figure 2 shows the scatter plots of the dependent and independent variables which will be elaborated below. Results from Table 6 indicate that subjective norm, perceived usefulness and perceived enjoyment are meaningful ($d \geq 0.1$) and significant ($p < 0.05$) necessary conditions for the adoption intention of LinkedIn. Table 6 also indicates that subjective norm is a meaningful ($d \geq 0.1$) and significant ($p < 0.05$) necessary condition for perceived usefulness.

Tables 7 and 8 capture a more detailed assessment of each necessary condition. For instance, to achieve a 50% level of adoption intention of LinkedIn, three necessary conditions need to be fulfilled: perceived enjoyment at no less than a score of 2.02, perceived usefulness at no less than a score of 2.35, and subjective norm at no less than a score of 2.00. The bottleneck tables of 7 and 8 represent more clearly the NCA insights which can be derived from the scatter plots in Figure 2. For instance, looking at the ceiling envelopment–free disposal hull (CE-FDH) (step function) line which is more accurate than the ceiling regression–free disposal hull (CR-FDH) line (Richter *et al.*, 2020), we can see that a value of 2.0 on the subjective norm is required to obtain a value of 4.0 (which is 50% on a 1–7 scale) on adoption intention.

Based on Richter *et al.* (2020), we synthesize the results of our hypotheses tests and NCA in Table 9. The implications of our findings will be discussed in the subsequent concluding section.

5. Discussion and implications

5.1 Discussion

This study applied the Value-Based Adoption Model (VAM) to examine the factors influencing LinkedIn adoption among higher education students. The findings offer theoretical and

