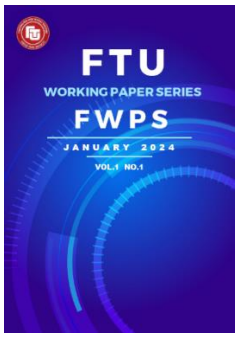

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NGHIÊN CỨU TÁC ĐỘNG CỦA VIỆC CHIA SẺ KIẾN THỨC TRÊN MẠNG XÃ HỘI ĐẾN KẾT QUẢ HỌC TẬP CỦA SINH VIÊN TRƯỜNG ĐẠI HỌC NGOẠI THƯƠNG

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Tóm tắt

Mạng xã hội đã trở thành một công cụ hữu ích cho việc học tập và giảng dạy nhờ chức năng chia sẻ thông tin. Nghiên cứu này nhằm mục đích kiểm tra các yếu tố ảnh hưởng đến việc chia sẻ kiến thức (knowledge sharing) thông qua mạng xã hội và tác động của chia sẻ kiến thức đối với kết quả học tập của sinh viên tại Đại học Ngoại thương (FTU). Bốn yếu tố thúc đẩy sinh viên FTU chia sẻ kiến thức qua mạng xã hội với mục đích học tập được nghiên cứu bằng cách mô hình cấu trúc tuyến tính SEM. Kết quả nghiên cứu 129 sinh viên cho thấy sự tự tin về kiến thức (knowledge self-efficacy), danh tiếng (reputation) và sự có qua có lại (reciprocity) là những yếu tố chính thúc đẩy sinh viên chia sẻ kiến thức qua mạng xã hội, trong khi cảm nhận sự hứng thú (perceived enjoyment) không có tác động đáng kể. Việc chia sẻ kiến thức qua mạng xã hội có ảnh hưởng tích cực đến thành tích học tập của sinh viên. Việc xác định các yếu tố ảnh hưởng và mức độ tác động của chúng là tiền đề để nhóm nghiên cứu đề xuất một số khuyến nghị sử dụng của việc ứng dụng mạng xã hội trong quá trình học tập.

Từ khóa: chia sẻ kiến thức, kết quả học tập, mạng xã hội, mục đích học tập, Đại học Ngoại thương

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THE IMPACT OF KNOWLEDGE SHARING THROUGH SOCIAL NETWORKS ON STUDENTS' ACADEMIC PERFORMANCE AT FOREIGN TRADE UNIVERSITY

Abstract

Social media has become a useful tool for learning and teaching due to its functions for knowledge sharing. The purpose of this study is to examine the factors that affect knowledge sharing through social networks and its impact on students' academic performance at Foreign Trade University (FTU). Four factors that motivate FTU students to share their knowledge through social networks for academic reasons were found using the structural equation model. The findings derived from 129 samples demonstrate that knowledge self-efficacy, reputation, and reciprocity are the key elements that drive students to sharing knowledge, while perceived enjoyment is insignificant. Knowledge sharing through social networks has a significant effect on students' academic achievement. Consequently, recommendations are offered for using social media in education.

Keywords: knowledge sharing, academic performance, social network, learning context, foreign trade university

1. Introduction

In today's increasingly interconnected world, Web 2.0 technologies are becoming one of the most popular online communication tools. Social network sites (SNSs) have drawn a large number of Internet users who have integrated these websites into their daily life routines. In Vietnam, about 78.1% of the total population uses at least 2 or more social networks. In which, university students (from 18 to 24 years old) cover 25.7% as whole (Oosga, 2023). Thus, social networks can continuously and strongly affect Vietnamese student's daily activities. The growth of social networks has provided many organizations (e.g., hospitals and educational institutions) with solutions, new insights, and mechanisms for knowledge sharing. The rapid exchange of information and knowledge via social networks has significantly altered lifestyles and promoted personal and organizational learning (Sedigheh et al., 2017). The Internet eases knowledge exchange in various ways (Muhammad et al., 2018). According to Jones et al. (2010), social networks are instruments used by educators and students in order to facilitate education.

Most students use social media to connect and learn on the Internet, consuming and creating digital information, and looking for their personal jobs. They frequently use Facebook, Instagram, LinkedIn, TikTok, and YouTube to communicate, exchange, and share knowledge, opinions, and ideas; as well as to stimulate ongoing interaction with other members. These social networks give their users the chance to join new groups and networks in a way that could promote exchanging information, ideas, and opinions as well as collaborate with other members who share their goals and requirements. They are regarded as ideal platforms for collaborative learning. Students use these SNSs, particularly Facebook, for academic purposes, specifically to contact people in their respective classes to get information about assignments (Kosik, 2007). Many of them have

admitted that they preferred Facebook to university education software programs because it offered more immediate responses.

