

Relationship of Organizational Justice with Knowledge Sharing: Mediating Effect of Professional Learning

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Abstract

The present study aims to focus on examining the impact of organizational justice (OJ) and professional learning (PL) on knowledge sharing (KS), as well as the mediating role of PL in the OJ-KS (OJ-KS relationship). In particular, this study aims to explain the impact of PL dimensions on KS; PL dimensions are conclusion reflection (CR), experimental innovation (EI), new knowledge acquisition (NA). This study uses structural equation modelling methodologies to explore target relationships. The questionnaire was employed to collect data from 1124 full-time college professors in 26 public universities in Guangxi Zhuang Autonomous Region, China. The findings reveal that OJ and PL have significant positive impact on KS, as well as PL plays a partial mediating role on the OJ-KS. However, not all dimensions of PL equally influence KS: while EI and NA positively affect KS, CR show no significant effect. This study highlights the pivotal role of multidimensional PL in enhancing knowledge sharing among college professors and contributes to a deeper understanding of how perceived organizational justice and professional learning interplay to enhance knowledge sharing among college professors.

Key word: Knowledge sharing (KB), Professional learning (PL), Organizational justice (OJ), Conclusion reflection (CR), Experimental innovation (EI), New knowledge acquisition (NA), college professors



Introduction

Effective knowledge sharing plays a key role in developing core competencies and sustainable competitive advantage (Granger *et al.*, 2022; Nonaka, 2009). College professors usually have higher academic qualifications, are proficient in professional field knowledge, master the core competitiveness of universities, have a stronger desire for self-realization, and have higher mobility than ordinary corporate employees. The professional knowledge mastered by college professor is a kind of competitive advantage, so out of consideration of self-interest, they will not share knowledge with others (Raza and Awang, 2021). In the context of university, lack of in-depth discussions and interactive exchanges of teaching-related knowledge not only constrains the teachers' professional development (Zhou *et al.*, 2014), but also hinders knowledge accumulation within the institution (Sun, 2010). If the knowledge of individuals is not shared, the core competitive knowledge of universities will be lost with the flow of teachers. The characteristics of college professor make knowledge sharing in universities face great challenges. Hence, it is of great significance to study the influencing factors of college professor's knowledge sharing.

A lot of previous studies (Akram *et al.*, 2017; Tran Pham, 2023) have confirmed strong relationships between organizational justice and knowledge sharing. Significant impact of organizational justice on knowledge-

sharing behaviors has been observed (Akram *et al.*, 2020). In 2006, all provinces in China began to centralize the pre-job training and educational technology training of university teachers in their provinces, and uniformly arrange them to attend relevant training in teacher training centers of universities in their provinces and obtain corresponding certificates (Chao, 2010; Liu & Wang, 2015; Zhu & Yang, 2018). The professional training provided by universities can enhance the professional learning of their teachers (Hu *et al.*, 2021). However, whether college professors' professional learning can enhance the level of their knowledge sharing is a question worthy of further exploration. Existing research has demonstrated that organizational justice has a significant positive impact on teachers' professional learning (Zheng & Chen, 2018). When college professors feel respected and fairly treated within the university, they perceive professional learning as a contributive behavior to reciprocate the university. Therefore, the role of professional learning in mediating between organizational justice and knowledge sharing is an area of interest for this study.

The research objectives of this paper mainly include the following two aspects: 1. to study the effect of college professors' professional learning (PL) and PL dimensions on knowledge sharing behavior; and 2. to explain the impact of college professors' professional learning (PL) on the relationship between the organizational justice (OJ) and knowledge



sharing (KS). The results from this paper are expected to benefit the college professors' knowledge sharing literacy in China and promote related authorities, university management and college professors, to set up future policies or education content to create a harmonious atmosphere in organization, improve college professors' professional learning and increase their knowledge sharing behavior.

Conceptual frameworks

Knowledge sharing

In the conceptualization of knowledge sharing, research has defined it at the organizational level as individuals provide personal views regarding professional knowledge and experience within the organization (Bartol *et al.*, 2002). Some studies, however, define it at the individual level as the sharing of behavioral, cognitive, or affective evaluations of organizational environment, etc., when individuals possess the capability to improve the current characteristics of the organization (Lin, 2007). So can conclude that knowledge sharing is the individual mutual exchange of knowledge, the process of creating new knowledge together with each other. Hence, this paper defines teacher knowledge sharing as the behavior where college professors share about their own education professional knowledge, teaching arrangement, education management experience, electronic

courseware, and explicit and implicit knowledge.

