

-RESEARCH ARTICLE-

THE RELATIONSHIPS BETWEEN ONLINE KNOWLEDGE SHARING, INNOVATIVE WORK BEHAVIOR, AND ACADEMIC PERFORMANCE: EVIDENCE FROM VIETNAM

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—Abstract—

When it comes to innovative work behaviours, research indicates that people's behaviour might be influenced by the expected consequences of their activities, such as performance expectations (Yuan & Woodman, 2010). Innovative self-sufficiency and outcome expectations have gotten limited attention in research. As such, the purpose of this article was to investigate the links between online knowledge sharing, innovative work practices, and academic success. A quantitative study was conducted in Vietnam with a sample size of 560 pupils. The data were analyzed using a covariance-based SEM approach. The SPSS version 28 and AMOS software packages were used to process the data. The findings indicate that both online knowledge transfer and receipt correlate with innovative work behaviour and academic success. However, there is not enough evidence to prove that innovative work behaviour correlates positively with academic performance. We highlighted various implications for students and

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higher education institutions based on the survey results, including the promotion of information sharing and innovative work behaviours and the improvement of students' academic performance.

Keywords: academic performance; innovative work behavior; online knowledge transferring; online knowledge receiving; online knowledge sharing

1. INTRODUCTION

One of the primary reasons universities exist is to equip students with the knowledge, skills, and attitudes necessary to succeed in the future labour force. Students' academic performance is an appropriate metric for evaluating training (Tokunbo, 2018) and is used to evaluate training and classify students in institutions. Employers also use it as a criterion when recruiting graduates. Graduation rates and students' academic achievement are of primary concern to higher education institutions (E. Shahzadi, & Ahmad, Z, 2011). As a result, academic performance research, particularly research into the factors affecting academic achievement, has historically attracted considerable attention (Wang, Liu, & Talha, 2022).

Along with studies on student academic performance, academics have focused on student inventive work behaviour, as it represents an individual's problem-solving skills. Individuals who exhibit innovative work behaviours demonstrate their future human resource potential. Numerous academics have examined the elements that influence innovative work behaviour and its outcomes, including job success. Additionally, several studies have been conducted to examine the effect of innovative work behaviour on an individual's work performance. However, similar studies in higher education remain uncommon (Talha, 2020).

Research has traditionally placed a premium on knowledge exchange. In recent years, as a result of the advancement of information technology, which resulted in modern applications such as the internet and virtual social networks, online knowledge sharing has garnered researchers' attention, with numerous authors attempting to establish relationships between online knowledge sharing and other factors (Waheed, Baig, Khan, Sheikh, & Khan, 2016).

Several studies have been conducted to date on the relationship between knowledge sharing and innovative work behaviour (Asurakkody & Kim, 2020; Jan, Zainal, & Lata, 2021; J. Lee, 2018; T. P. L. Nguyen, Nguyen, K. N., Do, T. D., & Nguyen, T. T. M, 2019; Sudibjo & Prameswari, 2021), the relationship between knowledge sharing and individual work performance (Henttonen, Kianto, & Ritala, 2016; Nasir, 2019; T. P. L. Nguyen, Nguyen, K. N., Do, T. D., & Nguyen, T. T. M, 2019; Vitapamoorthy, 2021). However, research in higher education, particularly on online platforms, is uncommon. Given that online learning is a growing trend in education (Habes et al., 2021) and that people are now living with the consequences of the COVID-19 pandemic (Alchamdani et al., 2020; Kara, 2021; Pokhrel & Chhetri, 2021), research on the relationship between

online knowledge sharing, innovative work behaviour, and student academic performance is critical.

2. LITERATURE REVIEW

2.1 Theoretical Foundation

This study, which is based on the enterprise's resource-based view (RBV) and knowledge base view (KBV), examines how firms leverage their strategic resources to promote open innovation and thereby influence their organizations' success (An, Huang, Liu, & Wu, 2022). Using the RBV, we propose that companies with an elastic supply of valued resources and skills boost employee innovation behaviour and firm performance (An et al., 2022), increasing their competitive advantage over competitors. Businesses should have valuable, one-of-a-kind assets that are tough for competitors to copy (An et al., 2022). Additionally, these intangible assets provide a competitive edge for organizations because their values are difficult to replicate, and their functions are complicated to replace (Grillitsch, Schubert, & Srholec, 2019). Nowadays, organizations' primary demand is for their different resources, skills, and strategy implementation to be synchronized to give superior products/services to clients and thereby increase their competitive edge over competitors (Plank & Doblinger, 2018). Additionally, we believe that the performance differential between businesses is defined by the extent to which their staff permit the realization of the numerous bundles of resources with the potential to produce value (An et al., 2022; Grillitsch et al., 2019). As a result, we argue that managing and utilizing coworkers' cognitive capacities, specifically the crucial knowledge, has become critical for organizations to engage in open innovation to achieve higher organizational performance (Plank & Doblinger, 2018).

