The Impact of Transformational Leadership and Ethical Leadership on Tacit Knowledge Sharing Behavior of Full-time University Teachers : The Mediating Role of Transactive memory systems and Value Orientation

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Abstract

The objectives of this research were: (1) to analyze the relationship between leadership style, value orientation, and the transactive memory system the values orientation among full-time university teachers (2) to analyze the impact of value orientation and the transactive memory system on tacit knowledge sharing behavior. (3) to analyze the impact of leadership style on tacit knowledge sharing behavior, and (4) to study the mediating role of value orientation and the transactive memory system in the relationship between leadership style and tacit knowledge sharing behavior.

The research method was a survey research and data analysis tools such as SPSS and AMOS. Population were Full-time university teachers total of 800 will be distributed, with to meet the study's requirements of various undergraduate universities. Sample were 560 Full-time university teachers in undergraduate institutions nationwide. Selecting with convenience sampling questionnaires will be distributed, with a target response and effective rate of around 70% to meet the study's requirements. The statistics used for data analysis included frequency, percentage, mean, Standard Deviation, Exploratory Factor Analysis, Confirmatory Factor Analysis, and Structural Equation Modeling was employed.

Research findings were: (1) Transformational leadership has a direct impact on altruistic values, self-actualization values, and transactive memory systems. Full-time university teachers. (2) Ethical leadership has a direct and significant impact on altruistic values, self-achievement values, and transactive memory systems. Ethical leaders actively promote altruistic values, emphasize the importance of teamwork and mutual assistance through daily words and actions, and team activities. (3) Transformational leadership and ethical leadership both have positive effects on the transactive memory system. (4) Transformational leadership and ethical leadership both have a positive impact on altruistic values. However, when comparing the influence of these two leadership styles. (5) There is a positive correlation between self-achievement value orientation and tacit knowledge sharing behavior. Specifically, self-achievement value orientation can significantly influence the tacit knowledge sharing behavior of full-time university teachers. And (6) Significant positive correlation between the mediating variables (including altruistic values, self-achievement values, and transactive memory systems) and the dependent variable (tacit knowledge sharing behavior).

Keywords: Transformational Leadership, Ethical Leadership on Tacit Knowledge, Sharing Behavior, Full-time University Teachers

Introduction

Transformational and ethical leadership styles can complement each other. Transformational leadership encourages innovation and learning, contributing to the generation and sharing of tacit knowledge. Ethical leadership emphasizes morality and integrity, helping to maintain the ethical use of tacit knowledge. The combination of these two leadership styles may create an environment conducive to knowledge management and transactive memory systems. The absence of transformational leaders advocating innovation and creativity, or the lack of ethical leaders emphasizing organizational identity, within the full-time teacher team, will inhibit the formation of an transactive memory system for tacit knowledge sharing (Li Wei et al., 2020). Secondly, value orientation research can help understand the motivations behind full-time university teachers' tacit knowledge sharing behavior. The values and beliefs demonstrated by full-time university teachers in tacit knowledge sharing, as well as their cognitive evaluation of tacit knowledge sharing, are important factors influencing their behavior. If full-time university teachers believe that tacit knowledge sharing has positive value for academic exchange, disciplinary development, and research quality improvement, they will be more willing to share tacit knowledge and experience. Therefore, considering the value orientation of full-time university teachers can better predict and understand tacit knowledge sharing behavior.

From the background introduction, it is evident that effective sharing of tacit knowledge among full-time university teachers plays an important role in increasing the knowledge stock of the teacher team and enhancing research and teaching levels. However, due to the unique attributes of tacit knowledge, full-time university teachers often find it difficult to actively participate in tacit knowledge sharing activities (Xie Yaohui et al., 2022). The leadership style, transactive memory system, and value orientation of full-time university teachers all have a significant impact on tacit knowledge sharing behavior. However, the ultimate impact and influencing mechanisms of these factors on tacit knowledge sharing behavior are not yet clear and require further research. Therefore, considering the actual situation of tacit knowledge sharing among full-time university teachers, this study will combine leadership theory and transactive memory system theory to explore the influence of leadership style on the tacit knowledge sharing behavior of full-time university teachers, providing a more comprehensive and in-depth explanation of the factors influencing the tacit knowledge sharing behavior of full-time university teachers. By delving into the values, behavioral intentions, and team building of full-time university teachers, it can better guide higher education management, motivate full-time university teachers' knowledge sharing behavior, and promote the healthy development of knowledge sharing in universities. Such comprehensive research is expected to make important contributions to promoting the construction of a culture of tacit knowledge sharing in universities and the prosperity of academic exchange.

