

The Information Distribution Role of Facebook in Universities

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Abstract

Purpose: The paper employs the theory of planned behaviour, social identity theory, social presence theory, and social exchange theory to propose a model for using the social media platform Facebook in distributing information in universities. **Research design, data and methodology:** Data were obtained from 618 students at Hanoi University of Industry (HaUI) in Vietnam. The study used structural equation modeling in SPSS and the statistical analysis software AMOS version 24 to explore the information distribution role of Facebook. **Results:** Findings reveal that subjective norms and social presence play a key role in driving students to use Facebook for studying. In addition, university administrators can boost student satisfaction and academic achievement through Facebook. Interestingly, students who strongly identify with the brand name of the university have a strong connection with the university are more likely to engage in behaviors supportive toward the university. **Conclusions:** These findings show that Facebook had played a key information distribution role in universities. Thus, the study provides the executive board of the university and teachers can gain new understanding of why students employ Facebook for studying as well as capitalize on the platform to improve several operational metrics such as brand identification, student satisfaction, and academic achievement.

Keywords: Marketing Communication, Information Distribution, Brand Identification, Student Satisfaction, Academic Achievement.

JEL Classification Code: C12, D39, D83, L82, M31.

1. Introduction²

The recent growth of social networking sites in students' daily lives has been explored by various works on the effect of social networking sites use in the university context (Aydin, 2012; Garcia, Elbeltagi, Dungay, & Hardaker, 2015;

Pinar, Girard, & Basfirinci, 2020; Rauschnabel, Krey, Babin, & Ivens, 2016). Scholars have continued to consider the prominent role of social actors in driving students to use Facebook for studying (Cheung, Chiu, & Lee, 2011; Goh, Rasli, Tan, & Choi, 2018). Although Facebook is one of the popular tools used by many universities to distribute

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information. However, the potential of Facebook's role in university has been the topic of much discussion among shareholders, management, and communities. It is unclear whether students have altered their method of using Facebook for studying purposes and what relationships exist between social networking sites use and brand identification, student satisfaction, and academic achievement. Therefore, Facebook use in the university context has become a highly debated issue because of its practical implications, and research opportunities as well as the challenges it poses in different disciplines.

Previous literature on the use of Facebook has relied on standard measures of different aspects. Therefore, it is not appropriate for an investigation of a particular feature in a specific environment such as the higher education context. Besides, social influence was used to examine why a person uses social networking (Cheung & Lee, 2010). Overall, research on the effect of social actors on Facebook uses in higher education for studying purpose remains limited and offered wildly differing views. Ainin, Naqshbandi, Moghavvemi, Jaafar, and Ismawati (2015) demonstrated that Facebook use has a positive effect on academic achievement while other scholars identified negative influences (Michikyan, Subrahmanyam, & Dennis, 2015; Paul, Baker, & Cochran, 2012). For example, in China, Facebook use is limited, therefore Chinese students do not utilize Facebook in the university context. However, given Facebook's potential uses all over the world, scholars studying social networking sites identify Facebook's application as a studying tool (Michikyan et al., 2015; Sánchez, Cortijo, & Javed, 2014). At HaUI, Facebook is often used for distributing information. The university was founded in 1898 and is currently one of the leading application-oriented, multi-disciplined universities in Vietnam. The University's students routinely use Facebook for communication related to academic issues. In addition, the teaching staff and administrators regularly employ this platform for the university's various activities, including making announcements, marketing, conducting surveys, or creating discussion boards. Features that support the academic activities of Facebook may greatly vary among universities, particularly in Vietnam. While brand identification, student satisfaction, and students' emotional connection to the institution are closely correlated (Hanson, Bryant, & Lyman, 2020; Pinar et al., 2020; Saleh, Hamka, Maidin, & Manda, 2022). Hence, administrators in higher education can encourage students to post content on social media about their class-related events as a way to position their university's brand identity (Eldegwy, Elsharnouby, & Kortam, 2018). Although previous works paid attention to issues relevant to social networking sites in educational communication, there has been little research employing an integrative and comprehensive approach to examine

antecedents and consequences of Facebook use in educational communication. The aim of this paper is therefore threefold. First, based on a systematic literature review, the study provides a comprehensive view of the body of knowledge related to the use of social networking sites in an academic context so far produced. Second, by employing the theory of planned behaviour, social presence theory, social identity theory, and social exchange theory, the research proposes and explores a model that relates antecedents and consequences of Facebook use in educational communication. Third, it provides fresh insights into the use of social media in the academic context about Facebook's pedagogical role. Importantly, these results can expectedly help universities enhance students' satisfaction and academic achievement as well as the standing and reputation of the university.