In other words, RBV prioritizes "employees" on the strategy radar monitor (An et al., 2022), which aids in aligning top management knowledge value and knowledge sharing practices with organizational processes (Grillitsch et al., 2019) to influence open innovation and, as a result, improves overall organizational performance. The KBV, a subset of the RBV, enables firms to obtain a competitive edge by maximizing the potential of their knowledge workers to accomplish organizational goals. According to theory and research, knowledge varies by organization, and knowledge is generally associated with desired organizational outcomes in the majority of cases (Plank & Doblinger, 2018). Additionally, knowledge as a unique strategic resource is central to the knowledge-based theory, which views the organization as a dynamic organism that changes continuously through the production and use of knowledge (Malik, Froese, & Sharma, 2020). As a result, if knowledge is the most valuable strategic resource and enables businesses to compete in a dynamic environment (Malik et al., 2020), it becomes critical for top management to recognize the value of knowledge, to establish and maintain knowledge sharing practises that foster open innovation and the desired levels

of organizational performance (McGahan, 2021). Additionally, we argue that top management's appreciation of knowledge and knowledge sharing practices are precious intangible resources (Malik et al., 2020) that organizations must leverage to improve open innovation and firm-level performance to compete in dynamic markets.

According to prior research, businesses are abundant in knowledge-based resources (Grillitsch et al., 2019), and knowledge resources are critical for sustaining high levels of open innovation and organizational success (Plank & Doblinger, 2018). These tangible assets contribute to developing a firm's competitive advantage and make it more difficult for competitors to replicate (McGahan, 2021). According to previous research, a commercial enterprise's competitive advantage is contingent upon its capacity to harness current and new knowledge while developing new processes, items, or products. To put it another way, knowledge management promotes the discovery and application of information within organizations to foster and support open innovation (An et al., 2022; Malik et al., 2020). On the other hand, implementing and utilizing information sharing approaches in academic institutions can be challenging and time-consuming. Nonetheless, we expect that the high value placed on online knowledge sharing will stimulate information-sharing practises that will aid in achieving innovation and the required level of academic success.

2.2 Knowledge Sharing Via the Internet

Knowledge sharing is a collection of behaviours involving exchanging information or helping with others (T. P. L. Nguyen, Nguyen, K. N., Do, T. D., & Nguyen, T. T. M., 2019) or as the process through which employees exchange tacit and explicit knowledge (Belal, Hasan, Nordin, & Kosaka, 2020). It is regarded as a critical organizational process (Cugueró-Escofet, Ficapal-Cusí, & Torrent-Sellens, 2019) since it creates new knowledge. According to Grimsdottir, Edvardsson, and Durst (2019), employees can contribute to knowledge applications, innovation, and their organization's competitive advantage through the knowledge sharing process. Individuals, teams, organizations, and even communities can engage in the process. Because it is derived from the sharing activity, knowledge sharing involves two concurrent processes: knowledge transmission and knowledge receiving (Cugueró-Escofet et al., 2019). The transferor and receiver can be an individual, a team, an organization, or a community during the sharing process. Individuals can gain from knowledge sharing in terms of improved performance, increased learning and creativity, and an effect on the individual's psychology (Ahmad & Karim, 2019).

Durst and Zieba (2019) argued that the low cost of computers and networks has resulted in significant knowledge-sharing opportunities. According to the two writers, "computers and networks can point to people with knowledge and connect people who need to exchange knowledge over a distance" via email, groupware, the internet, and intranets. According to (De Bernardi, Bertello, & Venuti, 2019), online knowledge sharing is "the online exchange of knowledge for learning and application by an

individual.” It is concerned with interpersonal communication. Online communication has substantially improved in recent years due to the advancement of information technology, particularly the usage of the internet and virtual social networks (Chen & Talha, 2021). “online” refers to social communication via the internet and online contexts (Ma, 2012). More remarkably still, after receiving knowledge, individuals can solve their problems in the future using these tools.

2.3 Innovative Work Behavior

The capacity of an employee to produce, promote, and execute unique and helpful ideas at work is described as their ability to generate, promote, and implement novel and valuable ideas (Chen & Talha, 2021). It is the process of implementing novel problem-solving concepts to improve a product, service, or process (Newman, Tse, Schwarz, & Nielsen, 2018). Jong (2008) developed a model of inventive work behaviour that includes two stages of innovation: initiation and implementation. The two writers define innovative work behaviour as “the process of idea exploration, idea production, idea advocating, and idea implementation” (Li et al., 2021). In the context of the learning environment, innovative work behaviour refers to modifications and enhancements that benefit students, such as the implementation of new approaches, tools, methods, materials, and technology that benefit the learner and expand the learner’s creative potential (Baharuddin, 2019).