Research Objectives

1. To analyze the relationship between leadership style, value orientation, and the transactive memory system affect the mechanisms of full-time university teachers in knowledge management tools.

2. To analyze the impact of value orientation and the transactive memory system on tacit knowledge sharing behavior, and examine the transactive memory system plays a role in promoting knowledge sharing within university research teams,

3. To analyze the impact of leadership style on tacit knowledge sharing behavior, and reveal whether leaders encourage or restrict the sharing of tacit knowledge.

4. To study the mediating role of value orientation and the transactive memory system in the relationship between leadership style and tacit knowledge sharing behavior.

Research Process

Questionnaire distribution: researchers can seek help from research offices in various undergraduate universities in China through convenient geographical proximity, or distribute questionnaire links to the faculty members of various undergraduate universities through accumulated work relationships, and then collect them to ensure timely and complete retrieval of the questionnaires.

Data processing and analysis: Once a sufficient number of valid questionnaires are collected, researchers will organize, encode, and analyze the collected data. Data processing includes steps such as cleaning invalid data and encoding questionnaire content. Subsequently, statistical analysis methods such as descriptive statistics, mediating effect testing, reliability and validity testing, etc., will be used to analyze the factors influencing the tacit knowledge sharing behavior of full-time university teachers and incentive mechanisms in depth.

Population and Sample

Full-time university teachers total of 800 will be distributed, with to meet the study's requirements of various undergraduate universities.

Sample, This research's sample to collect 560 samples with convenience sampling of full-time university teachers in undergraduate institutions nationwide, with a target response and effective rate of around 70% to meet the study's requirements.

Data analysis

To achieve this, the study collected data through a survey questionnaire and analyzed it using data analysis tools such as SPSS and AMOS. Firstly, the basic information of the respondents was analyzed through descriptive statistics. Secondly, the internal consistency of the questionnaire was evaluated using reliability analysis, and the potential structure of the questionnaire was determined through exploratory factor analysis. Subsequently, confirmatory factor analysis was used to further validate the structural validity of the questionnaire. Finally, structural equation modeling was employed to analyze the relationships between latent variables, and the Bootstrap method was used to test for mediating effects, thus determining the indirect paths present in the model.

This study identified the main factors influencing the tacit knowledge sharing behavior of full-time university teachers through analyzing the results. These factors include leadership style, value orientation variables, and transactive memory system variables. Furthermore, we explored how leadership style influences value orientation variables and transactive memory

system variables, and ranked the importance of these influences. As this study considers altruistic and self-achievement value orientation variables as well as transactive memory system variables as important mediating variables in the research model. Additionally, this study examined the impact and degree of influence of value orientation and transactive memory system factors on tacit knowledge sharing behavior. Finally, from the perspective of independent and mediating variables, we discussed the mediating effects of the model, revealing the status of each mediating variable in the model.

Major findings

These analytical methods can help us understand the relationships between variables and how these relationships influence the final results.