This study is structured in six parts. Section 2 presents the theoretical background and hypothesis development. Section 3 shows the research methodology. Section 4 focuses on the results. Finally, the discussion and conclusion are provided in Section 5 and Section 6 respectively.

2. Theoretical Background and Hypothesis Development

2.1. Theory of Planned Behaviour and Social Identity Theory

This research uses the theory of planned behaviour (Ajzen, 1991) to develop a deeper understanding of the link between subjective norms and Facebook use in educational communication at HaUI in Vietnam. According to this theory, subjective norm refers to individuals' perceptions of social pressure from important referents to perform or not to perform the behaviour. This theory has been employed extensively in the prediction of behaviours research (Baker & White, 2010; Venkatesh & Davis, 2000), including the related communication technology behaviours (Lu, Zhou, & Wang, 2009; Pelling & White, 2009). However, little is known about the application of the theory of planned behaviour in students' social networking sites use. Thus, it is necessary to consider the effects of subjective norms on Facebook use in an academic context.

In addition, according to social identity theory, individuals define and evaluate themselves in terms of self-integrated or group societies, and they formulate explicit or implicit rules about the particular context in which they relate appropriate attitudes and behaviors of group members, as introduced by group standards (White, Hogg, & Terry, 2002). Thus, group norms are then considered to influence behavioral outcomes.

2.2. Social Presence Theory

This theory suggests that an individual can perceive affection among people on a social networking site. According to Xu, Ryan, Prybutok, and Wen (2012), social presence positively influences intent to use social networking sites. However, Oliveira, Huertas, and Lin (2016) indicated that in a community without a collective culture, Facebook interaction cannot be influenced by the presence on the social network. In particular, students with a high level of social media presence are believed to have a higher propensity for using Facebook.

2.3. Social Exchange Theory

Underpinned by social exchange theory, the research examines the link between Facebook use in educational communication and its effects on parameters such as brand identification, student satisfaction, and academic achievement. This theory proposes interdependence between exchangers. When students determine that the university can meet their academic needs, they will react and support the school by promoting the university or demonstrating other supportive behaviors (Bhattacharya & Sen, 2003).

2.4. Antecedents of Facebook Use in Educational Communication

Figure 1 presents the research model proposed and tested in this study. Subjective norms and social presence are two antecedents of using Facebook in education communication. Besides, according to (Cheung & Lee, 2010; Oliveira et al., 2016), the above two factors also determine the use of Facebook as a key information distribution role in universities. While social presence provides understanding of how the attractiveness of a social networking site directly affects social networking behavior, subjective norms interpret a significant social actor to encourage students to utilize Facebook. Therefore, the use of Facebook in university can enhance student satisfaction and academic achievement because this communication work involves a well-planned and systematic process of creating a unique and favorable identity for higher education.

In this study, it is behaviour of using Facebook for educational communication. Some authors demonstrated that subjective norms have a negligible effect on academic achievement (Baker & White, 2010), but in the latest paper by Oliveira et al. (2016), it is suggested that a positive association exists. Therefore, H₁ is proposed as follows:

H1: Subjective norms has a positive effect on Facebook use in educational communication.