In the dimension of knowledge sharing, Bock (2005) used the most classic division of explicit knowledge and tacit knowledge to measure explicit knowledge sharing and tacit knowledge sharing. Compared with single-dimensional scales, three-dimensional scales can more comprehensively display the meaning of knowledge. The dimensions used in this study was based on the scale of knowledge sharing behavior proposed by Yang & Chao (2007) based on Chiu *et al.* (2006). Compiled and developed according to the Chinese context, self-assessed by college professors. The dimensions, including sharing quality, collaborative spirit, and practice performance. The formation of knowledge sharing is influenced by both individual and organizational factors. At the individual level, factors primarily encompass one's inherent disposition, emotional trust, cognitive trust and self-efficacy (Wang & Du, 2011). Organizational factors, on the other hand, entail aspects such as organizational structural characteristics and interdepartmental interactions (Lin, 2008), as well as organizational culture and ethos (Chen & Cheng, 2012).

Organizational justice

Organizational justice perception is an individual's personal evaluation of the ethical and moral standing of managerial actions (Cropanzano *et al.*, 2007). This concept emphasizes the personal assessment of whether the conduct of



management is aligned with both societal moral norms and one's own aspirations. The research on organizational justice traces its origins to Adams (1965)'s equity theory, which focuses on the distribution outcomes received by individuals. This concept later became known as distributive justice. Distributive justice refers to the extent to which employees perceive the fairness of the outcomes of reward distribution (Greenberg, 1991). Greenberg (1990) defined procedural justice as the fairness of the processes used in decision-making within the workplace. In this context, procedural justice refers to individuals' perceptions of the fairness of management processes. Bies and Moag (1986) first introduced the concept of interactional justice. Greenberg (1990) further delineated interactional justice into interpersonal justice and informational justice. Interpersonal justice refers to whether superiors treat subordinates with respect in their interactions, while informational justice pertains to whether superiors provide sufficient relevant information regarding the outcomes of distribution. Colquitt *et al.* (2001) conducted a comprehensive systematic review of prior research. In specific contexts, the perceived organizational justice refers to an individual's perception of fairness in decisions, systems, and related measures that affect their interests within the organization (Ma *et al.*, 2014), encompassing four aspects: interpersonal justice, informational justice, distributive justice and procedural justice. The organizational justice perception of college professors refers to their personal

evaluation of the fairness of the universities' resource allocation processes and outcomes, as well as their perception of respect from superiors and the distribution of information in interpersonal interactions.

Professional learning

The concept of teacher professional learning has shifted from "teacher professional development". As early as the 1990s, the main concepts in this field included "teacher training", "teacher professional development", "teacher education", etc. (Wang, 2011). Schön (2008) believed that the professional learning of teachers is not merely the simple transfer of knowledge or the acquisition of skills through textbooks or training courses, nor is it solely the observation and imitation among peers. Rather, it is an integration of principles and practices, a coherent theory of action, aimed at better serving the profession and achieving the purpose of transformation.

Kwakman (2003) constructed a teacher professional learning scale encompassing three dimensions: collaborative activities, individual activities, and teaching activities. Building upon Kwakman's (2003) scale, Thoonen *et al.* (2011) redesigned the instrument, incorporating two key dimensions: experimentation and reflection, as well as the acquisition of new information. Furthermore, the scale developed by in de Wal *et al.* (2014) comprises a four-factor model, including reading, experimentation, collaboration, and reflection. Borrowing from established measurement scales, Liu



(2016) developed a teacher professional learning questionnaire within the Chinese cultural context, comprising four dimensions: colleague collaboration, conclusion reflection, experimental innovation, new knowledge acquisition. Robinson *et al.* (2008) found that principal leadership influences student learning outcomes through its impact on teacher professional learning.

Literature review and hypothesis development

Organizational justice and professional learning

In research concerning the perceived organizational justice and teacher professional learning, although there is no direct investigation specifically targeting the impact of organizational justice on teacher professional learning, it is discernible from various studies that there exists a certain degree of correlation between the perceived organizational justice and teacher professional learning.