1. Sample distribution

Table 1 Sample distribution

		Frequency	**Percentage**
Sex	Male	362	53.00%
	Female	321	47.00%
Age	21-30 years old	81	11.86%
	31-40 years old	96	14.06%
	41-50 years old	201	29.43%
	51-60 years old	246	36.02%
	Above 60 years old	59	8.64%
Educational Background	Undergraduate and below	66	9.66%
	Master	228	33.38%
	Doctor	389	56.95%
Professional Title	None	17	2.49%
	Lecturer	338	49.49%
	Associate Professor	174	25.48%
	Professor	154	22.55%
Years of Working experience	3years and below	135	19.77%
	4-9 years	62	9.08%
	10-14 years	174	25.48%
	15 years and above	312	45.68%

In the formal testing, 683 valid samples were collected, meeting the requirements for the number of questionnaire responses and subsequent research. Looking at the distribution of the samples, the proportion of males and females is roughly equal, with 53.00% males and 47.00% females. The age distribution also shows diversity, with involvement from various age groups: 41-50 years old accounts for 29.43%, 51-60 years old accounts for 36.02%, and those 60 years old and above make up 8.64%. In terms of education, the educational level of the samples is generally high, with 9.66% having a bachelor's degree or below, 33.38% having a master's degree, and 56.95% having a doctoral degree, indicating a strong professional and academic background in our sample.

2. Descriptive Statistics

Table 2 Descriptive Statistics

Items	Number of cases	Mean	Standard deviation	Skewness		Kurtosis	
					Standard error		Standard error
TD1	683.000	3.536	0.966	-0.567	0.094	0.262	0.187
TD2	683.000	3.514	1.002	-0.411	0.094	0.014	0.187
TD3	683.000	3.518	0.977	-0.411	0.094	-0.066	0.187
TD4	683.000	3.505	0.972	-0.432	0.094	-0.059	0.187
TY1	683.000	3.489	1.014	-0.491	0.094	0.025	0.187
TY2	683.000	3.515	0.977	-0.431	0.094	-0.031	0.187
TY3	683.000	3.518	1.000	-0.412	0.094	-0.181	0.187
TY4	683.000	3.510	0.959	-0.398	0.094	0.083	0.187
TG1	683.000	3.543	0.961	-0.432	0.094	0.124	0.187
TG2	683.000	3.534	0.975	-0.521	0.094	0.144	0.187
TG3	683.000	3.514	0.975	-0.443	0.094	0.056	0.187
TG4	683.000	3.495	0.969	-0.475	0.094	0.103	0.187
TG5	683.000	3.489	0.954	-0.400	0.094	0.039	0.187
TC1	683.000	3.534	0.999	-0.463	0.094	-0.031	0.187
TC2	683.000	3.515	0.999	-0.436	0.094	-0.104	0.187
TC3	683.000	3.565	0.952	-0.561	0.094	0.342	0.187
TC4	683.000	3.490	1.012	-0.468	0.094	-0.062	0.187
EL1	683.000	3.510	0.962	-0.533	0.094	0.150	0.187
EL2	683.000	3.562	0.957	-0.460	0.094	0.061	0.187
EL3	683.000	3.508	0.969	-0.338	0.094	-0.157	0.187
EL4	683.000	3.530	0.999	-0.468	0.094	-0.074	0.187
EL5	683.000	3.527	0.927	-0.412	0.094	0.158	0.187
EL6	683.000	3.562	0.960	-0.417	0.094	-0.013	0.187
EL7	683.000	3.492	0.953	-0.416	0.094	0.054	0.187
EL8	683.000	3.492	1.003	-0.432	0.094	-0.068	0.187
EL9	683.000	3.534	0.943	-0.479	0.094	0.206	0.187
EL10	683.000	3.510	0.963	-0.536	0.094	0.139	0.187
AV1	683.000	3.520	0.948	-0.529	0.094	0.278	0.187
AV2	683.000	3.521	1.008	-0.554	0.094	0.136	0.187
AV3	683.000	3.552	0.929	-0.504	0.094	0.344	0.187
AV4	683.000	3.510	0.935	-0.475	0.094	0.166	0.187
SV1	683.000	3.574	0.933	-0.439	0.094	0.195	0.187
SV2	683.000	3.584	0.944	-0.364	0.094	-0.034	0.187
SV3	683.000	3.496	0.993	-0.427	0.094	-0.062	0.187
SV4	683.000	3.482	1.024	-0.436	0.094	-0.154	0.187
SV5	683.000	3.502	0.969	-0.457	0.094	0.117	0.187
ET1	683.000	3.511	0.975	-0.511	0.094	0.053	0.187
ET2	683.000	3.492	0.969	-0.467	0.094	0.017	0.187