2.4 Academic Performance

The academic performance of students, alternatively referred to as academic achievement or academic performance, is a critical indicator in education. According to researchers, it is the product of a student’s cognitive and noncognitive characteristics and the sociocultural setting in which the student is learning (Liem, 2019). Academic performance is a critical metric for evaluating training and classifying students in institutions and a crucial criterion for employee recruitment. Recent graduates with a solid academic record are more likely to find work. Academic accomplishment is critical in creating the highest-quality graduates who will become outstanding leaders and labour force members in the future; these graduates are thus critical to the country’s socio-economic progress (Fauziyah, 2020).

2.5 Online Knowledge Sharing and Innovative Work Behavior

Akhavan, Hosseini, Abbasi, and Manteghi (2015) assert that innovation is necessary for individual and organizational creativity. It is critical for establishing long-term growth. The organizational climate is critical for supporting workplace creativity and innovation (Asurakkody & Kim, 2020). Additionally, creative and ingenious individuals perform better when surrounded by solid organizational support (Baharuddin, 2019). As a result, Newman et al. (2018) concluded that a favourable organizational environment increases commitment, motivation, and engagement among employees. According to Setini, Yasa, Gede Supartha, Ketut Giantari, and Rajiani (2020), innovative work behaviour refers to

a collection of behaviours associated with idea production, concept support, and idea implementation. Likewise, it is a multi-stage process in which an individual encounters a problem and then develops an idea that results in a solution through innovation and worker support (Elidemir, Öztüren, & Bayighomog, 2020). Employees' insights, proposals, and execution of these ideas on job-related responsibilities contribute to the organization's performance (Fauziyah, 2020). As a result of this, research indicates that knowledge sharing affects innovative work behaviour (Jan et al., 2021).

Processes of data and information sharing connect people with novel ideas. Knowledge sharing is widely regarded as a critical facilitator of innovative ideas and a significant factor in fostering organizational innovation (Hayajneh, Elayan, Abdellatif, & Abubakar, 2022), as well as individual creativity and innovation (T. P. L. Nguyen, Tran, N. M., Doan, X. H., & Nguyena, V. H, 2019; Ologbo, 2015). Researchers have shown a link between knowledge sharing and individual creativity (J. Lee, 2018) or innovative work behaviour in higher education (Asurakkody & Kim, 2020). Since the widespread adoption of the internet, which is especially pertinent in light of the COVID-19 pandemic, digital knowledge exchange processes have been accelerated, resulting in increased creative performance (Tnnessen, Dhir, & Flten, 2021). As a result, the following is hypothesized:

H1a: Online knowledge transferring positively influences innovative work behavior.

H1b: Online knowledge reception positively influences innovative work behavior.

2.6 Online Knowledge Sharing and Academic Performance

According to research, knowledge sharing is a two-way street in which one party gives and benefits from the contributions of the other. Two parties can benefit from one another through this method. As a result, knowledge sharing varies according to the type of knowledge exchanged (Ahmad & Karim, 2019). To begin, tacit knowledge is perceived to be more challenging to impart than explicit knowledge. The former is more meaningful since it is based on human experience, personal attitudes and opinions. It can be challenging to communicate this knowledge to others because it is communicated in non-formal ways rather than through formal language (Asurakkody & Kim, 2020). Explicit knowledge can be transferred through books, databases, movies, and the like. It's pretty frequent, and individuals are not compelled to do so. Employees frequently improve their productivity and competence through direct information exchange (Waheed et al., 2016). Organizations are driven to focus on this component due to their awareness of its beneficial effects and benefits, so information sharing is the primary activity in the knowledge management process. Knowledge sharing has been proved to benefit a business's bottom line by lowering expenses, enhancing efficiency, and raising individual and company output (Durst & Zieba, 2019). Workers can leverage knowledge-based resources to produce new ideas and improve company procedures, increasing organizational competitiveness. This demonstrates that knowledge sharing is

about more than distributing information; it is a tool that enables people to think creatively and independently. Employees are encouraged to generate their unique ideas for their benefit by utilizing informative resources (Durst & Zieba, 2019). According to Setini et al. (2020), knowledge sharing affects organizational performance in various ways, including management, decision-making, and production processes. The association between information sharing and individual performance was proven by T. P. L. Nguyen, Nguyen, K. N., Do, T. D., & Nguyen, T. T. M (2019). Yuniarsih (2018) discovered that information sharing was favourably and significantly associated with academic achievement in higher education. As a result of their use, social media networks such as Facebook can affect academic performance (Moghavvemi, 2018). As a result, we postulated the following:

H2a: Online knowledge transferring positively influences academic performance.

H2b: Online knowledge reception positively influences academic performance.

Innovative work behavior and academic performance

Asurakkody and Kim (2020) discovered that only a few empirical studies had examined the association between innovative behaviour and performance. As with human behaviour, IWB can be influenced by the expected outcomes of a behaviour, such as performance expectations (Setini et al., 2020). Although little study has been conducted to examine the relationship between creative self-efficacy and outcome expectancies, it is plausible to infer that individuals who engage in innovative work behaviours affect task performance and group and organizational performance (Fauziyah, 2020). Innovation is frequently related to introducing new products or services into a business and can positively affect the firm's performance (Musneh, 2021). Innovative work behaviour produces and promotes ideas by taking the person into account. It assists employees in resolving workplace issues and consequently improves task performance. As a result, the following is hypothesized:

H3: Innovative work behavior positively influences academic performance.