Organizational justice fosters an atmosphere of equity and harmony, where both the work environment and individual psychological factors among teachers can significantly influence their professional learning. Teacher professional learning, as a behavior aimed at enhancing teachers' individual qualities and consequently facilitating the achievement of school teaching objectives, can be viewed, from the perspective of social exchange theory, as a form of exchange between teachers and the school. Teachers invest "costs" in

their professional learning, which is influenced by the "rewards" they receive from the school. These rewards encompass both economic "rewards" as well as non-economic rewards (support, trust, fairness, respect, etc.). When teachers perceive themselves as respected and fairly treated within the school environment, they are inclined to regard their professional learning as a reciprocal behavior towards the school, thus contributing back to the institution. Research in relevant domains has already substantiated this point. For instance, Wang (2015) concluded in interviews with principals that an equitable organizational environment indeed facilitates teachers' professional learning. Danielson (2011) found a significant correlation between teacher evaluation management policies and teacher professional learning. In other words, a robust teacher evaluation system can ignite enthusiasm for teacher professional learning, thereby enhancing the level of teacher professional development. Yan and Zhang (2010), through a study utilizing samples of employed personnel within enterprises, demonstrated that organizational members' perceptions of the external environment can influence individual behavioral changes.

Multiple empirical studies have confirmed the impact of perceived organizational justice on teacher work behavior. Zapata-Phelan *et al.* (2009) posited in their research that individual perceptions of interactional justice can influence internal motivation and subsequently impact individual

innovative behavior. Additionally, Chi *et al.* (2021) found in their study that the perceived organizational justice among college professors significantly affects their organizational citizenship behavior. Lyu (2016) conducted a study with a sample of 254 teachers, confirming that the perceived organizational justice positively influences teachers' level of

work engagement. Based on the above literature, the present study tries to evaluate the following relationships (Figure 1):

H₁. There exists a significant and positive relationship between the Organizational justice and Professional Learning.

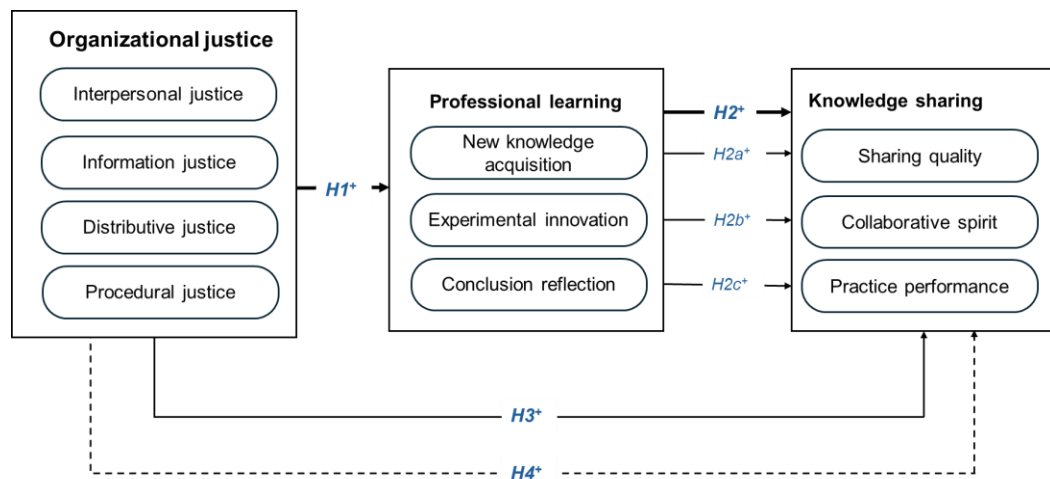


Figure 1 Hypothesized model

Professional learning and knowledge sharing

Teachers' professional learning is not only a self-directed learning process for individual self-improvement, but also a kind of payback for the school's work. Teacher professional learning is conducive to teachers' professional development and self-improvement (Chen, 2017). Knowledge sharing is particularly important for the long-term development of enterprises by facilitating

the smooth flow of knowledge in the organization and sublimating it into the core competitiveness of enterprises (Li, 2005). In this study, the social exchange theory proposed by Blau (1946) is an important theoretical basis for explaining the relationship between teachers' attitudes and behaviors. Teachers are a member of the school organization, teachers have the need for self-improvement, and only based on satisfying their personal needs will teachers interact and exchange knowledge



and personal experience through various channels, so that knowledge can spread from the experience of a single individual to the organizational level, to realize the transformation between individual learning and organizational learning. Teacher professional learning contributes to the facilitation of knowledge sharing behaviors among faculty members, which has been substantiated by numerous studies. For instance, Grant (1996) elucidated that teachers' acquisition of new knowledge from external sources and subsequent knowledge sharing can expand the knowledge base required for organizational innovation. Zhang (2014) demonstrated that teams with higher levels of reflective capacity exhibit a stronger willingness among members to share knowledge. Wang (2012) investigated and corroborated that innovative behaviors of organizational members can promote knowledge sharing activities among them. In the university context, the experimentation and implementation of innovative outcomes can stimulate communication and sharing among organizational members. Chen and Hu (2016) study, with university faculty as the sample, found a significant positive correlation between knowledge sharing and knowledge innovation. Based on the above discussion, this paper proposes the following hypothesis (Figure 1):

H₃. There exists a significant and positive relationship between professional learning and knowledge sharing of college professors.