However, for social networks to be successful in spreading knowledge, each contributor should be willing to share their expertise, which is not easy because some people would rather keep their knowledge to themselves than share it (Chennamaneni, 2006). Therefore, the main aim of this research is to find out the key factors affecting knowledge sharing behavior through social networks, so that we can choose and apply the appropriate methods to encourage students to share their knowledge, which is beneficial for other students and themselves as well. A deeper understanding of the factors that influence student knowledge sharing and helpful technology would allow for more informed decisions to implement the right educational technologies in higher educational institutions. To achieve these aims, this study sought to answer the following questions:

- Which factors influence students' online knowledge sharing behavior through social networks?

- What is the effect of knowledge sharing through social networks on students' academic performance?

2. Literature review and hypothesis development

2.1 Review of concepts

2.1.1 Academic performance

Academic performance is a measure of a student's achievement in several academic courses. Nowadays, using social networks has a significant influence on student's academic performance. Social media has become an indispensable part of their everyday life, and its impact can be positive or negative depending on how it is used.

Many academicians are concerned that excessive time spent on social media will lead to plagiarism and privacy concerns and in most cases contribute minimally to actual student learning outcomes. They often view the use of social media as superfluous or simply not conducive for better learning outcomes (Moran, Seaman, & Tinti-Kane, 2011). Studies have proved that most students invest time and efforts on social networks in building relationships around shared interests and on the same grounds (Maloney, 2007). It has convinced some education professionals that incorporating social media towards the conventional interaction, dialogue and sharing information between students and teachers reduces most of the obstacles that used to exist in education.

2.1.2 Knowledge Sharing

In a competitive and dynamic environment, knowledge is a key resource that gives a durable competitive advantage (e.g., Davenport & Prusak, 1998). The supply of task information and know-how to assist others and work with others to solve issues, generate new ideas, or execute

policies or processes is referred to as knowledge sharing (Cummings, 2004; Susan, Michael, & Angelo, 2003). Individuals share information when they convey it or receive it from others (Bilgihan, Peng, & Kandampully, 2014; Chen & Hung, 2010; Chen, Chang, Tseng, Chen, & Chang, 2012).

According to Hung and Cheng (2013), knowledge sharing is a process or activity of exchange between individuals, groups, or organizations. Knowledge sharing is described as "the communication of knowledge from a source in such a way that it is learned and applied by the recipient" by Ma and Chan (2014). The growing usage of social media to facilitate information sharing and ensure its widespread dissemination among individuals, particularly students who utilize social media tools, generates a virtual space that encourages knowledge sharing activities (Kwahk & Park, 2016).

2.1.3 Knowledge Self-efficacy

Self-efficacy has been considered as individuals' confidence in their abilities to execute a target that can be helpful for others (Chen & Hung, 2010). It is concerned with the personal belief in the capabilities to generate required outcome while using own actions and people inclined to get themselves engaged in a task, they believe they can finish (Maddux, 2016). Self-efficacy has also been defined as one of the key elements in sharing of knowledge, as rich literature is available which indicates that it affects knowledge sharing (Kaewchur & Phusavat, 2016; Othman & Skaik, 2014), and researchers have interest in investigating self-efficacy's role in predicting knowledge sharing (Lai & Hsieh, 2013). Self-efficacy affects sharing of knowledge positively and significantly. According to research, self-efficacy plays a critical role in enhancing knowledge sharing inside businesses (Chen & Hung, 2010).

2.1.4 Reputation

Definitions of reputation include such descriptive statements as "estimation in which a person or thing is commonly held, whether favorable or not" (Neufeldt & Guralnik, 1997), and terms such as standing, prestige, and status.

The academic reputation of the institution is a factor ranked high in the literature. The concept of organizational reputation has been defined as (a) assessments that multiple stakeholders make about the company's ability to fulfill its expectations over time (Fombrun & Van Riel, 2003), (b) a collective system of subjective beliefs among members of a social group (Bromley, 2002), (c) collective beliefs that exist in the organizational field about a firm's identity and prominence (Rao, 1994), (d) media visibility and favorability gained by a firm (Deephouse, 2000), (e) outsiders' perceptions about an organization's current performance and future behaviors (Carmelli, 2005), and (f) collective representations shared in the minds of multiple publics about an organization over time (Yang &Grunig, 2005; Yang, 2007). Therefore, the similarity of those definitions is that the reputation of an organization refers to public perceptions of the organization shared by its multiple constituents over time (Sung &Yang, 2008). The reputation or prestige of an academic

institution is indicated by various university ranking systems, perception of society overall and positive media coverage.