Items	Number of cases	Mean	Standard deviation	Skewness		Kurtosis	
					Standard error		Standard error
ET3	683.000	3.553	0.934	-0.389	0.094	0.051	0.187
ET4	683.000	3.495	1.009	-0.527	0.094	-0.001	0.187
ET5	683.000	3.543	0.948	-0.600	0.094	0.420	0.187
CB1	683.000	3.517	0.971	-0.443	0.094	0.093	0.187
CB2	683.000	3.480	0.972	-0.448	0.094	0.055	0.187
CB3	683.000	3.518	0.972	-0.460	0.094	0.007	0.187
CB4	683.000	3.471	0.954	-0.422	0.094	0.050	0.187
CB5	683.000	3.548	0.979	-0.520	0.094	0.100	0.187
CD1	683.000	3.502	0.977	-0.508	0.094	0.063	0.187
CD2	683.000	3.527	0.926	-0.552	0.094	0.380	0.187
CD3	683.000	3.395	1.043	-0.495	0.094	-0.119	0.187
CD4	683.000	3.492	0.934	-0.507	0.094	0.328	0.187
CD5	683.000	3.442	0.999	-0.513	0.094	0.061	0.187
EKS1	683.000	3.524	0.975	-0.454	0.094	-0.042	0.187
EKS2	683.000	3.483	1.005	-0.541	0.094	0.144	0.187
EKS3	683.000	3.546	0.933	-0.439	0.094	0.106	0.187
EKS4	683.000	3.531	1.004	-0.465	0.094	-0.075	0.187
EKS5	683.000	3.510	0.959	-0.568	0.094	0.300	0.187

According to the table above, we conducted a descriptive statistical analysis of 56 variables using SPSS software. The analysis results show that the mean values of these variables range from 3.395 to 3.584. In the scale, a mean value above 3 indicates a high degree of central tendency in the sample data. Additionally, the skewness and kurtosis statistics fall within the range of (-1.96, +1.96), indicating that the sample data exhibits characteristics of a normal distribution. In conclusion, the distribution of the sample in this study is reasonable, the collected data quality is reliable, and can be used for further in-depth analysis and model testing.

Validity Test : Exploratory Factor Analysis

Table 3 KMO and Bartlett's Test

KMO sampling adequacy measure		.981
Batelle sphericity test	Approximate chi-square	9964.631
	Degree of freedom	1540
	Sig.	0.000

The first results obtained were the KMO and Bartlett's sphericity test result table. From the result table, it can be seen that the Kaiser-Meyer Olkin measure of sampling adequacy is 0.981, significantly higher than the standard of 0.7, indicating a strong correlation between the questions in the test.The Bartlett test significance is sig<0.001, indicating a significant relationship between the clusters of items in the data, showing a high correlation between the extracted factors and the questions. In conclusion, the overall KMO value of the questionnaire is 0.981, indicating good validity and suitability for factor analysis. Bartlett's sphericity test chi-square value is 9964.631, with 1540 degrees of freedom, and a p-value less than 0.01, passing the significance test at the 1% level, suggesting that the dataset is suitable for exploratory factor analysis (EFA).These results indicate that the principal component analysis conducted was effective, and further analysis and interpretation of these factors can be continued.
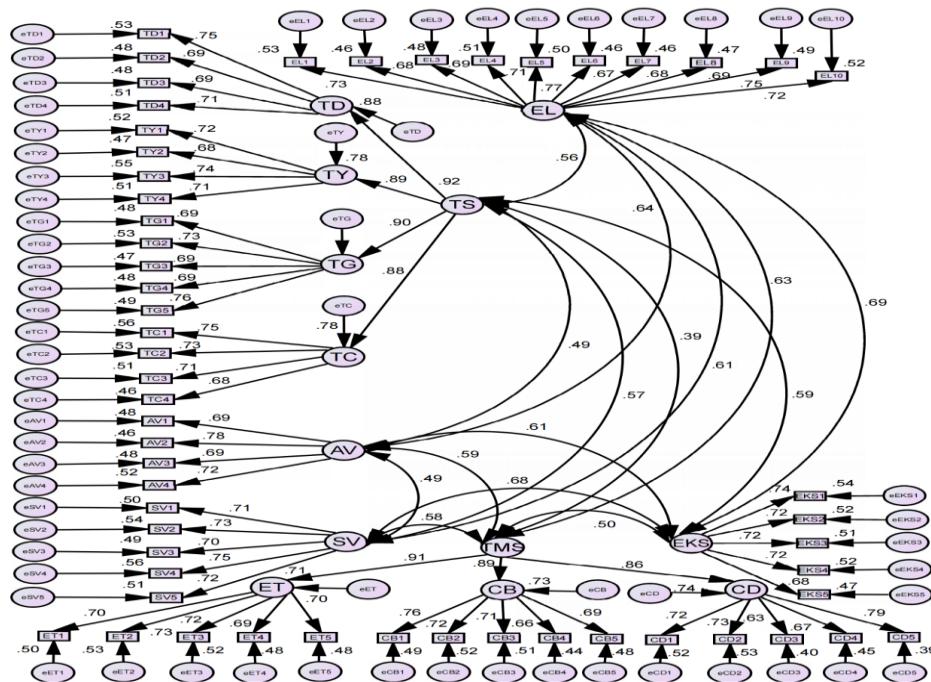
Table 4 Rotated Component Matrix