H_{2a}: College professors' conclusion reflection positively affects knowledge sharing.

H_{2b}: College professors' experimental

innovation positively affects knowledge sharing.

H_{2c}: College professors' new knowledge acquisition positively affects knowledge sharing.

Organizational justice and knowledge sharing

One primary reason why teachers are hesitant to share knowledge is their concern that candidly sharing their expertise might compromise their competitive edge, thereby potentially impacting their professional development (Zhou *et al.*, 2014). At this juncture, the ability of school administrators to foster a fair and harmonious organizational atmosphere emerges as a pivotal factor influencing knowledge sharing. Organizational justice refers to the subjective perception and feeling of employees regarding the fairness of the organization in allocating resources and implementing various rewards and disciplinary measures. Bock *et al.* (2005) believes that when the organizational culture promotes fairness, encourages communication and innovation, employees will be more willing to share knowledge. Hsu (2006) concludes that active learning, encouragement, and creating a shared environment of open information can all promote knowledge sharing. Organizational culture can promote the implementation of knowledge management. Through effective communication, team members can understand the will and ability of themselves and others, increase the safety, belonging and identity of team members, and increase the willingness to share knowledge. shared behavior. Dougherty (1992) believes that effective communication within the team will reduce misunderstandings and obstacles between people and improve the



efficiency of knowledge sharing. According to the perspective of equity theory, when employees perceive unfairness in the allocation of organizational resources and decision-making, they may resort to various strategies to reduce their levels of engagement and investment. For knowledge workers within an organization, reducing knowledge-sharing behaviors can be viewed as another situational response to perceived organizational unfairness.

Organizational justice is a subjective perception held by individuals. When employees perceive fairness within the organization, knowledge workers, from a perspective rooted in reciprocity, are inclined to augment their willingness to engage in knowledge sharing endeavors. According to McDermott (2001), members of a highly cohesive team usually exhibit high levels of commitment to team affairs, low levels of absenteeism, high levels of cooperation in performing tasks, and willingness to share knowledge. Yuan & Yao (2010) confirmed in related research that the knowledge sharing atmosphere within the scientific research team not only directly promotes members' knowledge innovation, but also positively regulates the relationship between innovative personality and knowledge innovation. Consequently, within the context of universities, organizational fairness engenders a sense of job satisfaction among teachers, thereby amplifying the likelihood of knowledge-sharing behaviors emerging. Therefore, based on above literature review, this paper proposes the following hypotheses (Figure 1):

H₃. There exists a significant and positive relationship between the organizational justice and Knowledge Sharing.

Mediating role of PL

Organizational justice has an important predictive effect on the organizational citizenship behavior of college professors through the organizational commitment (Zhao, 2020). An equitable environment within the organization facilitates enhanced self-efficacy and job satisfaction among teachers. When teachers experience a heightened sense of self-efficacy, they will be inclined to invest greater passion and effort into their educational work (Guskey, 1988). Teacher professional learning not only helps improve one's own professional competence, but also facilitates the smoother achievement of the school's development goals. Therefore, professional learning is not merely a self-interested individual behavior, but also a socially contributive act. Organizational equity can more readily evoke a sense of duty and trust among teachers, thereby promoting their engagement in professional learning (Liu, 2016). The various dimensions of teacher professional learning can serve to facilitate knowledge sharing behaviors among teaching professionals. Grant (1996) contended that individual acquisition of critical external knowledge resources can, through knowledge sharing behaviors, allow the diffusion of personal and dispersed new knowledge into collective and systemic organizational knowledge. Zhang (2014) demonstrated that teams with higher levels of reflective capacity exhibit stronger willingness among members to engage in knowledge sharing. Jiang (2016) highlighted that in



the process of knowledge sharing, teachers' professional knowledge continually expands, as new and existing knowledge undergo constant transformation, thereby enabling more effective knowledge innovation. Therefore, professional learning plays a key role in knowledge sharing behavior of the organization. Tu and Guo (2016) posited that as organizational members possess a greater knowledge reserve, their self-efficacy will be enhanced, resulting in more frequent exchange and interaction among them. Moreover, teachers' pedagogical innovative behaviors are conducive to improving teaching effectiveness, thereby elevating their self-efficacy (Mathisena and Bronnick, 2009). Individuals with high self-efficacy are typically more inclined to share their knowledge with other members within the organization (Li, 2015). Matsuo (2024) focused on evaluating the role of knowledge self-efficacy as a mediator on the relationship between strengths use support and knowledge sharing of the health-care organizations, but no study has focused on investigating the mediating role of PL on four dimensions of POJ and KS of the college professors.