The research model is shown in Figure 1.

3. METHODOLOGY

3.1 Sample and Procedure

This study employed the questionnaire survey method. The pilot study surveyed 50 students in Hanoi and Ho Chi Minh City, Vietnam's two major cities. Respondents were university students who had completed at least one year of study. The pilot's purpose was to determine whether the questionnaire was completely clear to determine the framework's applicability. The official survey gathered 592 responses. 32 of the 592 surveys completed were deemed invalid. Thus, 560 respondents were included in the study sample. Table 2 illustrates the distribution of students' fields of study.

3.2 Measures

The questionnaires were created using multiple-item scales. Each question was evaluated using a five-point Likert scale ranging from (1) strongly disagree to (5) strongly agree. Online knowledge sharing was quantified by examining online knowledge transfer and receipt. The two variables' measurements were adapted from those (T. T Lee, 2018) proposed.

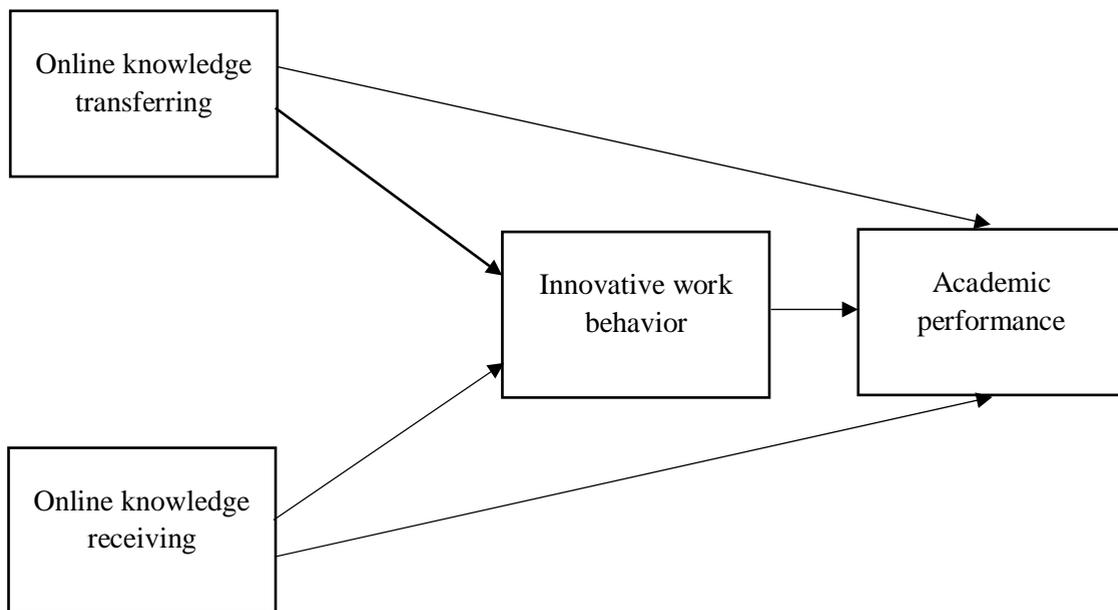


Figure 1. Research model.

The items assessing innovative work behaviour were adapted from those proposed by Hu, (Monica Hu, Horng, & Christine Sun, 2009) Elidemir et al. (2020). Academic performance items were adapted from (E. Shahzadi, & Ahmad, Z, 2011). Table 1 contains a complete list of all metrics.

3.3 Data analysis

The obtained data were analyzed using the Statistical Package for the Social Sciences (SPSS) software and the AMOS structural equation modelling (SEM) tool. Descriptive dataset statistics such as frequency means and variances were generated for each variable. Additionally, this phase assisted in identifying any data entry errors. Tables 2 and 3 contain descriptive data. Additionally, AMOS was used to assess the analysis of SEM, i.e., measurement and structural model.

4. FINDINGS AND DISCUSSION

4.1 Characteristics of the Sample

Table 2. Demographics and characteristics of the respondents.

Table 1. Measures of Variables

Measurement scales	
<i>Online knowledge transferring, source: Modified from Tiffany T. Lee (2018)</i>	
OKT1	When I learn something new, I communicate online with other students.
OKT2	I share new or interesting things on social media.
OKT3	I impart insights that I have gained to other students online.
OKT4	I give study-related advice online to other students.
OKT5	I explain the knowledge I have to other students online.
<i>Online knowledge receiving, source: Modified from Tiffany T. Lee (2018)</i>	
OKR1	I ask my university friends to inform me of what they know online.
OKR2	I ask my university friends to explain their know-how online.
OKR3	I ask colleagues to communicate online what they know from experience.
OKR4	I often seek information or solutions on social media.
OKR5	When I have a problem, I ask for advice from my university friends based on what they know.
<i>Innovative work behavior, source: Adapted from Hu, Horng, and Sun (2009) and Elidemir et al. (2020)</i>	
IWB1	In learning, I often seek new knowledge and skills.
IWB2	In learning, I propose new ideas and try to persuade other students.
IWB3	I occasionally create innovative and creative knowledge and skills in learning.
IWB4	In learning, I have a suitable plan for new idea creation.
IWB5	Overall, I consider myself a creator.
<i>Academic performance, source: E. Shahzadi and Ahmad (2011)</i>	
AP1	Student's accumulative GPA.
AP2	I feel confident with my knowledge and skills.
AP3	I can convey my knowledge to others.
AP4	I am satisfied with my academic performance.