Understanding the function of reputation in knowledge sharing advantages derive from the inherent contradiction between the necessity of non-codified technological information in a knowledge-intensive organization and the difficulties of coordinating and regulating these private, scattered resources. This conflict is especially relevant in multidivisional, global corporations that rely on technology and innovation for competitive advantage (Ensign & Hébert, 2010).

2.1.5 Reciprocity

Reciprocity is an important and widespread feature in interpersonal relationships. Individuals' propensity to reward generosity and punish opportunism is observed regularly in both long-term partnerships and occasional contacts, including short and anonymous exchanges in laboratory environments. Two well replicated groups of trials serve as excellent examples. The expensive rejection of unfair offers in ultimatum and alternating-offer bargaining games indicates a readiness to endure material losses in order to inflict pain on people deemed to be opportunistic (Güth, Schmittberger, & Schwarze, 1982). In trust or gift-exchange games, the tendency to incur material losses to reward others who are perceived as being generous provides further evidence for reciprocity (Fehr, Kirchsteiger, & Riedl, 1993; Berg, Dickhaut, & McCabe, 1995).In numerous cases, such behavior contradicts the twin hypotheses of rationality and material self-interest that underpin orthodox economic theory, raising the question of how this behavior could have emerged and persisted in evolutionary competition with purely opportunistic or self-serving behavior.

Reciprocity in the context of knowledge sharing is defined as the expectation that a future request for knowledge will be satisfied as a result of present contributions (Kankanhalli, Tan, & Wei, 2005).

2.1.6 Perceived enjoyment

Perceived enjoyment was defined as “the extent to which the activity of using the computer is perceived to be enjoyable in its own right, apart from any performance consequences that may be anticipated” (Davis, Bagozzi, & Warshaw, 1992). On this basis, perceived enjoyment is a form of intrinsic motivation and emphasizes the pleasure and inherent satisfaction derived from the specific activity.

2.2 Theoretical framework

Knowledge is an essential element in the present world (Mohajan, 2016). Thus, knowledge sharing is one of the most important activities in many organizations, including universities. When an individual disseminates their knowledge to other members of an organization, they are engaging in the knowledge sharing process (Ryu, Ho, & Han, 2003).

Several theories have been applied to study knowledge sharing behavior including theory of reasoned action (TRA), theory of planned behavior (TPB) and social exchange theory (SET). In

which, the Social Exchange Theory (Blau, 1964) is a commonly used theoretical base for investigating individuals' knowledge sharing behavior. Knowledge sharing might be viewed as a type of social exchange (Bock et al., 2005), with people sharing their acquired knowledge and skills on social networks and expecting, reciprocally, to get others' knowledge in return.

Due to the complexity of social exchange, various research projects have focused on various facets. For instance, Kankanhalli, Tan, and Wei (2005) examined incentives and deterrents in knowledge sharing and argued that how cost factors and benefit factors affect knowledge contributors using cost/benefit analysis based on SET. Hsu, Ju, Yen, and Chang (2007) examined self-efficacy and outcome expectations as predictors of personal factors of knowledge sharing behaviors. Ye et al. (2006) concentrated on several social exchange factors, such as reputation, reciprocity, knowledge self-efficacy, enjoyment and commitment to explain how members of virtual communities contribute their knowledge. The results indicate that all these above factors are important motivators that are positively associated with an individual's knowledge contribution intention in virtual communities.

2.3 Hypothesis Development

In order to explore knowledge sharing behaviors on social networks, we based on the Social Exchange Theory to conceptualize a research model for this research. We hypothesize that knowledge self-efficacy, reputation, reciprocity, and perceived enjoyment are some of the main factors that influence knowledge sharing among university students through social networks. The following section discusses and develops hypotheses based on this argument.

2.3.1 Knowledge Self-efficacy

Some studies have looked at how knowledge sharing self-efficacy affects the knowledge sharing intention. For example, Bock and Kim (2001) proposed that self-efficacy could be considered as one major component of self-motivation for knowledge sharing. When people share expertise that is helpful to the institutions, they gain confidence in terms of what they can do and this leads to enhanced self-efficacy (Constant et al., 1994). Consistent with the findings of some previous studies, we find out that knowledge sharing self-efficacy is a significant influence on online users' behavior in social network contexts. We therefore posit the following hypothesis:

H1: Knowledge self-efficacy will positively affect knowledge sharing through social networks.

2.3.2 Reputation

According to earlier research (Constant et al., 1994; Constant et al., 1996), knowledge contributors can get esteem from others through their sharing behavior. It has been noted that the need to gain an informal recognition and the need to establish themselves as authorities motivate individuals to contribute knowledge (Ardichvili et al., 2003). Therefore, in academic context, reputation can play a significant role in motivating users to share their knowledge with others (Kollock 1999). When individuals have the perception that their behavior of contributing

knowledge to others will improve their perceived status in the learning environment, they may be more inclined to do so (Wasko & Faraj, 2005). This leads to the following hypothesis:

H2: Reputation will positively affect knowledge sharing through social networks.