Based on the above discussion we seek to understand if PL mediate the relationship between the four dimensions of OJ (interpersonal justice, informational justice, distributive justice, procedural justice) and KS of the organization. Therefore, the following relationships are proposed (Figure 1):

H4. Professional learning plays a

mediating role in the relationship between organizational justice and knowledge sharing.

Methodology

The survey method used in this study is an online questionnaire survey. Distribution questionnaires to a random sample of college professors by multi-stage sampling techniques (Taherdoost, 2016) in 26 public universities in Guanxi Province, China. First, randomly selected 20 administrators from 26 college administrators known through personal relationships such as relatives and friends. Invite administrators from 20 public university offices to assist in completing the questionnaire via email or WeChat. Ensure that each of the 20 administrators randomly distributes 75 online questionnaires. A total of 1500 questionnaires were distributed.

Sample description

Table 1 presents the characteristics of the sample. Data were gathered using random sampling, resulting in a total of 1,500 respondents. These responses were obtained through a questionnaire designed to measure the various constructs of the research model. All 1,500 questionnaires were distributed to full-time college professors across 26 universities in Guangxi Province, China. After excluding invalid or incomplete responses, 1,124 valid questionnaires remained, yielding an effective response rate of 74.93%.

Table 1 Sample characteristics

Category	N	Percentage
<i>Gender profile</i>	1124	
Male	517	46.0%
Female	607	54.0%
<i>Age profile</i>	1124	
<=35	205	18.2%
36-45	766	68.1%
>45	153	13.6%
<i>Marital status</i>	1124	
Single	288	25.6%
Married	666	59.3%
Cohabiting	170	15.1%
<i>Professional title</i>	1124	
Lecturer	205	18.2%
Associate Professor	766	68.1%
Professor	153	13.6%
<i>Profession</i>	1124	
Medical Sciences	596	53.0%
Humanities and Social Sciences	274	24.4%
Natural Sciences	154	13.7%
Other	100	8.9%

Questionnaires

The items in each scale used Likert's five-point scoring which ranges from 1 (strongly disagree) to 5 (strongly agree). The questionnaire of organizational justice was adapted from the scale of Liu *et al.* (2013) scale based on Colquitt's (2001) organizational justice Scale, which was revised according to the Chinese context, and was self-assessed by college professors. The four dimensions of OJ consisted of 18 items. The professional learning scale adopts Liu (2016) scale based on Kwakman (2003) professional learning scale. The items measuring the "colleague collaboration" dimension in the variable of professional learning are closely related to the "collaborative spirit" in the independent variable of knowledge sharing behavior. Therefore, in the

professional learning scale, it is recommended to remove the "colleague collaboration" dimension from the scale. Therefore, the professional learning scale consisted of 20 items related to three dimensions. The questionnaire for studying KB proposed by Yang & Long (2008) based on Chiu *et al.* (2006). It consists of 15 items.

Results and analysis

Reliability and validity tests

This study employed the Cronbach's alpha coefficient and Corrected Item-Total Correlation (CITC) to assess the reliability of the questionnaires. The Cronbach's Alpha coefficient for each scale surpassed 0.7, indicating good



reliability (Nunnally, 1978). The CITC values for items CR2, NA5, FJ2, PJ2, CS2 and SQ2 are both less than 0.4. Deleting these items can further improved the Cronbach's Alpha coefficients for the respective scales (Wu, 2010). Therefore, it is recommended to remove these six items. Construct validity was tested using Exploratory Factor Analysis (EFA). According to Wu (2010), before conducting EFA the Kaiser-Meyer-Olkin (KMO) values were found to above 0.9 while Cronbach alpha result reached a significance level of 0.05, indicating a highly suitable dataset for factor analysis (Black et al., 2010). In Exploratory Factor Analysis (EFA) using factor analysis, CR5, EI5 and DJ2 have a loading greater than 0.5 on its primary factor but loading exceeding 0.4 on two factors simultaneously. The elimination of these items may alter the factor structure (Tracey *et al.*, 1999). After removed these items, further factor analysis on the remaining items, the factor loadings of

each scale exceeded 0.5 and did not surpass 0.4 on other common factors, indicating good structural validity for each scale. Examining convergent validity involved ensuring that factor loadings had absolute values of at least 0.5, with 0.7 or above considered optimal. The Average Variance Extracted (AVE) should exceed 0.5, and the construct reliability should be higher than 0.7 (Hair, 2014). The summary of convergent validity and reliability analysis are presented in Table 2. All indicators in the examination meet the recommended criteria. Consequently, the questionnaires exhibited strong convergent validity.