The data indicate that 41.96% of the 560 students were from North Vietnam. Students from central and southern Vietnam made up 22.86 and 35.18% of the student body, respectively. Male students made up 43.75% of the student body; the remainder were female. Those studying natural sciences made up the highest share (20.71%), followed by students studying social sciences (17.86%), economics and management (17.86%), pharmacology, medicine, and biomedical engineering (18.75%), engineering (13.57%),

and other majors (11.25%). Sophomores made up the most significant percentage (38.39%), followed by juniors and seniors, who made up 31.07% and 30.53%, respectively.

Table 2. Demographic Characteristics of the Respondents

Characteristics	Frequencies	Percentage (%)
Gender		
Male	245	43.75
Female	315	56.25
Major		
Engineering	76	13.57
Natural science	116	20.71
Economics and management	100	17.86
Social science	100	17.86
Pharmacology, medicine, biomedical engineering	105	18.75
Others	63	11.25
Studying year		
2 nd year	215	38.39
3 rd year	174	31.07
4 th year	158	28.21
5 th year and above	1	2.32
Location		
Northern region	235	41.96
Central region	128	22.86
Southern region	197	35.18

41.96% of the 560 students were from North Vietnam, according to the data. Students from central and southern Vietnam made up 22.86% and 35.18%, respectively, of the student body. Male students comprised 43.75% of the student body, while female students comprised the remainder. Students majoring in natural sciences accounted for the largest share (20.71%), followed by those majoring in social sciences (17.86%), economics and management (17.86%), pharmacology, medicine, and biomedical engineering (18.75%), engineering (13.57%), and other majors (11.25%). Sophomores accounted for the highest number (38.39%), followed by juniors and seniors at 31.07% and 30.53%, respectively.

4.2 Confirmatory Factor Analysis

Confirmatory factor analysis was used to assess the survey items' construct validity. The analysis's findings are depicted in [Figure 2](#). According to [Hair \(2010\)](#), an acceptable value for the relative chi-square (CMIN/df) is equal to or less than 2; the cut-off point

for the Tucker Lewis Index (TLI), the Comparative Fit Index (CFI), and the Goodness of Fit (GFI) is between zero and one. A successful model has a Root Mean Square Error Approximation (RMSEA) value less than or equal to 0.05. (Schumacker & Lomax, 2004). CMIN/df = 1.981; CFI = 0.96; TLI = 0.952; GFI = 0.95; RMSEA = 0.042; and PCLOSE = 0.97. As a result, the survey data are sufficiently reliable for CFA analysis.

Convergent validity, discriminant validity, and reliability are essential in confirmatory factor analysis. According to Hair (2010), the thresholds for the comparison of indicators in the tests mentioned above are as follows:

- Reliability: Standardized Loading Estimates ≥ 0.5 ; Composite Reliability (CR) ≥ 0.7 ;
- Convergent: Average Variance Extracted (AVE) ≥ 0.5 ;
- Discriminant: Maximum Shared Variance (MSV) < Average Variance Extracted (AVE); Square Root of AVE (SQRTAVE) > Inter-Construct Correlations.

The results show that the Standardized Loading Estimates ≥ 0.5 and the CR of the factors are all greater than 0.7, so the scale's reliability is guaranteed. The AVE values of most of the scales are more significant than 0.5, so the scales are all convergent. Thus, the AVE of all scales is more significant than 0.5, which ensures convergence. All MSV values are less than the AVE, and SQRTAVES are more significant than the Inter-Construct Correlations, so discriminability is guaranteed.

4.3 Structural Equation Modeling

The relationships between OKS, IWB, and AP are presented in Figure 3.

The SEM model test returned the following results: CMIN/df = 1,789 < 2; CFI = 0.971; TLI = 0.965, and are all greater than 0.9; RMSEA = 0.041 < 0.08; and PCLOSE = 0.986 > 0.05, demonstrating that the SEM model is good in terms of analyzing the factors affecting IWB and AP.

The regression coefficients (regression weights) given in Table 5 reflect the impact of the independent variables on the dependent variables. As seen in the survey data, OKT and OKR positively influence IWB. OKT also positively influences AP, whereas OKR does not impact AP. The relationship between IWB and AP is also not supported.