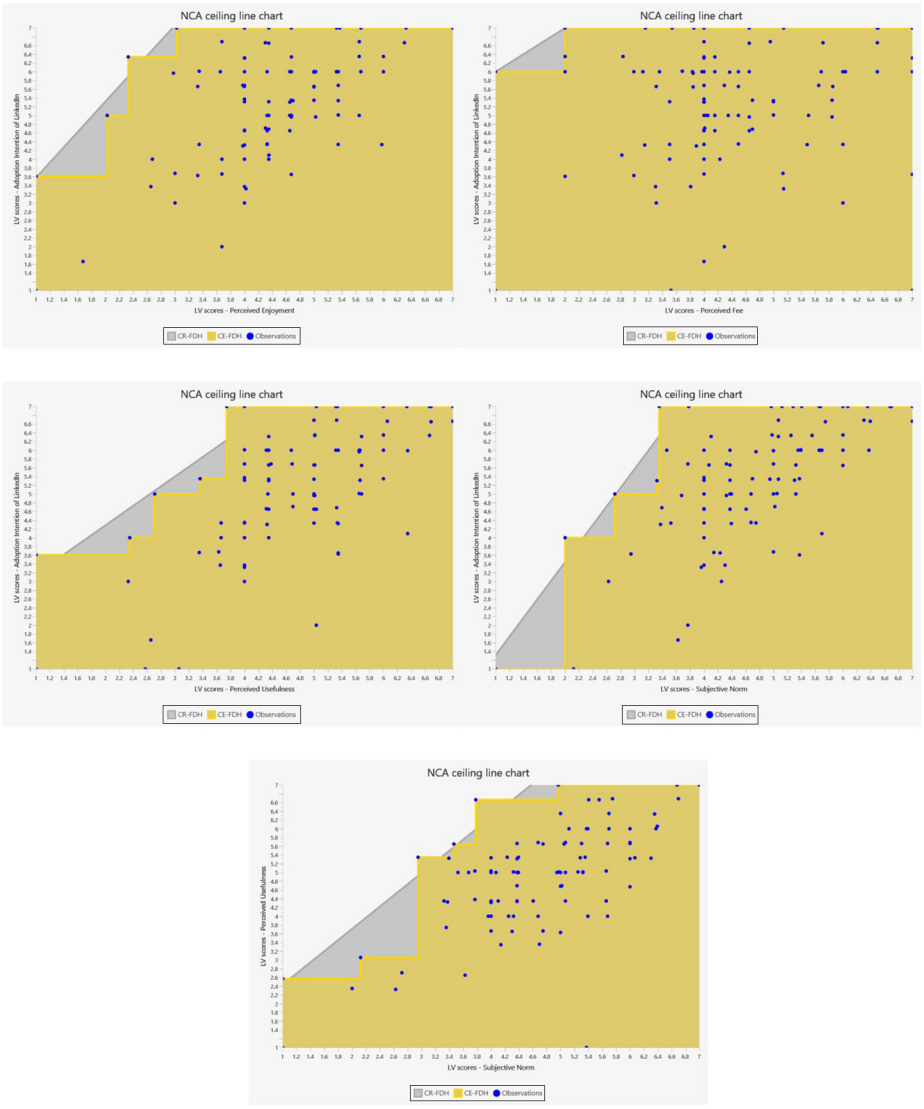
Table 6 NCA effect sizes

Construct	*Adoption intention of LinkedIn CE-FDH*	p-*value*	*Perceived usefulness CE-FDH*	p-*value*
Subjective norm	0.26	0.00	0.28	0.00
Perceived usefulness	0.21	0.00		
Perceived enjoyment	0.13	0.00		
Perceived fee	0.03	0.48		

Source(s): Created by the authors

Downloaded from http://ftp.nowpublishers.com/yc/article-pdf/26/7/172/10325544/yc-01-2025-2411en.pdf by guest on 26 May 2026

Figure 2 Scatter plots



Source: Created by the authors

practical insights into how perceived value in its multidimensional form drives student decisions to adopt professional networking platforms like LinkedIn. Consistent with the VAM framework, perceived usefulness emerged as a critical determinant of adoption where students are more likely to use LinkedIn when they believe it supports their career development and employability goals. Subjective norms exert a strong dual influence, significantly shaping intention and enhancing perceived usefulness. Both PLS-SEM and NCA underscore the necessity of social influence, suggesting that endorsements from peers or mentors significantly increase students' likelihood to adopt LinkedIn. This insight highlights the role of social validation in technology uptake, indicating that institutions and organizations can foster adoption through community-based advocacy and professional role models.

Although perceived enjoyment did not significantly affect adoption in PLS-SEM, NCA reveals it as a necessary condition, implying that a minimum level of engagement and emotional satisfaction is essential. This finding underscores the importance of interactive

Downloaded from http://ftp.nowpublishers.com/yc/article-pdf/26/7/172/10325544/yc-01-2025-2411en.pdf by guest on 26 May 2026

Table 7 Bottleneck table for adoption intention (score values)

NN	*Adoption intention of LinkedIn*	*Perceived enjoyment*	*Perceived fee*	*Perceived usefulness*	*Subjective norm*
0.00%	1.00	NN	NN	NN	NN
10.00%	1.60	NN	NN	NN	2.00
20.00%	2.20	NN	NN	NN	2.00
30.00%	2.80	NN	NN	NN	2.00
40.00%	3.40	NN	NN	NN	2.00
50.00%	4.00	2.02	NN	2.35	2.00
60.00%	4.60	2.02	NN	2.71	2.72
70.00%	5.20	2.33	NN	3.36	3.32
80.00%	5.80	2.33	NN	3.74	3.35
90.00%	6.40	3.02	2.00	3.74	3.35
100.00%	7.00	3.02	2.00	3.74	3.35

Source(s): Created by the authors

Table 8 Bottleneck table for perceived usefulness (score values)

NN	*Perceived usefulness*	*Subjective norm*
0.00%	1.00	NN
10.00%	1.60	NN
20.00%	2.20	NN
30.00%	2.80	2.12
40.00%	3.40	2.95
50.00%	4.00	2.95
60.00%	4.60	2.95
70.00%	5.20	2.95
80.00%	5.80	3.78
90.00%	6.40	3.78
100.00%	7.00	4.97