As shown in Table 3, the square root of AVE is greater than the Pearson correlation coefficients between the dimension of variables. So, the questionnaires used in the study has good discriminant validity (Fornell and Larcker, 1981), and the subsequent hypothesis testing can be carried out.

**Table 2** Summary of validity and reliability analysis

Variable/Construct	Factor loading (>0.5)	AVE (>0.5)	CR (>0.7)	Cronbach alpha
<i>Conclusion reflection</i>		0.710	0.936	0.912
CR1	0.922			
CR3	0.873			
CR4	0.867			
CR6	0.739			
CR7	0.876			
CR8	0.765			
<i>Experimental innovation</i>		0.630	0.894	0.903
EI1	0.863			
EI2	0.833			
EI3	0.694			
EI4	0.853			
EI6	0.708			
<i>New knowledge acquisition</i>		0.574	0.868	0.832
NA1	0.629			
NA2	0.809			
NA3	0.76			
NA4	0.914			
NA6	0.638			
<i>Interpersonal justice</i>		0.617	0.865	0.861
IJ1	0.767			
IJ2	0.741			
IJ3	0.784			
IJ4	0.846			
<i>Informational justice</i>		0.644	0.878	0.821
FJ1	0.867			
FJ3	0.839			
FJ4	0.779			
FJ5	0.718			
<i>Distributive justice</i>		0.595	0.854	0.869
DJ1	0.836			
DJ3	0.69			
DJ4	0.769			
DJ5	0.784			
<i>Procedural justice</i>		0.525	0.768	0.731
PJ1	0.726			
PJ3	0.738			
PJ4	0.709			
<i>Collaborative spirit</i>		0.689	0.898	0.791
CS1	0.731			
CS3	0.879			
CS4	0.768			
CS5	0.927			
<i>Practice performance</i>		0.797	0.940	0.939
PP1	0.918			
PP2	0.906			
PP3	0.847			
PP4	0.899			
<i>Sharing quality</i>		0.732	0.932	0.902
SQ1	0.808			
SQ3	0.882			
SQ4	0.872			
SQ5	0.912			
SQ6	0.798			

Note(s): CR is the composite reliability, AVE is average variance extracted; factor loadings are significant at $p < 0.001$

Table 3 Discriminant validity

Scales	Dims	1	2	3	4	5	6	7	8	9	10
Professional Learning	CR	0.843									
	EI	0.647	0.794								
	NA	0.422	0.513	0.758							
Perceived Organizational justice	IJ				0.785						
	FJ				0.620	0.802					
	DJ				0.600	0.703	0.771				
	PJ				0.539	0.555	0.472	0.725			
Knowledge Sharing	CS								0.83		
	PP								0.594	0.893	
	SQ								0.510	0.556	0.856

Path analysis results

From the path coefficient test table 4, it can be observed that college professors' perceived organizational justice ($\beta=0.560$, $P<0.001$) can influence professional learning significantly at the 0.1% level. College professors' professional learning ($\beta=0.261$, $P<0.001$) can influence knowledge sharing significantly at the 0.1% level. College professors' perceived organizational justice ($\beta=0.427$, $P<0.001$) can influence knowledge sharing significantly at the 0.1% level.

Furthermore, the impact of conclusion reflection on knowledge sharing is negative ($\beta = -0.003$, $P > 0.05$), but not significant. Experimental innovation ($\beta=0.212$, $P<0.001$) has significant

positive effect on college professors' knowledge sharing at the 0.1% level. New knowledge acquisition ($\beta=0.073$, $P<0.05$) has significant positive effect on college professors' knowledge sharing at the 5% level.

Interpersonal justice ($\beta=0.226$, $P<0.001$) has significant positive effect on college professors' knowledge sharing at the 0.1% level. The impact of informational justice on knowledge sharing is negative ($\beta = -0.088$, $P > 0.05$), but not significant. The impact of distributive justice on knowledge sharing is positive ($\beta = 0.070$, $P > 0.05$), but not significant. Procedural justice ($\beta=0.114$, $P<0.05$) has significant positive effect on college professors' knowledge sharing at the 5% level.