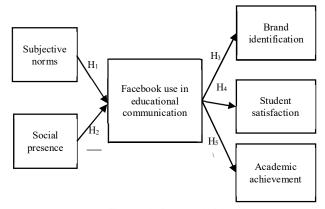


Figure 1: Research Model

Research by Lee, Kozar, & Larsen (2009) has shown the media plays a significant role in supporting social presence. The relationship between social media presence and intention to use social networking sites was intensively studied and mixed results were reported. Some scholars indicated that social media presence has a positive influence on the intention to use social networking sites (Cheung et al., 2011). However, in contrast to those studies, according to de Oliveira et al. (2016) social media presence does not affect Facebook interaction in a community. In this research, we believe that social presence represents the level of sociability, sensitivity, and warmness among students who utilize Facebook for studying. The above discussion supports the formulation of the following hypothesis:

H2: Social presence has a positive effect on Facebook use in educational communication

2.5. Consequences of Facebook Use in Educational Communication

This study examines the outcomes of Facebook use in educational communication on brand identification, student achievement. satisfaction. academic identification refers to the psychological process in which an individual integrates the organization into his or her own identity (Budi, Hidavat, & Mani, 2021; Choi & Rahman, 2018; Kang, Kim, & Yang, 2019; Wilkins & Huisman, 2013). In the context of higher education, brand identification is synonymous with a student's perceived sense of belongingness or oneness with the higher education following their direct interaction (Balaji, Roy, & Sadeque, 2016). Thus, the usage of Facebook for distributing information in higher education plays a crucial role in bolstering students' university supportive behaviors. It is also a way to position the university's brand identity (Eldegwy et al., 2018). The above discussion supports the formulation of the following hypothesis:

H3: Facebook use in educational communication has a positive effect on brand identification.

According to the social exchange theory, there is a reciprocal interdependence between the exchange parties. The university that meets their needs for educational communication through Facebook they might reciprocate by promoting the university to others (Garcia et al., 2015). Thus, we believe that Facebook use in university can lead to satisfied students. In this regard, the study posits the following hypothesis:

H4: Facebook use in educational communication has a positive effect on student satisfaction.

Academic achievement refers to students having sufficient academic skills and abilities to conduct their course assignments (Ainin et al., 2015). Whether Facebook use affects academic achievement has been a matter of heated debate in the social networking site literature (Junco, 2012). It is difficult for scholars to agree on Facebook's impacts on student achievement. Kirschner and Karpinski (2010) identified the reason for this effect as the limited ability of students to engage in both learning and nonlearning activities at the same time. Similarly, Junco (2012) also found that students' learning time was significantly reduced when using Facebook; the more time using Facebook, the worse their academic performance (Michikyan et al., 2015). Although Facebook use reduces academic performance in some studies, it would not be reasonable to claim that academic achievement is negatively impacted by Facebook use altogether (Kirschner & Karpinski, 2010). In our opinion, students use Facebook for both academic and non-academic activities. Thus, we should only be concerned with the measure of learning intent. For example, class-related information is usually posted on Facebook; consequently, learners can access them fastest through their peers (Ainin et al., 2015). More importantly, we would expect individuals to fully capitalize on the advantages of Facebook to apply it to education communication in the learning process. Hence, the following is hypothesized:

H5: Facebook use in educational communication has a positive effect on academic achievement.

3. Research Methodology

3.1. Research Measures

To measure the effects of Facebook use in educational communication (FE), we used four items synthesized by Ainin et al. (2015), Paul et al. (2012), and Cheung et al.

(2011). To measure subjective norms (SN), we utilized two items from previous studies by Cheung et al. (2011). These items show the influence of the social actors related to the intention of using social networking sites. To measure social presence (SP), we applied the measurement of Cheung et al. (2011). To measure brand identification (BI), we employed six items synthesized by Mael and Ashforth (1992) and Kim, Han, and Park (2001). These items indicate the role of brand identification in forming students' behavior toward the university. The level of student satisfaction (SS) was measured by three items as posited by Kuenzel and Halliday (2008). To measure academic achievement (AA), we used four items proposed by Ainin et al. (2015). We adopted a five-point Likert-scale measurement, from 1 (strongly disagree) to 5 (strongly agree), to measure all constructs (Liao, Hu, & Ding, 2017; Simatupang & Sridharan, 2002). All measurement scales are shown in Appendix A.