2.3.3 Reciprocity

According to Davenport and Prusak (1998), people have a finite amount of time, energy, and knowledge. Therefore, people are typically reluctant to share scarce resources with others unless it is profitable. In order to contribute knowledge, individuals must believe that their contribution is worth the effort. Students share knowledge with their friends as they develop relationships with them and anticipate receiving knowledge in the future. Additionally, it has been found that those who have previously routinely assisted others were able to receive the helpful knowledge and assistance they required more rapidly (Rheingold, 2000). All of these findings point to the presence of reciprocity in the learning environment and a favorable association between reciprocity and knowledge contribution intention. This leads to:

H3: Reciprocity will positively affect knowledge sharing through social networks.

2.3.4 Perceived enjoyment

Perceived enjoyment can be considered from two perspectives: enjoy using social networks while spending time with friends, and enjoy helping others. Addressing the former, Hsu and Lin (2008) hypothesized that enjoyment is a factor that influenced users' inclination to join social networks. Internet users are more likely to participate in social networks activities, because the interaction process results in fun and enjoyment. Perceived enjoyment, according to Teo, Lim, and Lai (1999), a significant effect on Internet usage. From another perspective, enjoyment in helping others is defined as the feeling of pleasure brought on by sharing knowledge with others (Kankanhalli et al., 2005). Knowledge contributors who take pleasure in assisting others may be more favorably oriented and inclined towards knowledge sharing (Lin, 2007). In turn, enjoyment in helping others can significantly impact the knowledge contributor's usage of information systems (Kankanhalli et al., 2005). This study combined the two dimensions of perceived enjoyment (enjoyment of using social media and enjoyment of doing good deeds), and hypothesized that:

H4: Perceived enjoyment will positively affect knowledge sharing through social networks.

2.3.5 Knowledge Sharing

Previous research showed that knowledge sharing leads to better team performance, due to improved decision making, better problem solving, and enhanced creativity (Huang, 2009; Nonaka &Takeuchi, 1995). Nelson and Cooprider (1996) pointed out that while the presence of such a shared view might result in greater performance, the absence of shared knowledge may result in poor group performance. Numerous theoretical reasons are offered in the psychological literature with the underlying premise being that performance will improve if a group is exposed to more

information (Huang, 2009). Moye et al. (2005) found that information sharing can improve team performance by lowering task and interpersonal conflict. Increased knowledge sharing helps participants consider more options, benefit from the experiences of others, and use the knowledge more effectively, all of which leads to improved performance (Huang, 2009). Majid and Wey (2009) suggested that online collaboration tools help students learn and share knowledge, as well as improve their academic performance.

H5: Students' knowledge sharing behavior has a positive effect towards their academic performance.

2.4 Proposed research model

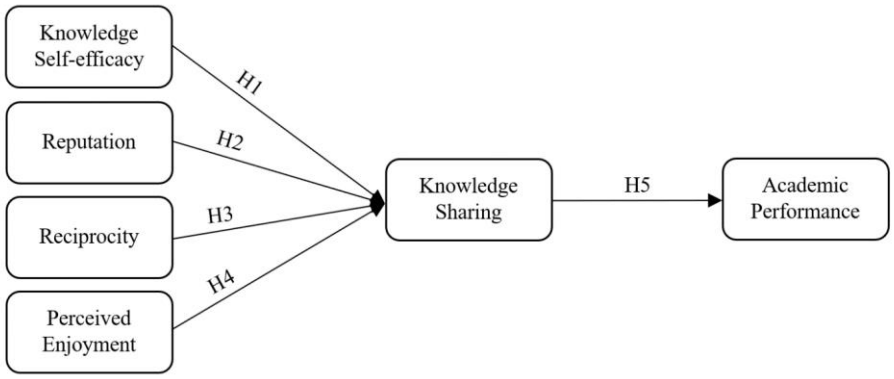

Figure 1. Proposed research model

Source: *Author*

3. Methodology

3.1 Measurement of variables

We employ a quantitative approach to examine the effect of information sharing on academic performance and collect data through questionnaires and surveys, which are common and often used in many empirical studies (Synodinos, 2003). The original, validated scales were changed for use in the study's online knowledge-sharing environment. Some validated scales have been modified to better fit the needs of our research. A five-point Likert scale was used to evaluate the variables. The question used to assess knowledge self-efficacy was derived from earlier work by Sharabati (2018). Hosen et al. (2021), Hsu and Lin (2008), and Wasko and Faraj (2005) were used as the sources for the five items for reputation (also known as perceived status) and perceived enjoyment. The items used to assess reciprocity (or perceived reciprocal advantage) were taken from Movhavvemi et al. (2017), Chai et al. (2011), and Ali et al. (2019). We employ the measures from Hosen et al. (2021), Movhavvemi et al. (2017), and Sharabati (2018) for knowledge sharing and academic performance.