Table 4 The path coefficients between variables

Path analysis			Estimate	S.E.	C.R.	P
Organizational justice	→	Professional Learning	0.560	0.047	12.987	***
Professional Learning	→	Knowledge Sharing	0.427	0.035	9.102	***
Conclusion reflection	→	Knowledge Sharing	-0.003	0.019	-0.066	0.948
Experimental innovation	→	Knowledge Sharing	0.212	0.026	4.569	***
New knowledge acquisition	→	Knowledge Sharing	0.073	0.035	2.053	0.040
Organizational justice	→	Knowledge Sharing	0.261	0.034	6.073	***
Interpersonal justice	→	Knowledge Sharing	0.226	0.03	4.697	0.001
Informational justice	→	Knowledge Sharing	-0.088	0.029	-1.355	0.176
Distributive justice	→	Knowledge Sharing	0.07	0.027	1.302	0.193
Procedural justice	→	Knowledge Sharing	0.114	0.026	2.493	0.013

Note: ***indicates $p < 0.01$

Mediation analysis

The tests for the mediation relationships were shown in the table 5 below. From Table 5, we found that the total effect of organizational justice on knowledge sharing is 0.500, with a confidence interval of [0.415, 0.58], which does not include 0, indicating the presence of a total effect. The direct effect is 0.261, with a confidence interval of [0.163, 0.361], which does not include 0, indicating the

presence of a direct effect. The direct effect accounts for 52.2% of the total effect. The indirect effect is 0.239, with a confidence interval of [0.176, 0.315], which does not include 0, indicating the presence of an indirect effect. The indirect effect accounts for 47.8% of the total effect. Therefore, the college professors' professional learning partially mediates the relationship between organizational justice and knowledge sharing.

Table 5 Mediation effects

	Estimate	p value	Lower	Upper	Effect proportion
Total effect	0.500	0.000	0.415	0.581	—
Direct effect	0.261	0.000	0.163	0.361	52.2%
Indirect effect	0.239	0.000	0.176	0.315	47.8%

Summary of hypothesis testing results

This study empirically examines the relationships between professional learning (conclusion reflection, experimental innovation, acquiring new knowledge), perceived organizational justice and knowledge sharing, using

college professors as the research subjects. Based on the results obtained from data analysis using SPSS 23.0 and AMOS 23.0 software, the specific verification of the hypotheses proposed in this study is presented in Table 6. From the table, it can be observed that all hypotheses are supported.

Table 6 Summary of hypothesis testing results

No.	Hypothesis	Test Results
H ₁	College professors' OJ positively affects the PL.	Supported
H ₂	College professors' professional learning positively affects the knowledge sharing.	Supported
H _{2a}	College professors' conclusion reflection positively affects knowledge sharing.	Not supported
H _{2b}	College professors' experimental innovation positively affects knowledge sharing.	Supported
H _{2c}	College professors' new knowledge acquisition positively affects knowledge sharing.	Supported
H ₃	College professors' OJ positively affects KS.	Supported
H ₄	Professional learning has a mediating effect between the OJ and KS.	Supported

Conclusion and discussion

Conclusion

This paper studied the impact of perceived organizational justice (OJ) and professional learning (PL) on knowledge sharing (KS), as well as the mediating role of PL in the OJ-KS (OJ-KS relationship) of college professors in 26 public universities in Guangxi Zhuang Autonomous Region, China. The findings highlight that perceived organizational justice significantly enhances professional learning, which in turn promotes knowledge sharing. However,

the influence of different dimensions of organizational justice varies. Specifically, interpersonal justice and procedural justice positively affect knowledge sharing, while informational justice and distributive justice do not show a significant impact. Moreover, professional learning significantly drives knowledge sharing, with experimental innovation (EI) and new knowledge acquisition (NA) being critical factors that promote knowledge sharing. Conversely, conclusion reflection (CR) does not significantly influence knowledge sharing. Importantly, professional learning serves as a partial mediator in the relationship between perceived organizational justice



and knowledge sharing. This suggests that organizational justice and professional learning are crucial in understanding and predicting the knowledge sharing behaviors of Chinese college professors.