Items	Component										
	1	2	3	4	5	6	7	8	9	10	11
TD1	0.652										
TD2	0.640										
TD3	0.614										
TD4	0.684										
TY1		0.646									
TY2		0.628									
TY3		0.662									
TY4		0.553									
TG1			0.606								
TG2			0.597								
TG3			0.702								
TG4			0.645								
TG5			0.569								
TC1				0.580							
TC2				0.616							
TC3				0.711							
TC4				0.583							
EL1					0.594						
EL2					0.696						

Item						
EL3	0.630					
EL4	0.616					
EL5	0.600					
EL6	0.691					
EL7	0.611					
EL8	0.562					
EL9	0.582					
EL10	0.598					
AV1		0.613				
AV2		0.606				
AV3		0.562				
AV4		0.578				
SV1			0.661			
SV2			0.637			
SV3			0.691			
SV4			0.634			
SV5			0.592			
ET1				0.601		
ET2				0.598		
ET3				0.623		
ET4				0.636		
ET5				0.674		
CB1					0.652	
CB2					0.623	
CB3					0.587	
CB4					0.684	
CB5					0.662	
CD1						0.635
CD2						0.615
CD3						0.785
CD4						0.670
CD5						0.692
EKS1						0.586
EKS2						0.557
EKS3						0.708
EKS4						0.603
EKS5						0.656

During the factor analysis of the scale and the analysis of factor loadings for each item rotation, it was observed that the total explained variance of the scale was 72.014%, with each factor explaining percentage greater than 55%, indicating that retaining 11 factors is appropriate.

Overall CFA. This study conducted Confirmatory Factor Analysis using AMOS software and obtained a table of standardized factor loadings, as shown below:

In order to measure the effectiveness of a questionnaire, it is necessary to analyze the fit of the model. When the model fit indices reach or exceed the predetermined target values, we can consider the questionnaire to have good validity, meaning that the questionnaire can effectively measure the constructs it is designed to measure. This study constructed a confirmatory factor analysis model, with model fit indices shown in the table below:

Table 5 Model Fit Index

Parameter	X^2/df (CMIN/DF)	RMR	GFI	AGFI	NFI	TLI	CFI	RMSEA
Estimated value	1.085	0.018	0.926	0.919	0.935	0.994	0.995	0.011
Reference value	<3	<0.05	>0.8	>0.8	>0.9	>0.9	>0.9	<0.08