3.2 Sampling

The objective is to examine the impact of education-related knowledge sharing via social media on academic performance at FTU With the scope of this research, convenience sampling is employed due to its affordability, simplicity, ease of access, and the ready availability of participants (Etikan, Musa, & Alkassim, 2016). A questionnaire was distributed to students from various majors at FTU in the form of an online survey. A rule of thumb recommends the minimum sample size of 40 samples, which is "ten times the largest number of structural paths directed at a particular latent construct in the structural model" (Hair et al., 2011)

3.3 Data analysis

In this study, Partial Least Squares - Structural Equation Modeling (PLS-SEM) is employed for its purpose of explaining the variance of an endogenous latent construct (Festge & Schwaiger, 2007) in addition to the small sample size and nonnormal data (Lee, 2001; Hair et al., 2019).

Data analysis consists of two stages: Measurement model and Structural model assessments. Confirmatory factor analysis (CFA) is used to perform the evaluation of the measurement model. SmartPLS is suggested as a "reliable and valid" tool for CFA on PLS-SEM by Afthanorhan (2013). Therefore, in this study, SmartPLS 4 is applied to process the data collected.

4. Results and discussion

4.1 Demographics of respondents

Table 1 shows the demographics of respondents. Of the 129 respondents in different majors at Foreign Trade University, 34 are male and 95 are female. Approximately 75.20% of surveyed students are in their third year, 15.50% in their second year, with the rest in their fourth year. A total of 48 students spend more than 6 hours per day on social media, making up 37.21% of the respondents. Additionally, 42 students have GPAs greater than 3.6, while 63 respondents have GPAs between 3.2 and 3.6, accounting for 81.40% of the total respondents.

Table 1. Respondents' demographics

		Quantity	**Percentage (%)**
Gender	Male	34	26.36
	Female	95	73.64
Student year	Second year	20	15.50
	Third year	97	75.20
	Fourth year	12	9.30
GPA	> 3.6	42	32.56

	3.2 to 3.6	63	48.84
	2.5 to 3.19	21	16.28
	< 2.5	3	2.32
Time on social network	More than 6 hours per day	48	37.21
	4 to 6 hours per day	46	35.66
	1 to 3 hours per day	33	25.58
	Less than 1 hour per day	2	1.55

Source: *Author*

4.2 Result of findings

4.2.1 Measurement model

In this study, CFA is conducted to examine the validity, reliability, convergent and discriminant validity of the model. The measures are factor loading, Composite Reliability (CR), Cronbach's Alpha (CA) and Average variance extracted (AVE).

Factor loadings ≥ 0.708 suggest an acceptable reliability of indicators (Hair et al., 2019). As shown in Table 2, all indicators have factor loading > 0.708, indicating that above 50% of the variance in each of these indicators can be explained by their respective construct.

CR and CA are used to assess internal consistency reliability. Higher values indicate higher levels of reliability. CR values ranging from 0.7 to 0.9 and CA > 0.7 are recommended (Hair et al., 2019; Nunnally & Bernstein, 1994). All constructs in the proposed model meet the above thresholds, thereby achieving the internal consistency reliability.

The convergent validity of each construct is measured through AVE. The fact that all constructs have AVE ≥ 0.5, which is the accepting level proposed by Hair et al. (2019), depicts the construct can explain more than a half of its indicators' variance.

Table 2. Measurement model assessment results

Construct	Indicators	Factor loading	AVE	CR	CA
Knowledge Self-Efficacy (KSE)	KSE1	0.740	**0.641**	**0.842**	**0.719**
	KSE2	0.847			

	KSE3	0.811			
Reputation (REPU)	REPU1	0.719	**0.575**	**0.871**	**0.821**
	REPU2	0.731			
	REPU3	0.778			
	REPU4	0.790			
	REPU5	0.771			
Reciprocity (RECI)	RECI1	0.823	**0.619**	**0.867**	**0.795**
	RECI2	0.756			
	RECI3	0.797			
	RECI4	0.771			
Perceived Enjoyment (PE)	PE1	0.763	**0.642**	**0.877**	**0.821**
	PE2	0.891			
	PE3	0.802			
	PE4	0.740			
Knowledge Sharing (KS)	KS1	0.762	**0.577**	**0.872**	**0.817**
	KS2	0.731			
	KS3	0.775			
	KS4	0.760			
	KS5	0.770			
Academic Performance (AP)	AP1	0.746	**0.589**	**0.851**	**0.769**
	AP2	0.817			
	AP3	0.748			
	AP4	0.758			

Source: *Author*

The fourth step is to validate discriminant validity, which is how a construct differs from other constructs within the same structural model. Henseler, Ringle and Sarstedt (2014) proposed the

Heterotrait-Monotrait Ratio (HTMT) as a reliable measurement for discriminant validity. Since HTMT values in Table 3 satisfy the threshold of no more than 0.9, the research model achieves discriminant validity.