3.2. Data Collection

The participants in the research were students at eleven faculties of HaUI. The respondent guide contained questions probing students' experiences with using Facebook in higher education communication and another context regarding antecedents and consequences of Facebook use in education such as subjective norms, social presence, brand identification, student satisfaction, and academic achievement. The English questions version was translated into Vietnamese by three experts who were proficient in both languages and the research area. Prior to the questionnaire mailing, five experts and scholars were asked to review the questionnaire in the first pretest and modify it as necessary. Subsequently, researchers randomly distributed twenty questionnaires to check and perfect them. Therefore, the questionnaire of this study has a high level of content validity which is necessary for the data collection process. Then, the data collection procedure included an online survey (via Facebook, Zalo, and Email). Through invitation by email and social media, the surveyed students access a link that leads to a web page displaying the questionnaire. First, a multiplechoice question was presented. Students were asked "Have you ever used Facebook to connect with your classmates about learning work?", using binary answers (Yes/No). If a respondent chooses the answer "No", they should stop the survey, if the respondent chooses the answer "Yes", he or she should proceed with the survey process. After a 2-week survey, the research team collected 865 responses and conducted a screening process to identify missing data and potential outliers. Five responses that contained missing data were eliminated, and a further 242 responses suffering from multivariate outliers were removed. Hence, the final sample size was 618.

3.3. Data Analysis

The research applied the CFA and SEM. AMOS was utilized for measurement validation and to check the structural model based on the data collected from the 618 students in HaUI. Data analysis was employed using SPSS and AMOS version 24.

4. Results

4.1. Measurement Model

We first checked the reliability for all constructs in this study by examining Cronbach's alpha, which ranged from 0.840 to 0.942. All values surpassed 0.7, the standard of Nunnally and Bernstein (1994). We then implemented EFA to examine the measured variables of the study model. The EFA result has the KMO of 0.947 and sig of 0.000. Furthermore, each variable features the factor loading coefficient larger than 0.5, there are no items to remove because these items have low factor loadings. As a result, 24 items are grouped into six groups as the initial constructs.