Source(s): Created by the authors

Table 9 Conclusion of PLS-SEM and NCA analyses

Exogenous construct	*PLS-SEM results*	*NCA results*	*Conclusion*
Subjective norm Perceived usefulness	Significant	Necessary condition	On average, an increase in the subjective norm or perceived usefulness will increase the intention to adopt LinkedIn. Similarly, on average, an increase in subjective norm will increase the perceived usefulness of LinkedIn. However, certain levels are necessary for these outcomes to occur
Perceived enjoyment	Not significant	Necessary condition	A certain level of perceived enjoyment is necessary for the adoption intention of LinkedIn to manifest. However, no further increase beyond this level is recommended as the outcome of the intention to adopt LinkedIn would not increase any further
Perceived fee	Not significant	No necessary condition	A certain level of favorable perceived fee is not necessary for the adoption intention of LinkedIn to manifest. Any change in the perceived fee will also not affect the outcome of the intention to adopt LinkedIn

Source(s): Created by the authors

features that enhance students' emotional connection with the platform. Perceived fees, by contrast, appear to be less influential, likely due to LinkedIn's free version access and minimal financial barriers. However, the perceived cost in terms of time or potential premium features may warrant further expansion. By applying VAM in the educational context, the study advances understanding of how students assess functional, emotional, and social value when deciding to engage with professional networking platforms, offering actionable guidance for educators and platform developers.

Downloaded from http://ftp.nowpublishers.com/yc/article-pdf/26/7/172/10325544/yc-01-2025-2411en.pdf by guest on 26 May 2026

5.2 Theoretical implications

Given the advantages afforded by LinkedIn to its users who are studying in higher education students, understanding the drivers of user adoption is critical. This study has contributed to the information systems literature in the field of technology adoption and the higher education literature in terms of the use of SNS to assist higher education students in marketing for their future careers. In the context of higher education students as users, our results show the significant role of subjective norm in increasing perceived usefulness. Further, both subjective norm and perceived usefulness were found to significantly affect adoption intention. Our findings also indicate that certain levels of subjective norm, perceived usefulness and perceived enjoyment are necessary for higher education users to begin adopting LinkedIn.

Our results show that perceived enjoyment and perceived fee are not significant factors that can increase the levels of LinkedIn adoption. This runs contrary to studies by Davis *et al.* (1992), Kim *et al.* (2007), Chaihanchanchai and Anantachart (2024) and Zobeidi *et al.* (2024). One possible reason is that higher education students view LinkedIn mainly as a utilitarian service rather than for emotional connection and enjoyment purposes. LinkedIn serves as a valuable, socially accepted social networking site for students to expand their professional and industry connections. Vock *et al.* (2013) recommend that SNS operators highlight their social and economic advantages to users, particularly the premium members. Hence, perceived fees is not a significant factor in increasing LinkedIn adoption rates in our study as the benefits of a premium LinkedIn membership may not be salient for our higher education students to conduct their professional networking search.

This study is one of the earliest to use both PLS-SEM and NCA analyses to study the factors that influence the intention to adopt LinkedIn. A traditional hypothesis test alone would have concluded that perceived enjoyment has no theoretical relationship with the adoption intention of LinkedIn. However, the use of NCA represents a useful empirical tool that brings to light the importance of a minimum level of perceived enjoyment as a necessary hedonic response that must be elicited from higher education students in order for the adoption consideration to occur. Thus, our NCA analysis raises the importance of perceived enjoyment as still being a key construct in the adoption intention of SNS such as LinkedIn.

This study contributes to the growing body of literature on professional social media by demonstrating the applicability of VAM in the context of LinkedIn adoption among university students. It extends VAM beyond its traditional applications in commercial and entertainment contexts, demonstrating its relevance in academic and professional development settings. The findings highlight the importance of social (subjective norm) and conditional value (perceived usefulness) in influencing adoption decisions while suggesting that emotional value (perceived enjoyment) may hold less weight in professional environments, underscoring the unique motivational factors in the higher education context. By exploring multidimensional value perceptions, this research contributes to a deeper understanding of how students evaluate educational technologies. It opens avenues for future studies to assess VAM's applicability across different academic disciplines and cultural contexts. Longitudinal research could further illuminate how value perceptions shift throughout students' academic and career journeys, enriching the model's utility in dynamic learning environments.