Table 3. Discriminant validity with HTMT Ratio analysis

	AP	KS	KSE	PE	RECI	REPU
AP						
KS	0.830					
KSE	0.476	0.551				
PE	0.405	0.302	0.287			
RECI	0.444	0.527	0.433	0.431		
REPU	0.279	0.374	0.157	0.141	0.336	

Source: *Author*

4.2.2 Structural model

With the qualified measurement model above, the study will evaluate the structural model. Structural model evaluation consists of 4 assessments: Collinearity, Structural model Path coefficients, Coefficient of determination and effect size assessments.

Prior to measuring the structural relationships, variance inflation factor (VIF) values are considered to ensure multicollinearity issues not to occur. The ideal threshold recommended by Hair et al. (2019) is VIF ≤ 3. All VIF values in the model are satisfactory, thus, no problematic collinearity.

Table 4. VIF values

Construct	Item	VIF
AP	AP1	1.529
	AP2	1.637
	AP3	1.669
	AP4	1.723
KS	KS1	1.702
	KS2	1.684

	KS3	1.684
	KS4	1.650
	KS5	1.639
KSE	KSE1	1.270
	KSE2	1.564
	KSE3	1.544
PE	PE1	1.796
	PE2	1.884
	PE3	1.731
	PE4	1.561
RECI	RECI1	1.858
	RECI2	1.514
	RECI3	1.634
	RECI4	1.580
REPU	REPU1	1.679
	REPU2	1.726
	REPU3	1.585
	REPU4	1.503
	REPU5	1.727

Source: *Author*

Hypothesized relationships are estimated based on the significance of the path coefficients. Therefore, bootstrapping with 5000 subsamples was applied at a significance level of 0.05.

Table 5. Structural model significance results

	Path coefficient (β)	**Sample mean**	**Standard deviation**	**p values**	**Result**
H1: KSE -> KS	0.300	0.303	0.079	0.000	Supported

H2: REPU -> KS	0.213	0.226	0.079	0.007	Supported
H3: RECI -> KS	0.236	0.230	0.106	0.026	Supported
H4: PE -> KS	0.092	0.104	0.089	0.301	*Rejected*
H5: KS -> AP	0.672	0.674	0.069	0.000	Supported

Source: *Author*

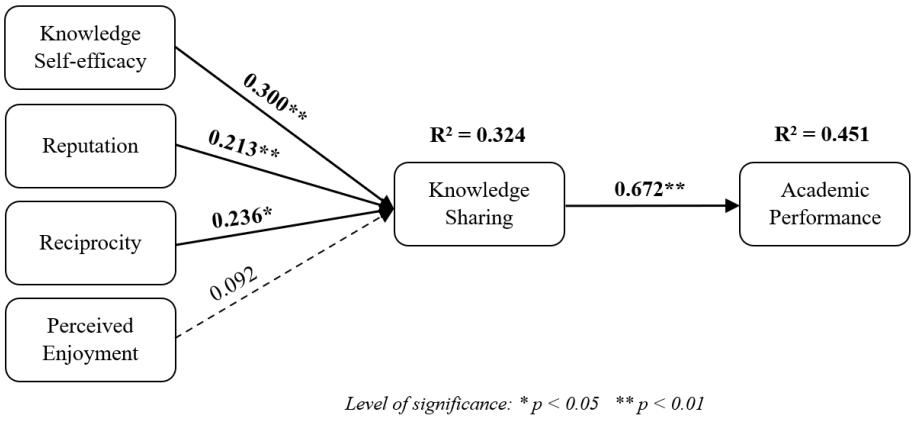

Figure 2. Results of PLS Analysis of Study Hypotheses

Source: *Author*

The hypothesis testing results depict that perceived enjoyment (β = 0.092, p > 0.05) has no significant effect on knowledge sharing. Hence, H4 is not supported. On the other hand, the relationships between knowledge self-efficacy (β = 0.300, p < 0.05), reputation (β = 0.213, p < 0.05), reciprocity (β = 0.236, p < 0.05) and knowledge sharing are all positively and statistically significant. In addition, the result of the relationship between KS and AP demonstrates that knowledge sharing positively impacts on academic performance with β = 0.672, p < 0.05. Therefore, H1, H2, H3 and H5 are supported.