Table 1: Convergent Validity and Reliability

Facebook use in educational communication 0.897 0.718 0.910 FE1 0.905"	Latent variable	λ	α	AVE	CR
Reducational communication Reducational communication Red Red	Facebook use in		0.807	0.718	0.010
FE2 0.890"*	educational communication		0.091	0.7 10	0.910
FE2 0.890"*	FE1	0.905***			
FE4 0.777"** 0.930 0.727 0.930 SP1 0.866"** 0.930 0.727 0.930 SP1 0.866"** 0.831"** 0.845 0.845 0.845 0.845 0.845 0.842 0.842 0.842 0.842 0.842 0.842 0.842 0.842 0.842 0.842 0.842 0.842 0.842 0.842 0.842 0.842 0.842 0.843 0.942 0.847 0.943 0.942 0.847 0.943 0.942 0.847 0.943 0.942 0.847 0.943 0.944 0.943 0.944 0.943 0.944 0.944 0.944 0.944 0.944 0.944 0.944 0.944 0.944 0.944 0.944 0.944 0	FE2	0.890***			
Social presence 0.930 0.727 0.930 SP1 0.866*** 0.831*** 0.831*** 0.831*** 0.838*** 0.838*** 0.845*** 0.845*** 0.845*** 0.842** 0.842** 0.842** 0.842** 0.842** 0.842** 0.842** 0.842** 0.842** 0.842** 0.842** 0.842** 0.842** 0.842** 0.842** 0.942** 0.847** 0.943** 0.943** 0.943** 0.943** 0.943** 0.943** 0.943** 0.943** 0.944** 0.943** 0.944** 0.944** 0.944** 0.944** 0.944** 0.943** 0.944** 0.943** 0.943** 0.943** 0.943** 0.943** 0.943** 0.943** 0.943** 0.943** 0.943** 0.943** 0.943** 0.943** 0.943** 0.944** 0.944** 0.944** 0.944** 0.944** 0.944** 0.915** 0.915** 0.915** 0.915** 0.915** 0.915** 0.915** 0.924** 0.915** 0.924** 0.924** 0.946***	FE3				
SP1 0.866"* SP2 0.831"* SP3 0.880"* SP4 0.838"* SP5 0.845"* Subjective norms 0.840 0.727 0.842 SN1 0.853"* SN2 0.852"* Student satisfaction 0.921"* SS2 0.940"* SS3 0.900"* Academic achievement 0.912 0.730 0.915 AA1 0.908"* AA2 0.864"* AA3 0.865"* AA4 0.776"* Brand identification 0.931 0.585 0.929 BI1 0.847"* BI3 0.880"* BI4 0.879"*	FE4	0.777***			
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SP3 0.880"" SP4 0.838"" SP5 0.845"" Subjective norms 0.840 0.727 0.842 SN1 0.853"" SN2 0.852"" 0.942 0.847 0.943 SS1 0.921"" 0.943	SP1				
SP4 0.838*** 0.845*** SP5 0.845*** 0.840 0.727 0.842 SN1 0.853*** 0.852*** 0.842 0.842 0.847 0.943 SN2 0.852*** 0.942 0.847 0.943 0.943 0.921*** 0.942 0.847 0.943 0.915 <t< td=""><td>SP2</td><td>0.831***</td><td></td><td></td><td></td></t<>	SP2	0.831***			
SP5 0.845*** 0.840 0.727 0.842 SN1 0.853*** 0.852*** 0.842 0.842 SN2 0.852*** 0.942 0.847 0.943 SS1 0.921*** 0.942 0.847 0.943 SS2 0.940*** 0.900*** 0.912 0.730 0.915 AA1 0.908*** 0.902** 0.902** 0.915 0.915 AA2 0.864*** 0.865*** 0.931 0.585 0.929 B11 0.847*** 0.931 0.585 0.929 B12 0.807*** 0.880*** 0.980*** 0.980*** B13 0.880*** 0.931 0.585 0.929 B14 0.879*** 0.970*** 0.970*** 0.970***	SP3	0.880***			
Subjective norms 0.840 0.727 0.842 SN1 0.853***	SP4	0.838***			
SN1 0.853***	SP5	0.845***			
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SS1 0.921"" SS2 0.940"" SS3 0.900"" Academic achievement 0.912 0.730 0.915 AA1 0.908"" 0.912 0.730 0.915 AA2 0.864"" 0.865" 0.865" 0.865" 0.929 Brand identification 0.931 0.585 0.929 BI1 0.847"" 0.807"" 0.8867" 0.8867" BI3 0.880"" 0.880" 0.8867" 0.8867" 0.8867" BI4 0.879"" 0.770"" 0.770"" 0.770""	SN2	0.852***			
SS2 0.940*** 0.900*** SS3 0.900*** 0.912 Academic achievement 0.912 0.730 0.915 AA1 0.908*** 0.912 0.730 0.915 AA2 0.864*** 0.864** 0.776*** 0.776*** 0.931 0.585 0.929 Brand identification 0.847*** 0.931 0.585 0.929 BI1 0.847*** 0.807*** 0.886** 0.886** 0.886** BI3 0.880*** 0.886** 0.886** 0.886** 0.886** BI4 0.879*** 0.770*** 0.886** 0.886** 0.886**	Student satisfaction		0.942	0.847	0.943
SS2 0.940*** 0.900*** SS3 0.900*** 0.912 Academic achievement 0.912 0.730 0.915 AA1 0.908*** 0.912 0.730 0.915 AA2 0.864*** 0.864** 0.776*** 0.776*** 0.931 0.585 0.929 Brand identification 0.847*** 0.931 0.585 0.929 BI1 0.847*** 0.807*** 0.886** 0.886** 0.886** BI3 0.880*** 0.886** 0.886** 0.886** 0.886** BI4 0.879*** 0.770*** 0.886** 0.886** 0.886**	SS1	0.921***			
Academic achievement 0.912 0.730 0.915 AA1 0.908"**	SS2				
AA1 0.908**	SS3	0.900***			
AA2 0.864***	Academic achievement		0.912	0.730	0.915
AA2 0.864***	AA1	0.908***			
AA4 0.776*** 0.931 0.585 0.929 BI1 0.847*** 0.807*** 0.807*** BI3 0.880*** 0.807*** 0.807*** BI4 0.879*** 0.770*** 0.800***	AA2	0.864***			
AA4 0.776*** 0.931 0.585 0.929 BI1 0.847*** 0.807*** 0.807*** BI3 0.880*** 0.807*** 0.807*** BI4 0.879*** 0.770*** 0.800***	AA3	0.865***			
BI1 0.847**	AA4	0.776***			
B12 0.807***	Brand identification		0.931	0.585	0.929
B12 0.807***	BI1	0.847***			
BI3 0.880*** BI4 0.879*** BI5 0.770***	BI2	0.807***			
BI4 0.879*** BI5 0.770***	BI3	0.880***			
BI5 0.770***	BI4				
	BI5				
	BI6	0.786***			