5.3 Managerial implications

Our PLS-SEM and NCA results offer a blueprint to increase the adoption of LinkedIn among higher education students. We describe the three key stages below, highlighting the significance of a multi-stakeholder approach in optimizing the marketing potential of LinkedIn (Jain *et al.*, 2024):

Downloaded from http://ftp.nowpublishers.com/yc/article-pdf/26/7/172/10325544/yc-01-2025-2411en.pdf by guest on 26 May 2026

- *Stage 1 – Design and development:* For LinkedIn developers seeking to increase their higher education student users, the features and design of LinkedIn must meet the minimum levels of perceived usefulness and perceived enjoyment from the students. This requires a co-creation of aspects of the platform features and involves product design testing and user feedback.
- *Stage 2 – Promotions and messaging*: While the system and design components affecting perceived usefulness and perceived enjoyment are relatively easier managed from the development front, marketers need to ensure that there is a minimum level of subject norm present among LinkedIn users. Higher education students need to be informed that the use of LinkedIn is indeed an expectation among people important to them. Such social narratives can come from promotional materials via LinkedIn websites and ads featuring visuals and testimonials communicating such social expectations.
- *Stage 3 – Education and advocacy:* While stages 1 and 2 can be mainly driven and continued by the developers, stage 3 requires the involvement of other stakeholders including higher education institutions and employers. Continued education with a focus on the benefits of LinkedIn as well as advocacy among teachers and companies will assist in raising adoption levels among higher education students further. This needs to be done in tandem with monitoring the sentiments of higher education students to ensure that their enjoyment levels do not fall below the necessary minimum levels which are required for the adoption consideration to occur.

From an institutional perspective, the study suggests that universities can encourage LinkedIn adoption by highlighting its relevance to employability outcomes and establishing its social legitimacy. Educators should design activities that emphasize networking and profile enhancement to improve students' digital employability skills while incorporating digital literacy initiatives to reduce perceived sacrifices and promote long-term adoption. The findings also suggest that students are less motivated by enjoyment and more by tangible academic or career benefits, guiding educators to focus on practical, career-oriented outcomes in their teaching strategies.

From an industrial perspective, the study offers valuable insights for LinkedIn and similar platforms aiming to grow their user base in higher education contexts. Students' adoption primarily based on perceived usefulness and social influence suggests that LinkedIn could collaborate with universities to offer educational versions of the platform. The research also supports the need for policy development around digital employability within educational frameworks. Policymakers should consider incorporating professional networking literacy into graduate attributes and national employability strategies to better prepare students for the digital job market. On a societal level, increasing LinkedIn adoption can help promote access to professional opportunities, especially for students from disadvantaged or marginalized backgrounds. Encouraging the use of professional social media can shift public attitudes toward career planning and the role of higher education in fostering digitally literate graduates, ultimately improving graduate outcomes, reducing youth unemployment, and promoting more inclusive workforce participation.

5.4 Limitations and future research

Despite the important contributions of our research to the literature, our study contains several limitations which represent areas for further research. First, due to accessibility and time constraints, our study could only gather a sample size of 120 higher education students. While this met the minimum PLS-SEM sample size as recommended by Hair *et al.* (2011), we applied bootstrapping to improve the reliability and validity of our confidence intervals and findings (Lim, 2024). Future studies with greater sample sizes across a variety of universities in different regions will be able to better generalize and validate the results of this empirical research. Future studies should particularly examine how students'

Downloaded from http://ftp.nowpublishers.com/yc/article-pdf/26/7/172/10325544/yc-01-2025-2411en.pdf by guest on 26 May 2026