Table 6. Coefficients of determination R^2 and effect size f^2

Latent constructs		**AP**	**KS**
R^2		0.451	0.324
f^2	**KS**	0.823	
	KSE		0.116
	PE		0.011

	RECI	0.063
	REPU	0.061

Source: *Author*

Coefficient of determinations (R^2) is known as a measure of the explanatory power of the model and also within-sample predictive power (Shmueli & Koppius, 2011; Rigdon, 2012). The cut-off values for endogenous latent in terms of R^2 suggested by Chin (1998) are 0.67 (substantial), 0.33 (moderate) and 0.19 (weak). In accordance with these guidelines, R^2 values for KS and AP are categorized as moderate. R^2 value of 0.324 for KS indicates a moderate level of explanatory capacity for the model in elucidating the relationship between KS and its four exogenous constructs (KSE, REPU, RECI, and PE). AP reported R^2= 0.451 indicates that 45.1% of the variance in AP can be explained by KS.

Finally, effect size assessment is conducted through f^2. According to Cohen (1998), effect size f^2 values of 0.35, 0.15 and 0.02 reflect a large, medium and weak effect of an independent latent construct on its considered dependent construct. The effect size f^2 of KS on AP (0.823) is high, while KSE, REPU and RECI are approaching the moderate effect size on KS.

4.3 Discussion of empirical results

According to the analytical results, knowledge sharing is favorably impacted by three of the four factors, which in turn has a good influence on academic performance. This could be explained by the outcome expectations of students whenever they share knowledge on social media.

Although a variety of previous research showed the positive effect of perceived enjoyment on knowledge sharing (Kankanhalli et al., 2005; He & Wei, 2009; Sharabati, 2018), however, we found no essential relationship between perceived enjoyment and knowledge sharing. This could indicate that perceived enjoyment, in terms of knowledge sharing between students, is not an essential motivator for academic performance.

Of the all, knowledge self-efficacy showed the strongest relationship with knowledge sharing. Sharabati (2018) found that the ability of students is the factor that drives them to share knowledge via social media. This is also supported by Kankanhalli (2005), in which people are more inclined to offer their information when they are certain that it would be useful for communication. Our findings are in line with the results proposed by Chen and Hung (2010), Lin (2007) which suggest the positive impact of self-efficacy on knowledge sharing.

The evidence supports reciprocity, which has been provided by Chai et al. (2010), Abdelwhab Ali et al. (2019) and Sharabati (2018), showing a significant impact on knowledge sharing. The context of giving and receiving, overall, have engaged the knowledge sharing practice within a community. In other words, the expectations of perceived reciprocal benefits encourage students to share knowledge via social media (Moghavvemi, 2017).

Reputation seems to be the one which affects knowledge sharing the least among three variables. Although we come to the conclusion against previous research by Sharabati (2018), we have evidence to show the reliability of our findings. Moghavvemi (2017) also found that perceived status is not as important as reciprocity and outcome expectation. In the study of Moghavvemi (2017), sharing knowledge may not aim to increase status in the context of a group of friends and classmates, however, in a larger community consisting of thousands of people like FTU, reputation will be a crucial factor.

There are previous findings proving the effect of knowledge sharing on academic performance. As mentioned above, the convenience and availability of sharing channels can contribute to knowledge sharing practice of students among the community. Moreover, lecturers and officers would play a vital role in encouraging this sharing trends among the students. The more they promote, the higher academic performance students can gain (Sharabati, 2018). Ainin et al. (2015) and Al-rahmi et al. (2015) came to the conclusion that social media use has a strong and significant impact on students' learning performance. Du et al. (2007), Eid et al. (2016) likewise draw the conclusion that performance is significantly influenced by information sharing. Knowledge sharing plays an important role in the success of knowledge management practices in all academic institutions, including universities (Cheng el al., 2009).

5. Implication and suggestion

5.1 Practical implication

Social networks, particularly Facebook, are being used for different purposes than they were in the past, when people mostly used them for communication and enjoyment. Social network users nowadays can collaborate on similar issues, exchange knowledge, and ask for help. Sharing knowledge via social networks can create a good sense of community among those who have similar interests and concerns. These networks can be utilized as a resource to store and disseminate knowledge.

Students seem to be more comfortable to discuss, comment, share ideas, and work through Facebook groups as opposed to classrooms. Therefore, academic lecturers can use SNSs to create a sense of community among the students to improve their interaction and collaboration, as well as generate a positive environment between students and lecturers during the learning process. These findings can be utilized as a model for using SNSs to effectively and efficiently share knowledge with students. It provides empirical evidence for academic instructors to encourage students sharing their knowledge via online groups.