Note: λ: Item loading; α: Cronbach's alpha; AVE: Average variance extracted; CR: composite reliability; *** p < 0.001

Finally, we conducted CFA to check the convergent and discriminant validity of the overall measurement model. As shown in Table 1, all factor loadings (λ) exceed 0.6 at p<0.001, the reliability of the construct (CR) is more than 0.7, and the average variance extracted (AVE) exceeds 0.5. These results indicate that all the measures showed adequate convergent validity and met Hair et al.'s (2006) standard of convergent validity (Hair, Black, Babin, Anderson, & Tatham, 2006).

Table 2: Means, Standard Deviations, and Correlations

	FE	SP	SN	SS	AA	BI
FE	0.847					
SP	0.579	0.853				
SN	0.335	0.594	0.853			
SS	0.462	0.433	0.259	0.921		
AA	0.599	0.575	0.374	0.616	0.855	
BI	0.598	0.574	0.376	0.721	0.738	0.765
М	4.105	3.519	3.722	4.221	3.812	3.968
S.D	0.756	0.925	0.889	0.766	0.780	0.799

Note: M: Mean; S.D: Standard deviation. The diagonal values mentioned in bold and italics represent the square root of AVE.

We used AVE to test the discriminant validity. Table 2 shows that the square root of AVE for each construct (diagonal elements in italics) was higher than the correlations among constructs in the model. This result implies that the constructs and their measures are adequate. Thus, the discriminant validity of the research is satisfactory (Bagozzi, Fornell, & Larcker, 1981).

In addition, a variety of fit indices can be used as a guideline for prospective structural equation modelers to confirm the model. In this study, these overall fitness coefficients meet the requirements of a good fitness overall (as shown in Table 3).

Table 3: Overall Fit Index of the CFA Model

Fit index	Scores	Recommended threshold value
Absolute fit measures		
CMIN/df	1.979	≤2 ^a ; ≤5 ^b
GFI	0.943	≥0.90a; ≥0.80b
RMSEA	0.040	≤0.80a; ≤0.10b
Incremental fit measures		
NFI	0.965	≥0.90ª
AGFI	0.925	≥0.90a; ≥0.80b
CFI	0.983	≥0.90ª
Parsimonious fit measures		
PGFI	0.717	The higher the better
PNFI	0.798	The higher the better

Note: aAcceptability: acceptable; bAcceptability: marginal

4.2. Structural Model

This study employed SEM to investigate the proposed model. Figure 2 shows that the direct effects of each

independent variable on the dependent variables and statistically is significant; thus, all hypotheses are supported. In particular, the standardized path coefficients for H_1 ($\gamma = 0.226$, p<0.001) and for H_2 ($\gamma = 0.405$, p<0.001) affirm the positive relationship between subjective norms and social presence.

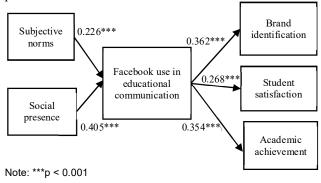


Figure 2: Path Coefficients of the Structural Model

Confirming H_3 , H_4 and H_5 , Facebook use in educational communication had significant positive effects on brand identification, student satisfaction and academic achievement, with values of 0.362 (p < 0.001), 0.268 (p < 0.001) and 0.354 (p < 0.001), respectively. These results highlight the key role of Facebook use in educational communication, especially, especially for university brand identification (with an estimated value of 0.354; p < 0.001).

5. Discussion

The main goal of the study is to explore how subjective norms and social presence relate to students' perceptions through Facebook use in university. These findings demonstrate that the effects of subjective norms and social presence support that Facebook is an essential communication medium in the academic context, in contrast with research by Baker and White (2010) and Cheung et al. (2011).