demographic characteristics (e.g. age, field of study) influence adoption patterns. This study, grounded in the Singapore context, may have limited generalizability to other countries due to differences in professional cultures and higher education structures. Additionally, international connectivity and economic development levels could influence LinkedIn adoption differently across regions. With larger student pools, stratified sampling may also be deployed to minimize the bias inherent in our purposive sampling method used in this study (Lim, 2024). Second, tracking the perceptions between premium and free users could uncover different motivations behind SNS usage and utility and further validate the significance and necessary condition status of perceived fees. To this, additional hypotheses testing with moderator or mediator variables will provide richer model insights. Thirdly, it will be useful to test differences in the levels of significance and necessary conditions between different higher education profiles including students of different cultures. The study did not account for the influence of disciplinary backgrounds, career stages, or psychological factors on LinkedIn adoption. Differences in usage motivations among students at various academic or career stages, along with factors such as career-related anxiety and digital literacy, may significantly influence adoption behaviors and warrant further exploration in future research. In addition, as the VAM sacrifice construct of perceived fee was not found to be significant nor necessary for the adoption of LinkedIn, other relevant sacrifice-related constructs (e.g., time investment, privacy concerns) can be tested on higher education students. Finally, future mixed-methods research can give further qualitative reasons, insights, and recommendations based on the results of the PLS-SEM and NCA analyses. The cross-sectional design of this study limits the ability to capture how adoption drivers may shift over time. Longitudinal research could provide deeper insights into how students' LinkedIn usage patterns develop across different phases of their academic journey and into their early career stages.

References

Ajzen, I. (1985), "From intentions to actions: a theory of planned behavior", *Action Control*, Springer, Cham, pp. 11-39.

Alshurideh, M.T. and Kurdi, B.A. (2023), "Factors affecting social networks acceptance: an extension to the technology acceptance model using PLS-SEM and machine learning approach", *International Journal of Data and Network Science*, Vol. 7 No. 1, pp. 489-494, doi: 10.5267/j.ijdns.2022.8.010.

Benitez, J., Henseler, J., Castillo, A. and Schuberth, F. (2020), "How to perform and report an impactful analysis using partial least squares: guidelines for confirmatory and explanatory is research", *Information & Management*, Vol. 57 No. 2, p. 103168, doi: 10.1016/j.im.2019.05.003.

Bridgstock, R. (2019), "Employability and career development learning through social media: exploring the potential of LinkedIn", in Higgs, J., Horsfall, D., Cork, S. and Jones, A. (Eds), *Challenging Future Practice Possibilities*, Sense-Brill Publishers, pp. 143-152.

Carmack, H.J. and Heiss, S.N. (2018), "Using the theory of planned behavior to predict college students' intent to use LinkedIn for job searches and professional networking", *Communication Studies*, Vol. 69 No. 2, pp. 145-160, doi: 10.1080/10510974.2018.1424003.

Chaihanchanchai, P. and Anantachart, S. (2024), "An empirical evidence of factors underlying TikTok usage: a serial mediation analysis", *Journal of Marketing Communications*, pp. 1-25, doi: 10.1080/13527266.2024.2419024.

Chan, S-C. and Lu, M-T (2004), "Understanding internet banking adoption and use behavior: a Hong Kong perspective", *Journal of Global Information Management*, Vol. 12 No. 3, pp. 21-43, doi: 10.4018/jgim.2004070102.

Cingillioglu, I., Gal, U. and Prokhorov, A. (2024), "Social media marketing for student recruitment: an algorithmically sequenced literature review", *Journal of Marketing for Higher Education*, Vol. 34 No. 2, pp. 1101-1123, doi: 10.1080/08841241.2023.2177789.

Cohen, M., Buzinski, S.G., Armstrong-Carter, E., Clark, J., Buck, B. and Reuman, L. (2019), "Think, pair, freeze: the association between social anxiety and student discomfort in the active learning

Downloaded from http://ftp.nowpublishers.com/yc/article-pdf/26/7/172/10325544/yc-01-2025-2411en.pdf by guest on 26 May 2026

environment", *Scholarship of Teaching and Learning in Psychology*, Vol. 5 No. 4, pp. 265-277, doi: 10.1037/stl0000147.

Davis, F.D., Bagozzi, R.P. and Warshaw, P.R. (1989), "User acceptance of computer technology: a comparison of two theoretical models", *Management Science*, Vol. 35 No. 8, pp. 982-1003, doi: 10.1287/mnsc.35.8.982.