From the table above, it can be seen that the ratio of X^2/df chi-square value to degrees of freedom is 1.085, which is less than 3, indicating a good model fit. The RMR value is 0.018, which is less than the standard of 0.05, also indicating a good model fit. The closer the values of GFI and AGFI are to 1, the higher the model fit. In addition, NFI, TLI, and CFI are incremental fit indices used to assess model fit, with values closer to 1 indicating better fit. From the table, it can be seen that NFI, TLI, and CFI are all greater than 0.9, indicating a good model fit. Finally, RMSEM is an index measuring the degree of model misfit, with values closer to 0 indicating better fit. In this study, RMSEM is 0.011,

Structural Equation Modeling

According to the theoretical model proposed in this study, a structural equation model was established using AMOS 24.0 (see the diagram below).
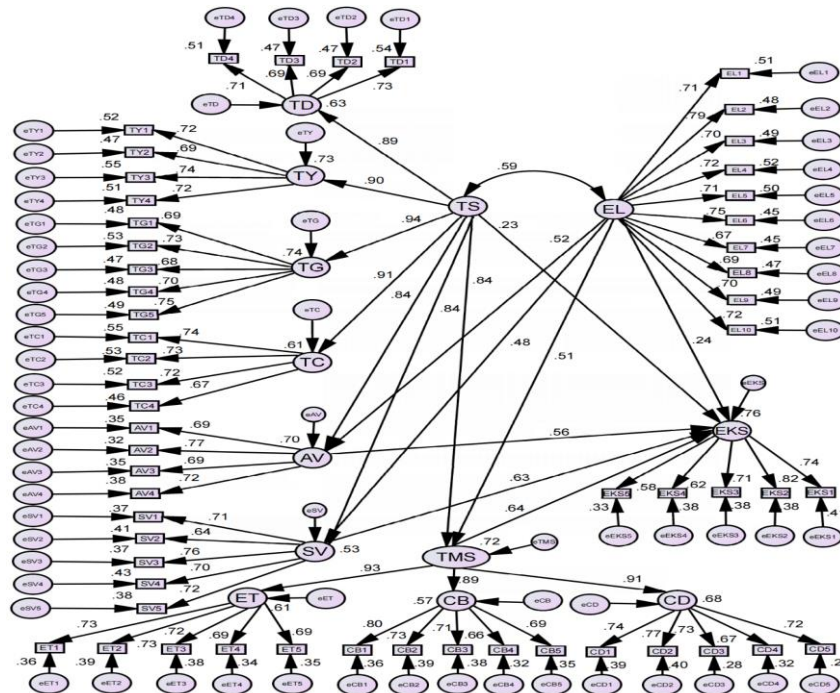

Figure 4.10 Structural Equation Model

In the diagram above, The structural equation model shown in the above figure reveals that the study estimated standardized path coefficients for 6 parameters. It is worth mentioning that the model also includes error terms for 66 observed variables. These error terms represent the portion of the observed variables that cannot be explained by the model, and they are an essential part of the structural equation model.

Model Fit Analysis

When using Structural Equation Modeling (SEM) as a tool for validating theoretical models, model fit is a crucial evaluation indicator. Good model fit is a necessary condition for SEM analysis, indicating a high degree of alignment between the model matrix and the sample matrix (Byrne, 2010).

Table 6 Fit Indices of Structural Equation Model

Parameter	$X2/df$ (CMIN/DF)	RMR	GFI	AGFI	NFI	TLI	CFI	RMSEA
Estimated value	1.944	0.033	0.917	0.903	0.903	0.936	0.940	0.037
Reference value	<3	<0.05	>0.9	>0.9	>0.9	>0.9	>0.9	<0.08

From the above table, we can observe multiple fit indices that collectively reflect the goodness of fit of the structural equation model. Among them, the value of CMIN/DF is 1.944, which meets the standard that the reference value should be less than 3, preliminarily indicating a good fit between the model and the data; RMR=0.037, which is less than 0.05, further confirming the good fit of the model; GFI is 0.917, AGFI is 0.903, both exceeding the reference value of 0.9, indicating that the model can explain the variability in the data well, and the fit of the model is very high; NFI, TLI, and CFI are incremental fit indices, and their values are also greater than 0.9, further supporting the conclusion of a good fit of the model; finally, the value of RMSEA is only 0.037, meeting the standard of less than 0.08, once again proving the good fit between the model and the data. Considering the analysis results of these fit indices, it can be concluded that the structural equation model of this study has a good fit and can provide good research outcomes for this study.