The paper provides new evidence showing that students are interested in learning through Facebook. That means users' goals engaging in educational communication are towards satisfaction of individual needs and improvement in the learning experience. These results emphasize the effect of subjective norms and social presence on Facebook use in academic communication. The subjective norms finding shows that Facebook users look for positive responses in education communication. Students will perceive the sense of belongingness or oneness with the university following their direct interaction (Balaji et al., 2016).

The results indicate that brand identification, student satisfaction, and academic achievement were all significantly related to Facebook use in educational communication. Against the backdrop of the coronavirus pandemic and greater use of technology (Ahn, Mangulabnan, & Lee, 2022; Lian, Hua, & Said, 2022), the role of Facebook in university communication is even more essential. Besides, the paper displays that Facebook can improve academic achievement. The results are not in line with the prior research which investigated the hazards of using Facebook at university, namely spending a lot of time chatting (Michikyan et al., 2015; Paul et al., 2012). In our opinion, students use Facebook for both academic and non-academic activities. For example, class-related information is usually posted on Facebook; consequently, learners can access them fastest through their peers (Ainin et al., 2015). More importantly, we would expect individuals to fully capitalize on the advantages of Facebook to apply it to education communication in the learning process. The finding can rectify the shortcomings in previous literature regarding this issue (Junco, 2012; Michikyan et al., 2015). In addition, the results assert the positive effects of Facebook use in higher communication on brand identification. Within this context, Facebook is not only a tool for learning but also an internal marketing communication method. Students develop personal relationships with the institution through numerous experience activities, and they reciprocate by engaging in higher-level university-supporting behaviors, resulting in genuine 'university ambassadors' (Balaji et al., 2016). These findings demonstrate that Facebook had played a key information distribution role in universities.

6. Conclusions

Recently, students, scholars, and managers have become more interested in communication activity through social networking sites. Though numerous previous literature examined this topic in marketing communication, it remains fairly under-researched in the academic context. By employing the theory of planned behaviour, social identity theory, social presence theory, and social exchange theory, this study examines the antecedents and consequences of Facebook use in distributing information in universities. The findings indicated that subjective norms and social presence are two important factors that necessitate Facebook use in university for academic activities. More specifically, a stronger social presence encourages students to use Facebook for learning purposes. Therefore, interacting with students has the benefits of promoting students' positive attitudes towards the university. Furthermore, Facebook's applications that support students can provide higher education institutions with a cost-effective instrument for attracting new students and improving current students' perception of the brand's positioning. Administrators in

higher education can encourage students to post content on social media about their co-curricular events as a way to position their university's brand identity.

In addition, thanks to our research, the executive board of the university and teachers can gain a new understanding of why students employ Facebook for studying as well as capitalize on the platform to improve several operational metrics such as brand identification, student satisfaction, and academic achievement. Educators should assume an active role and regard Facebook as an effective academic information distribution tool to disseminate class-related materials and create connections between individuals. Last but not least, university administrators can strive to create a supportive online environment to enhance the university's brand develop a robust and distinct brand identity via Facebook.

The results of this research must be tempered with some limitations. First, the paper focuses mainly on educational communication by Facebook, while ideally other social networking sites should be considered. Second, this study investigates two constructs namely social presence and subjective norms in the use of Facebook in university as well as the impacts they have on factors such as brand identification, student satisfaction, and academic achievement. Future studies could examine the impacts of social media on other variables such as cultural context, brand loyalty, brand value, and brand reputation. Final, this study investigated Vietnamese students, therefore its results have limited generalizability. We hope that future research may consist of a sample from other universities that will help to generalize our findings.

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Appendix A

QUESTIONNAIRE

Dear HaUI students!

First of all, I would like to send you cordial greetings and best wishes for happiness and success in life!

We are a research group at HaUI, currently working on a project on "Communication at universities". We'd love to learn more about the practice for our research, and we hope you'll take a moment to answer some of the questions below.

Please also note that your answers are the basis for our evaluation of the research problem, so we would love to receive your detailed and honest answers. All relevant information will only be used for research purposes and will be kept completely confidential.

Sincerely thank you for your cooperation and help!