Davis, F.D., Bagozzi, R.P. and Warshaw, P.R. (1992), "Extrinsic and intrinsic motivation to use computers in the workplace", *Journal of Applied Social Psychology*, Vol. 22 No. 14, pp. 1111-1132.

Dul, J. (2016), "Necessary condition analysis (NCA): logic and methodology of 'necessary but not sufficient' causality", *Organizational Research Methods*, Vol. 19 No. 1, pp. 10-52, doi: 10.1177/1094428115584005.

Dul, J., Hauff, S. and Bouncken, R.B. (2023), "Necessary condition analysis (NCA): review of research topics and guidelines for good practice", *Review of Managerial Science*, Vol. 17 No. 2, pp. 683-714, doi: 10.1007/s11846-023-00628-x.

Erdmann, A., Mas, J.M. and Arilla, R. (2023), "Value-based adoption of augmented reality: a study on the influence on online purchase intention in retail", *Journal of Consumer Behaviour*, Vol. 22 No. 4, pp. 912-932, doi: 10.1002/cb.1993.

Florenthal, B. (2015), "Applying uses and gratifications theory to students' LinkedIn usage", *Young Consumers*, Vol. 16 No. 1, pp. 17-35, doi: 10.1108/YC-12-2013-00416.

Gerard, J.G. (2012), "Linking in with LinkedIn: three exercises that enhance professional social networking and career building", *Journal of Management Education*, Vol. 36 No. 6, pp. 866-897, doi: 10.1177/1052562911413464.

Goel, D. (2019), "Linkedin premium: student subscription LinkedIn", 8 April, available at: www.linkedin.com/pulse/linkedin-premium-student-subscription-daivik-goel/

Habets, O., Van der Heijden, B., Ramzy, O., Stoffers, J. and Peters, P. (2021), "Employable through social media: an intervention study", *Sustainability*, Vol. 13 No. 9, p. 5093, doi: 10.3390/su13095093.

Hair, J.F., Ringle, C.M. and Sarstedt, M. (2011), "PLS-SEM: indeed a silver bullet", *Journal of Marketing Theory and Practice*, Vol. 19 No. 2, pp. 139-152, doi: 10.2753/MTP1069-6679190202.

Hair, J.F., Risher, J.J., Sarstedt, M. and Ringle, C.M. (2019), "When to use and how to report the results of PLS-SEM", *European Business Review*, Vol. 31 No. 1, pp. 2-24, doi: 10.1108/EBR-11-2018-0203.

Hazzam, J., Wilkins, S., Singh, B. and Ibrahim, B. (2024), "The drivers and outcomes of postgraduate students' adoption and use of LinkedIn learning", *Innovations in Education and Teaching International*, pp. 1-16, doi: 10.1080/14703297.2024.2346549.

Healy, M., Cochrane, S., Grant, P. and Basson, M. (2023), "LinkedIn as a pedagogical tool for careers and employability learning: a scoping review of the literature", *Education + Training*, Vol. 65 No. 1, pp. 106-125, doi: 10.1108/ET-01-2022-0004.

Heidemann, J., Klier, M. and Probst, F. (2012), "Online social networks: a survey of a global phenomenon", *Computer Networks*, Vol. 56 No. 18, pp. 3866-3878, doi: 10.1016/j.comnet.2012.08.009.

Hsu, C.-L. and Lin, J.C.-C. (2018), "Exploring factors affecting the adoption of internet of things services", *Journal of Computer Information Systems*, Vol. 58 No. 1, pp. 49-57, doi: 10.1080/08874417.2016.1186524.

Izuagbe, R., Ifijeh, G., Izuagbe-Roland, E.I., Olawoyin, O.R. and Ogiamien, L.O. (2019), "Determinants of perceived usefulness of social media in university libraries: subjective norm, image and voluntariness as indicators", *The Journal of Academic Librarianship*, Vol. 45 No. 4, pp. 394-405, doi: 10.1016/j.acalib.2019.03.006.

Jain, V., Mogaji, E., Sharma, H. and Babbili, A.S. (2024), "A multi-stakeholder perspective of relationship marketing in higher education institutions", *Journal of Marketing for Higher Education*, Vol. 34 No. 2, pp. 502-520, doi: 10.1080/08841241.2022.2034201.