The standardized regression weights are shown in Table 5. OKT has a higher weight than OKR. There is sufficient evidence to show the positive influence of OKT on student AP. Table 6 presents the hypothesis testing results with a significance level of 5%.

Table 3. Descriptive Analysis of the Instrument

Variable and item	Mean	Standard deviation	coefficient of variation	Cronbach's alpha if item deleted	Cronbach's Alpha Reliability Test
Online knowledge transferring					
OKT1	3.54	.751	.212	.730	.754
OKT2	3.10	.855	.276	.722	
OKT3	3.54	.651	.184	.719	
OKT4	3.29	.729	.222	.694	
OKT5	3.32	.761	.229	.687	
Online knowledge receiving					
OKR1	3.74	.725	.194	.805	.820
OKR2	3.69	.727	.197	.806	
OKR3	3.71	.722	.194	.782	
OKR4	4.04	.666	.165	.783	
OKR5	3.86	.704	.183	.741	
Innovative work behavior					
IWB1	3.73	.789	.212	.752	.791
IWB2	3.68	.808	.219	.756	
IWB3	3.65	.808	.221	.727	
IWB4	3.69	.766	.208	.768	
IWB5	3.73	.815	.219	.757	
Academic performance					
AP1	3.34	.672	0.201	.823	.832
AP2	3.63	.656	0.181	.820	
AP3	3.56	.702	0.197	.765	
AP4	3.54	.694	0.196	.735	