Discussion

The results of this study align with the existing literature on knowledge sharing (Jiang *et al.*, 2014; Nonaka, 2009; Zhang & Fang, 2005; Nguyen *et al.*, 2019; Ritala *et al.*, 2015) and highlights the importance role of perceived organizational justice and professional learning in enhancing knowledge sharing literacy. In this study, the perceived organizational justice consists of interpersonal justice, informational justice, distributive justice and procedural justice, and professional learning consists of conclusion reflection, experimental innovation and new knowledge acquisition. More specifically, it is show that Chinese college professors' knowledge sharing behavior can be affected by their perceived organizational justice and professional learning. This finding contributes additional support to the theories proposed by Bock *et al.* (2005), Hsu (2006) and Wood (2007).

Furthermore, this study reveals the impact of three dimensions of professional learning (conclusion reflection, experimental innovation and new knowledge acquisition) on knowledge sharing among college professors in China. The findings of this study reveal that among the three dimensions of PL, the conclusion reflection dimension to be not significantly related to knowledge sharing, which is not consistent with

Zhang (2014). The results imply that higher level of conclusion reflection of Chinese college professors would decrease the knowledge sharing behavior. The possible reasons for this outcome could be that college professors, after acquiring new knowledge through professional learning, engage in reflection resulting in tacit knowledge. Implicit knowledge is highly individualized, making it challenging to standardize and formalize (Eraut, 2000); it cannot be easily conveyed through specific words or numerical expressions, nor readily shared with others. Zhang (2014), Wang (2012) and Grant (1996) find that conclusion reflection, experimental innovation and new knowledge acquisition are related to knowledge sharing behavior. Thus, this study adds evidence that Chinese college professors' conclusion reflection dimension of PL is no related to knowledge sharing behavior, but experimental innovation and new knowledge acquisition are significantly positively related to knowledge sharing behavior.

The study also found that college professors' professional learning partly mediates the relationship between perceived informational justice and knowledge sharing in universities. This suggests that college professors who feel respected and fairly treated in universities are more likely to gain confidence through professional learning Li *et al.* (2014) and are willing to share their knowledge with others. The professional learning behaviors of educators constitute a form of employee conduct aimed at elevating



their individual pedagogical acumen, thereby facilitating the achievement of institutional developmental objectives within educational settings. Many teachers perceive professional learning as an act of dedication towards their respective schools. According to Li (2014), viewed through the lens of social exchange theory, educators, when they perceive respect and equitable treatment within the school environment, reciprocate through engagement in professional learning activities as a means of reciprocating to the institution. Part of the impact of perceived organizational justice on knowledge sharing is achieved through enhancing college professors' professional learning. These studies demonstrated that college professors who are more actively involved in professional learning activities are inclined to be more willing to share their knowledge and experiences. However, in the research on knowledge sharing, studies that consider professional learning as a mediating variable are rare.

Implications

The results of this paper can provide some human resource management (HRM) recommendations to related authorities, university administrators and college professors regarding the important role of organizational justice and professional learning to promote knowledge sharing among Chinese college professors. Based on the result that professional learning has a positive effect on knowledge sharing behavior, related authorities and

universities need to actively explore new mechanisms for teachers' professional development, reforming the teacher qualification certificate system, and formulating plans for cultivating outstanding college professors to stimulate more knowledge-sharing behaviors. Based on the result that perceived organizational justice has a positive effect on knowledge sharing behavior, university administrators should demonstrate respect and care in communication, provide clear guidance on specified procedures and processes, maintain honesty and justice in procedural dissemination, and create a harmonious atmosphere for knowledge sharing.

Based on the result that professional learning plays a significant mediating role in the relationship between informational justice and knowledge sharing, college professors should seek and participating in university teaching training and guidance can enhance teaching skills and draw on the work experiences of predecessors to elevate their professional learning and enhancing core competitiveness. If the organizational environment in which college professors are located makes them feel valued and treated fairly, in exchange for the interests of the university, they will be more willing to share more high-quality knowledge, thereby contributing to the overall success of the university. Overall, this study underscores the importance of fostering a just organizational environment and supporting continuous professional learning to enhance knowledge sharing within academic institutions. These



insights can guide policymakers and administrators in designing strategies to improve knowledge dissemination and collaboration among college professors.

Limitations and further research

This study consists of three limitations. Firstly, the study was limited to full-time college professors in public universities in Guangxi with a small geographical scope.

In the future, it is hoped that the research scope can be further expanded to obtain a more diverse sample. Secondly, this study primarily used Questionnaire Star as the platform for data collection, and the data acquisition time points were concentrated. Future research could collect data in stages to enhance the representativeness and rigor of the study. Thirdly, this study did not analyze the relationships between the dimensions of organizational justice and other variables, future research could test them in Chinese cultural context.

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