Jang, Y.-T., Chang, S.E. and Chen, P.-A. (2015), "Exploring social networking sites for facilitating multi-channel retailing", *Multimedia Tools and Applications*, Vol. 74 No. 1, pp. 159-178, doi: 10.1007/s11042-013-1430-z.

Kamboj, S. and Sharma, M. (2023), "Social media adoption behaviour: consumer innovativeness and participation intention", *International Journal of Consumer Studies*, Vol. 47 No. 2, pp. 523-544, doi: 10.1111/ijcs.12848.

Kim, H.-W., Chan, H.C. and Gupta, S. (2007), "Value-based adoption of mobile internet: an empirical investigation", *Decision Support Systems*, Vol. 43 No. 1, pp. 111-126, doi: 10.1016/j.dss.2005.05.009.

Downloaded from http://ftp.nowpublishers.com/yc/article-pdf/26/7/172/10325544/yc-01-2025-2411en.pdf by guest on 26 May 2026

Knight, M. (2019), "Teaching responsible social media practices in business and professional communication: the importance of LinkedIn", *Business and Professional Communication Quarterly*, Vol. 82 No. 4, pp. 399-400, doi: 10.1177/2329490619884740.

Kock, N. (2015), "Common method bias in PLS-SEM: a full collinearity assessment approach", *International Journal of e-Collaboration*, Vol. 11 No. 4, pp. 1-10.

Lim, W.M. (2024), "What is quantitative research? An overview and guidelines", *Australasian Marketing Journal*, p. 14413582241264622, doi: 10.1177/14413582241264622.

Lin, T.-C., Lee, C.-K. and Lin, J.C.-C. (2010), "Determinants of enterprise 2.0 adoption: a value-based adoption model approach".

López-Carril, S., Anagnostopoulos, C. and Parganas, P. (2020), "Social media in sport management education: introducing LinkedIn", *Journal of Hospitality, Leisure, Sport & Tourism Education*, Vol. 27, pp. 100262-100262, doi: 10.1016/j.jhlste.2020.100262.

López-Carril, S., Alguacil, M. and Anagnostopoulos, C. (2022), "LinkedIn in sport management education: developing the students' professional profile boosting the teaching-learning process", *The International Journal of Management Education*, Vol. 20 No. 1, p. 100611, doi: 10.1016/j.ijme.2022.100611.

López-Carril, S., Glebova, E., Bae, D. and González-Serrano, M.H. (2025), "Social media as a teaching-learning tool to enhance students' professional profile: the case of LinkedIn", *European Journal of Education*, Vol. 60 No. 1, p. 12862, doi: 10.1111/ejed.12862.

López-Carril, S., González-Serrano, M.H., Calabuig-Moreno, F., Añó, V. and Anagnostopoulos, C. (2021), "Development and preliminary validation of social media as an educational and professional tool student perceptions scale (SMEPT-SPS)", *Sustainability*, Vol. 13 No. 4, p. 1814, doi: 10.3390/su13041814.

Meltwater (2024), "Social media statistics in Singapore", 6 April, available at: www.meltwater.com/en/global-digital-trends

Nahedh Alsehani, F., Abdul Wahab, A.W.B. and Shuib, L. (2024), "Factors influencing social media adoption in government organizations: a TOE framework and PLS-SEM model analysis", *IEEE Access*, Vol. 12, pp. 158150-158173, doi: 10.1109/ACCESS.2024.3478337.

Oppenheimer, D.M., Meyvis, T. and Davidenko, N. (2009), "Instructional manipulation checks: detecting satisficing to increase statistical power", *Journal of Experimental Social Psychology*, Vol. 45 No. 4, pp. 867-872, doi: 10.1016/j.jesp.2009.03.009.

Pena, L., Curado, C. and Oliveira, M. (2022), "The contribution of LinkedIn use to career outcome expectations", *Journal of Business Research*, Vol. 144, pp. 788-796, doi: 10.1016/j.jbusres.2021.09.047.