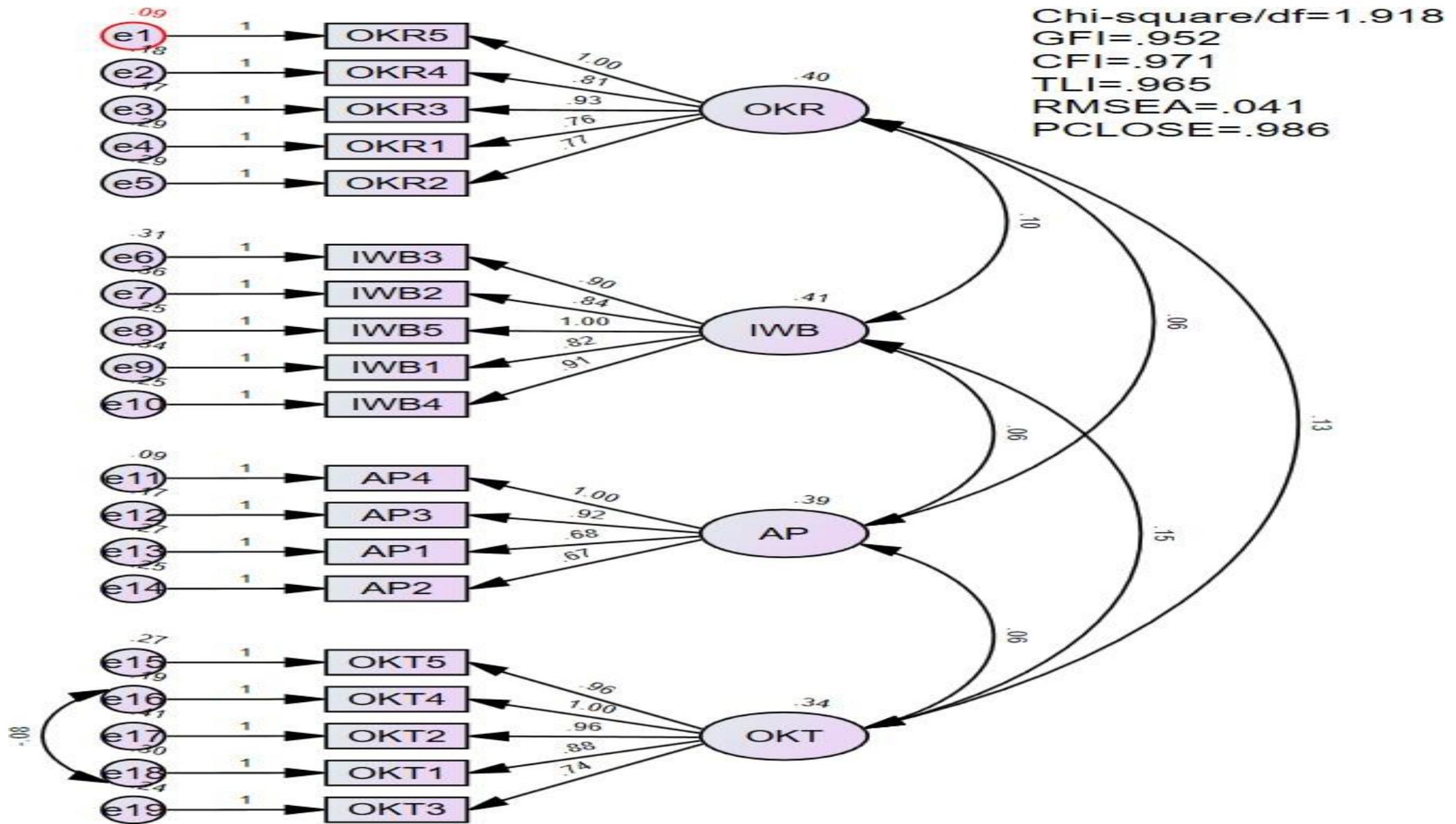


Figure 2. Measurement model

Table 4. Convergent Validity, Discriminant Validity, and Reliability Analysis

Indices Factors	CR	AVE	MSV	SQRTAVE	MaxR (H)	Inter-Construct Correlations			
						OKR	IWB	AP	OKT
OKR	0.878	0.593	0.127	0.770	0.903	0.770			
IWB	0.845	0.523	0.159	0.723	0.851	0.253***	0.723		
AP	0.837	0.569	0.030	0.754	0.882	0.141**	0.143**	0.754	
OKT	0.835	0.504	0.159	0.710	0.843	0.356***	0.398***	0.173***	0.710

Table 5. Regression Weights and Standardized Regression Weights

			Estimate	SE.	CR.	P	Label	Standardized regression weights
IWB	<---	OKR	.129	.050	2.588	.010	Supported	.127
IWB	<---	OKT	.389	.058	6.656	***	Supported	.353
AP	<---	IWB	.075	.053	1.435	.151	Not supported	.078
AP	<---	OKR	.080	.050	1.590	.112	Not supported	.081
AP	<---	OKT	.121	.060	2.012	.044	Supported	.113

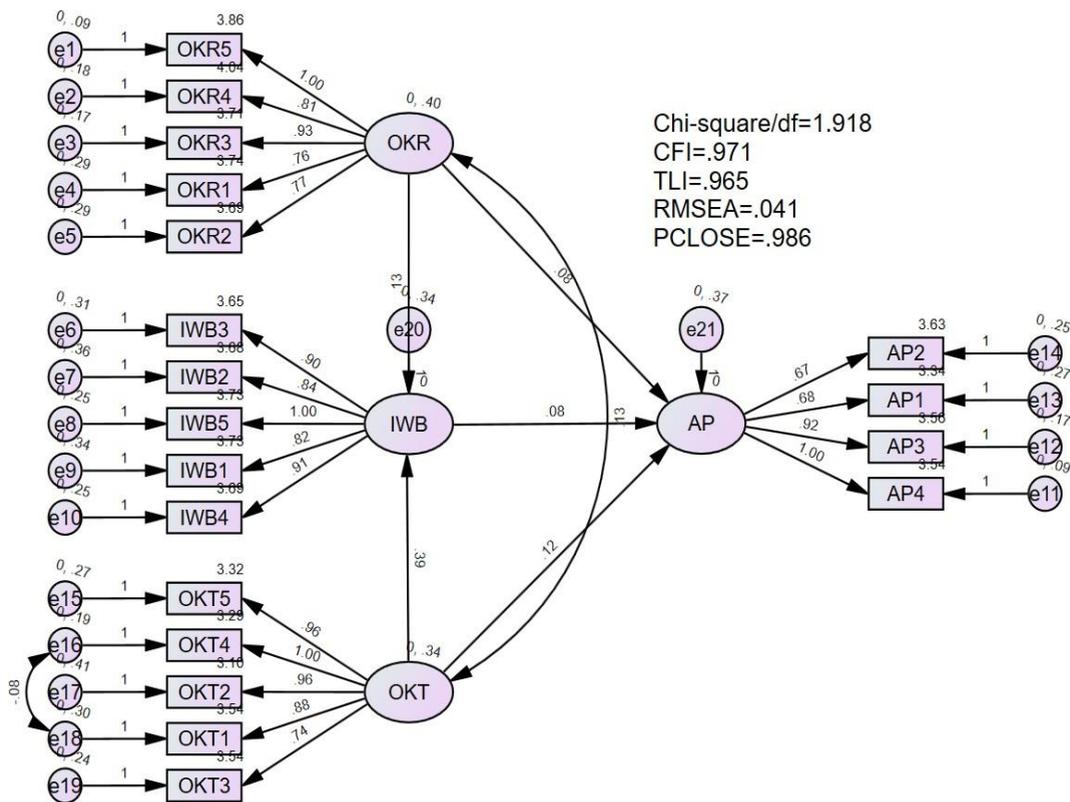


Figure 3. SEM analysis

Table 6. Hypothesis Testing Results

Hypothesis		P-value	Supported
H1a	Online knowledge transferring → Innovative work behavior	0.010	Yes
H1b	Online knowledge receiving → Innovative work behavior	0.000	Yes
H2a	Online knowledge transferring → Academic performance	0.044	Yes
H2b	Online knowledge receiving → Academic performance	0.112	No
H3	Innovative work behavior → Academic performance	0.151	No

Considering the role of the innovative work behavior mediating variable in the relationship between OKT, OKR, and AP, the Standardized Indirect Effects - Two-Tailed Significance was considered. The analysis results are shown in [Table 7](#).