Path Analysis

This study constructed a structural equation model to measure the effectiveness of research hypotheses. This model not only helps us understand the causal relationships between variables, but also allows for a deeper exploration of the role of mediating variables. Through path analysis, the causal relationships and mediating effects of mediating variables are verified. In a causal model, first, the direction of the independent and dependent variables is clarified; then, the results of path analysis can be used to test the strength of the interaction between variables and the explanatory power of the variables.

the standardized regression coefficients and variance parameter estimates are organized into a table format, as shown in the table below:

Table 7 Path coefficients between latent variables

Path	Non-standardized estimate	S.E.	t-value	P value	Std.
	Estimate	S.E.	C.R.	P	Std.
TC<---TS	1.091	0.060	18.246	***	0.892
TY<---TS	1.009	0.057	17.613	***	0.903
TG<---TS	1.007	0.058	17.383	***	0.936
TD<---TS	1.004	0.060	16.733	***	0.911
AV<---TS	0.641	0.066	9.718	***	0.841
SV<---TS	0.666	0.065	10.212	***	0.836
TMS<---TS	0.588	0.050	11.848	***	0.843
EKS<---TS	0.229	0.084	2.726	0.006**	0.230
AV<---EL	0.389	0.060	6.443	***	0.521
SV<---EL	0.374	0.058	6.477	***	0.478
TMS<---EL	0.351	0.040	8.867	***	0.513
EKS<---EL	0.793	0.324	2.448	0.015*	0.242
ET<---TMS	1.076	0.068	15.763	***	0.933
CB<---TMS	1.088	0.070	15.534	***	0.887
CD<---TMS	1.012	0.087	11.632	***	0.909
EKS<---TMS	1.320	0.666	1.982	0.047*	0.642

EKS<---AV	0.668	0.208	3.212	0.001**	0.557
EKS<---SV	0.249	0.123	2.024	0.043*	0.631

Note: *** indicates that the p-value is less than 0.001, ** indicates that the p-value is less than 0.01,

According to the data in the table above:

Based on the research model, the direct and indirect effects between latent variables are visualized in the above figure through path analysis. By observing the path coefficients and their corresponding p-values, we can see that the path coefficients for hypotheses H1 to H11 are all significant (P<0.05), thus confirming the hypotheses. Among these paths, transformational leadership has the greatest impact on altruistic values, self-achievement values, and transactive memory systems. For the impact on altruistic values, transformational leadership has the highest weight, followed by ethical leadership. For the impact on self-achievement values, transformational leadership has the highest weight, followed by ethical leadership. For the impact on transactive memory systems, transformational leadership has the highest weight, followed by ethical leadership.

Mediating Effect Analysis

In addition, this study also conducted a detailed comparison of the mediating effects of the same variable in different paths to more comprehensively understand the relationships between various factors. Through the analysis of mediating effects, it revealed the impact of independent variables on dependent variables in different paths, and further explored the role played by mediating variables between independent and dependent variables. In this study, particular attention was paid to the influence mechanisms of transformational leadership and ethical leadership on teachers' tacit knowledge sharing behavior.

Table 8 Mediating Analysis Results

Path	Point Estimate	Bias-corrected 95% CI		Percentile 95% CI		非标准化系数	SE	T	P
		Lower	Upper	Lower	Upper				
Total Effect									
TS->EKS	0.877	0.903	0.979	0.902	0.979	0.941	0.020	47.675	***
EL->EKS	0.858	0.881	0.964	0.881	0.962	0.923	0.021	43.495	***
Direct Effect									
TS->EKS	0.301	0.224	0.423	0.223	0.424	0.323	0.050	6.422	***
EL->EKS	0.220	0.149	0.324	0.149	0.325	0.237	0.045	5.303	***
Total indirect effect									
TS->EKS	0.576	0.509	0.722	0.508	0.723	0.618	0.054	11.480	***
EL->EKS	0.637	0.561	0.710	0.561	0.711	0.686	0.038	16.637	***
Specific indirect effect									
TS->AV->EKS	0.116	0.062	0.188	0.063	0.189	0.125	0.032	3.852	***
TS->SV->EKS	0.107	0.047	0.184	0.046	0.185	0.115	0.036	3.228	0.001**
TS->TMS->EKS	0.352	0.270	0.485	0.270	0.486	0.378	0.055	6.821	***