SECTION 1. GENERAL INFORMATION

Please provide some basic information about yourself:

Please provide some basic information ab	out yoursell:					
1.1. What faculty are you currently a stude	ent in?					
1. Faculty of Mechanical Engineering						
2. Faculty of Automobile Technology						
3. Faculty of Electrical Engineering						
4. Faculty of Electronic Engineering						
Faculty of Garment Technology and Fashion Design Faculty of Chemical Technology						
7. Faculty of Foreign Languages	H					
8. Faculty of Business Management	Ħ					
9. Faculty of Accounting-Auditing						
10. Faculty of Information and Technology	\Box					
11. Faculty of Tourism						
1.2. Please indicate your gender?						
1. Male 2. Female						
1.3. Have you ever used Facebook to connect with your classmates about learning work?						
PART 2. MAIN CONTENT						
Yes (continue to answer)						

No (stop survey)

Please indicate your opinions on the following issues:

Section 1

	Stron -gly agree	Agre- e	Neutr -al	Disag -ree	Stron- glydis agree
FE1: Facebook has become one of my communication tools to connect with my group of fellow students in a class about classrelated items.	□5	□4	□3	□2	□1
FE2: I use Facebook to communicate with my group of fellow students in a class about class-related items.	□5	□4	□3	□2	□1
FE3: I would felt inconvenience to communicate with my group of fellow students in a class to discuss class-related items if Facebook shut down.	□5	□4	□3	□2	□1
FE4: I tell my group of fellow students in a class to communicating about class-related items through Facebook.	□5	□4	□3	□2	□1

Section 2

	Stron -gly agree	Agre- e	Neutr -al	Disag -ree	Stron -gly disag -ree
SP1: There is a sense of human contact in Facebook.	□5	□4	□3	□2	□1
SP2: There is a sense of personalness in Facebook.	□5	□4	□3	□2	□1
SP3: There is a sense of sociability in Facebook.	□5	□4	□3	□2	□1
SP4: There is a sense of human warmth in Facebook.	□5	□4	□3	□2	□1
SP5: There is a sense of human sensitivity in Facebook.	□5	□4	□3	□2	□1

Section 3

	Stron -gly agree	Agre- e	Neutr -al	Disagr -ee	Stron -gly disag -ree
SN1: My group of fellow students who influence my behavior would think that I should use Facebook.	□5	□4	□3	□2	□1
SN2: My group of fellow students who are important to me would think that I should use Facebook.	□5	□4	□3	□2	□1

Section 4

	Stron -gly agree	Agre- e	Neu -tral	Disagre -e	Stron -gly disag -ree
SS1: I am satisfied with HaUI.	□5	□4	□3	□2	□1
SS2: Studying at HaUI has been a good experience.	□5	□4	□3	□2	□1
SS3: I am sure it was the right thing to go to HaUI.	□5	□4	□3	□2	□1

Section 5

Section 5					
	Stron -gly agree	Agre- e	Neu -tral	Disagre -e	Stron -gly disag -ree
AA1: I am confident I have adequate academic skills and abilities.	□5	□4	□3	□2	□1
AA2: I feel competent conducting my course assignment.	□5	□4	□3	□2	□1
AA3: I have learnt how to do my coursework in an efficient manner.	□5	□4	□3	□2	□1
AA4: I have performed academically as I anticipated I would.	□5	□4	□3	□2	□1

Section 6

000000					
	Stron -gly agree	Agre- e	Neutr -al	Disag -ree	Strong -ly disagr -ee
BI1: HaUI's successes are my successes.	□5	□4	□3	□2	□1
Bl2: I am very interested in what	□5	□4	□3	□2	□1

others think about HaUI.					
BI3: When someone praises HaUI, it feels like a personal compliment.	□5	□4	□3	□2	□1
BI4: I believe that consuming products of HaUI helps me to be part of the social group to which I belong.	□5	□4	□3	□2	□1
BI5: If a media story criticized HaUI, I would feel embarrassed.	□5	□4	□3	□2	□1
BI6: When someone criticizes HaUI, it feels like a personal insult.	□5	□4	□3	□2	□1

Thank you very much for your cooperation and help!