Table 7. Standardized Indirect Effects - Two-Tailed Significance

	OKR	OKT	IWB	AP
AP	.082	.122	...	...
AP2	.071	.013	.154	...
AP1	.072	.012	.159	...
AP3	.077	.011	.150	...
AP4	.072	.013	.153	...
IWB4	.021	.001	...	...
IWB1	.020	.001	...	...
IWB5	.023	.001	...	...
IWB2	.021	.001	...	...
IWB3	.022	.001	...	...

From the above results, it can be seen that there is an indirect relationship between OKR and AP (Sig value = 0.082, which is statistically significant at the 10% significance level). The standardized indirect effect coefficient of OKR on AP is 0.01, and the impact coefficient has a positive value, indicating the positive influence of OKR on AP. Thus, the indirect path analysis results show that the IWB variable has an intermediate effect on the relationship between OKR and AP (P-value = 0.08, which is significant at the 10% level) with a standardized impact coefficient of 0.01. The effect does not appear in the relationship between OKT and AP (P-value = 0.122, which is significant at the 10% level).

5. DISCUSSION AND CONCLUSION

This article aimed to investigate the links between online knowledge sharing, innovative work behaviour, and students' academic achievement. Five hypotheses were developed to accomplish these goals.

The first two examined the connection between online information sharing and innovative work practices. Two factors were used to quantify online knowledge sharing: online knowledge transmission and online knowledge receiving. The findings indicate that online knowledge transfer and receipt have a favourable and significant effect on innovative work behaviour. Students profit from knowledge exchange at university by presenting fresh ideas and solutions. The findings corroborate those of several other authors, including (Eid & Al-Jabri, 2016), Phung (2017) and Fauziyah (2020). The findings are congruent with those of K. N. Nguyen, & Do, T. D (2021) and Tuan Phong Nham (2020), who likewise considered knowledge sharing to be a function of two variables: knowledge donation and knowledge gathering. However, all of the studies mentioned above focus on information sharing within businesses rather than online

sharing within institutions. Thus, our study discovered evidence for a link between the two on online platforms and in higher education settings. The result indicates that students engaging in knowledge transfer or knowledge acquisition can generate new ideas or solutions when information sharing is facilitated.

Our findings indicate that online knowledge transfer positively and significantly improves student academic performance; however, insufficient evidence supports the relationship between online knowledge receipt and student academic performance. However, when inventive work behaviour is considered a mediator of the link, it was discovered that online knowledge receiving has a positive relationship with academic achievement, with a 90% confidence interval, which is consistent with the findings of other academics (Henttonen et al., 2016; T. P. L. Nguyen, Doan, X. H., Tran, M. D., Le, T. T., & Nguyen, Q. T, 2018). This finding is remarkably congruent with Eid and Al-Jabri (2016) findings, who examined the effect of online knowledge sharing via social networks on academic achievement. The findings demonstrate that students benefit from sharing their expertise. Thus, in addition to academic performance antecedent factors such as student learning abilities, parental background, peer influence, teacher quality, and learning infrastructure, as proposed by Tokunbo (2018), gender, student nationality, extracurricular activities, and an interest in pursuing advanced degrees, as proposed by Alnjadat, Hmadi, Samha, Kilani, and Hasswan (2019), knowledge sharing should be considered. However, it should be highlighted that there are inconsistent findings and that there is little data to indicate a link between information sharing and academic success (Henttonen et al., 2016).

Finally, we examined the association between creative work practises and academic success. The data analysis found little evidence to support a relationship between innovative work behaviour and academic success among students. Thus, the findings contradict Nasir (2019) assertion that innovative work behaviour is associated with employee performance.

6. RESEARCH IMPLICATIONS

This research makes a theoretical contribution by examining the relationship between online knowledge sharing, innovative work behaviours, and academic achievement in higher education. While the effects of knowledge sharing on innovative work behaviour and individual performance have been researched in various companies, such linkages in the online environment, particularly in higher education institutions, have received scant attention. The research findings indicated that knowledge sharing is favourably associated with innovative work behaviour and individual success, in this example, student academic performance, in an online context.

This study has several practical consequences for students and institutions of higher education. Students should increase their online knowledge sharing activities to promote their innovative work behaviours and academic performance. For instance, when they

discover something new or intriguing, they should share it with their classmates online. Additionally, they should communicate with other students via the internet. Higher education administrators should encourage students to exchange knowledge online to increase student innovation and academic achievement. This can be accomplished by improving the technology infrastructure for online communication among students.

7. RESEARCH LIMITATIONS

Certain restrictions apply to this investigation. First, students self-reported their online knowledge sharing, innovative work behaviours, and academic achievement assessments. Even though statistical remedies were utilized to eliminate systematic biases, future research should include assessments of student innovative work behaviour and academic success from lecturers in addition to student assessments. Second, the sample size of 560 students was insufficient compared to Vietnam's overall student population of around 1.8 million. We propose a bigger sample size to increase the study's statistical power in future research.

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