Richter, N.F., Schubring, S., Hauff, S., Ringle, C.M. and Sarstedt, M. (2020), "When predictors of outcomes are necessary: guidelines for the combined use of PLS-SEM and NCA", *Industrial Management & Data Systems*, Vol. 120 No. 12, pp. 2243-2267, doi: 10.1108/IMDS-11-2019-0638.

Ruparel, N., Dhir, A., Tandon, A., Kaur, P. and Islam, J.U. (2020), "The influence of online professional social media in human resource management: a systematic literature review", *Technology in Society*, Vol. 63, p. 101335, doi: 10.1016/j.techsoc.2020.101335.

Schepers, J. and Wetzels, M. (2007), "A meta-analysis of the technology acceptance model: investigating subjective norm and moderation effects", *Information & Management*, Vol. 44 No. 1, pp. 90-103, doi: 10.1016/j.im.2006.10.007.

Slone, A.R. and Gaffney, A.L.H. (2016), "Assessing students' use of LinkedIn in a business and professional communication course", *Communication Teacher*, Vol. 30 No. 4, pp. 206-214, doi: 10.1080/17404622.2016.1219043.

Uncles, M.D. (2018), "Directions in higher education: a marketing perspective", *Australasian Marketing Journal*, Vol. 26 No. 2, pp. 187-193, doi: 10.1016/j.ausmj.2018.05.009.

Venkatesh, V., Morris, M.G., Davis, G.B. and Davis, F.D. (2003), "User acceptance of information technology: toward a unified view", *MIS Quarterly*, Vol. 27 No. 3, pp. 425-478.

Vock, M., Dolen, W.V. and Ruyter, K. D (2013), "Understanding willingness to pay for social network sites", *Journal of Service Research*, Vol. 16 No. 3, pp. 311-325, doi: 10.1177/1094670512472729.

Wang, Y.-S., Yeh, C.-H. and Liao, Y.-W. (2013), "What drives purchase intention in the context of online content services? The moderating role of ethical self-efficacy for online piracy", *International Journal of Information Management*, Vol. 33 No. 1, pp. 199-208, doi: 10.1016/j.ijinfomgt.2012.09.004.

Downloaded from http://ftp.nowpublishers.com/yc/article-pdf/26/7/172/10325544/yc-01-2025-2411en.pdf by guest on 26 May 2026

WeAreSocial (2024), "Digital 2024 global overview report", 7 January, available at: https://wearesocial.com/sg/blog/2024/01/digital-2024/

Zeithaml, V.A. (1988), "Consumer perceptions of price, quality, and value: a means-end model and synthesis of evidence", *Journal of Marketing*, Vol. 52 No. 3, pp. 2-22, doi: 10.1177/002224298805200302.

Zhang, C., Chen, J. and Fu, X. (2023), "A multilevel analysis of adoption intention of travel information on social media: evidence from China", *Travel Behaviour and Society*, Vol. 32, p. 100582, doi: 10.1016/j.tbs.2023.100582.

Zhu, D.H., Chang, Y.P., Luo, J.J. and Li, X. (2014), "Understanding the adoption of location-based recommendation agents among active users of social networking sites", *Information Processing & Management*, Vol. 50 No. 5, pp. 675-682, doi: 10.1016/j.ipm.2014.04.010.

Zobeidi, T., Komendantova, N., Yazdanpanah, M. and Lamm, A. (2024), "A multi-dimensional model of anticipating intention to use social media for disaster risk reduction", *International Journal of Disaster Risk Reduction*, Vol. 104, p. 104356, doi: 10.1016/j.ijdrr.2024.104356.

Corresponding author

Nurhafihz Noor can be contacted at: nurhafihz.noor@jcu.edu.au

For instructions on how to order reprints of this article, please visit our website:
www.emeraldgrouppublishing.com/licensing/reprints.htm
Or contact us for further details: permissions@emeraldinsight.com

Downloaded from http://ftp.nowpublishers.com/yc/article-pdf/26/7/172/10325544/yc-01-2025-2411en.pdf by guest on 26 May 2026