5.2 Suggestion or Recommendation

For practitioners, the study's findings have a number of strategic ramifications. Our research first identifies five key factors that influence the intention to exchange knowledge.

Correspondingly, these following manipulations could be made to promote knowledge sharing within the academic institutions:

- Notify knowledge contributors of how they have contributed to the whole community to boost their perceptions of enhanced knowledge self-efficacy. To increase students' knowledge self-efficacy, lecturers should focus more on giving them helpful comments and emphasizing the valuable contributions they make to their university and friends.

- Do the reputation tracking and ranking to recognize knowledge contributors. Top 5/10 students who contribute most to knowledge sharing will receive extra points, be publicly rewarded or be nominated by the lecturers for some projects of the faculty or school.

- Develop a norm of reciprocity in the community, encouraging two-way knowledge sharing. Build a mutual respect and appreciation for the common goal of providing the best experiences and resources for communities.

6. Conclusion

6.1 Conclusion

This study utilized previous works and examined factors affecting students' knowledge sharing via social networks and assessed the impact of knowledge sharing on academic performance. The results showed that students' knowledge self-efficacy, reputation, and reciprocity encourages students at Foreign Trade University to share their knowledge between other members while perceived enjoyment has no impact on that; and that knowledge sharing through social media significantly influences academic performance.

6.2 Limitation of research

Although this study has provided some meaningful findings, some limitations exist due to some subjective factors that require further examination and research. Firstly, this study focuses only on undergraduate students in Foreign Trade University, the sample population for the study was limited to students in the university. Secondly, this study comprised a sample population of 129 respondents. Although several significant results were obtained, increasing the sample size would provide greater statistical power and would increase generalizability.

6.3 Future direction of research

Future research could study different levels of students and different academic courses. It would be interesting to test the research model at other universities, both inside and outside Vietnam, since cultural differences influence students’ opinion about knowledge sharing. Moreover, future study should look at the differences in social network engagement based on age, gender, level of education, or subject, since the variables influencing students' knowledge sharing

might vary between people and situations. Recommendations are made for using the social network in education in light of the findings.

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Appendix

Table 7. Questionnaire

Construct	Indicator
Knowledge Self-efficacy Sharabati, M. (2018)	KSE1: I have confidence in my ability to provide information on the social groups that can solve my friends' educational problem.
	KSE2: I have confidence in my ability to provide educational information on social groups which my friends are interested in or consider useful.
	KSE3: I am confident that most information I provide can attract my friends' attention.
Reputation Hosen et al. (2021); Hsu & Lin (2008); Wasko & Faraj (2005)	REPU1: I believe the participants of social networks would give me sufficient respect if I can contribute towards knowledge formation, documents exchange and virtual communication.
	REPU2: I expect the social community would help me to improve my status.
	REPU3: I think that my reputation would increase in university if I actively get involved in social media.
	REPU4: I earn rewards in the form of good reputation by sharing knowledge in the social groups.
	REPU5: Sharing knowledge in the social groups enhances my status in the eyes of my lecturer.
Reciprocity Movhavvemi et al. (2017); Chai et al. (2011); Ali et al. (2019)	RECI1: If I share my knowledge with other students in the social groups, I expect them to share their knowledge with me in the future.
	RECI2: Other students will share their knowledge with me if I share my knowledge with them in the social groups.
	RECI3: I should share my knowledge with other students if they share their knowledge with me in the social groups.
	RECI4: Knowledge sharing in social network groups helps me expand my network of friends.
Perceived Enjoyment Movhavvemi et al. (2017)	PE1: The process of knowledge sharing on social networks is enjoyable.
	PE2: I enjoy sharing my knowledge with others on social networks.
	PE3: It feels good to help other members by sharing my knowledge on social networks.
	PE4: Sharing my knowledge with others on social networks gives me pleasure.

Knowledge Sharing Hosen et al. (2021); Movhavvemi et al. (2017); Sharabati (2018)	KS1: I often visit social network to get the required knowledge and information. KS2: I share my earned knowledge and experience via social media. KS3: I always make a response by providing information when any request comes from others. KS4: I think social network sites is very convenient to share and earn new knowledge. KS5: I think social network sites is very convenient to share and earn new knowledge.
Academic performance Hosen et al. (2021); Sharabati (2018)	AP1: I have performed academically as I expected I would. AP2: Knowledge earned from social network sites save my learning time. AP3: The social network sites improve my understanding. AP4: The social network sites help me to exchange knowledge formally and informally.