EL->AV->EKS	0.127	0.075	0.198	0.074	0.196	0.136	0.031	4.425	***
EL->SV->EKS	0.121	0.061	0.199	0.060	0.199	0.130	0.035	3.726	***
EL->TMS->EKS	0.389	0.318	0.521	0.317	0.522	0.419	0.052	8.010	***

In this study, Bootstrapping tests were used to examine all the mediating paths in the research model. The point estimate of TS->AV->EKS is 0.116. The 95% confidence interval for Bias-corrected and Percentile does not include 0, indicating a significant mediating effect of AV between TS and EKS. Therefore, hypothesis H12 is supported.

The point estimate of TS->SV->EKS is 0.107. The 95% confidence interval for Bias-corrected and Percentile does not include 0, indicating a significant mediating effect of SV between TS and EKS. Therefore, hypothesis H13 is supported.

The point estimate of TS->TMS->EKS is 0.352, and the corresponding 95% confidence interval does not include 0, indicating a significant mediating effect of TMS between TS and EKS. Therefore, hypothesis H14 is supported.

The point estimate of the mediation effect of AV between EL and EKS is 0.127. The 95% confidence interval for Bias-corrected and Percentile does not include 0, indicating a significant mediation effect of AV between EL and EKS. Therefore, this supports hypothesis H15.

The point estimate of EL->SV->EKS is 0.121. The 95% confidence interval for Bias-corrected and Percentile does not include 0, indicating a significant mediating effect of SV between EL and EKS. Therefore, hypothesis H16 is supported.

The point estimate of EL->TMS->EKS is 0.389. The 95% confidence interval for Bias-corrected and Percentile does not include 0, indicating a significant mediating effect of TMS between EL and EKS. Therefore, hypothesis H17 is supported.

Hypothesis Testing Results

All hypotheses have been tested through structural equation modeling. In this study, a total of 29 assumptions were proposed, including 13 direct paths, 12 mediating paths, and 4 multiple mediating paths. The table below shows the results of the hypotheses.

Table 9 Hypotheses Results Table

Hypotheses	Result
H1 Transformational leadership of full-time university teachers has a positive impact on altruism values orientation.	Support
H2: Transformational leadership of full-time university teachers has a positive impact on self-achievement value orientation.	Support
H3: Transformational leadership of full-time university teachers has a positive impact on the transactive memory system.	Support
H4 Ethical leadership of full-time university teachers has a positive impact on altruism value orientation.	Support
H5 Ethical leadership of full-time university teachers has a positive impact on self-achievement value orientation.	Support
H6 Ethical leadership of full-time university teachers has a positive impact on transactive memory system.	Support

H7 The altruism value orientation of tacit knowledge sharing among full-time university teachers has a positive impact on tacit knowledge sharing behavior.	Support
H8: The self-achievement value orientation of tacit knowledge sharing among full-time university teachers has a positive impact on tacit knowledge sharing behavior.	Support
H9: The transactive memory system of sharing tacit knowledge among full-time university teachers has a positive impact on tacit knowledge sharing behavior.	Support
H10: Transformational leadership of full-time university teachers has a positive impact on tacit knowledge sharing behavior.	Support
H11 Ethical leadership of full-time university teachers has a positive impact on tacit knowledge sharing behavior.	Support
H12 The altruism value orientation of full-time university teachers plays a mediating role in the relationship between transformational leadership and tacit knowledge sharing behavior.	Support
H13: The altruism values of tacit knowledge sharing among full-time university teachers play a mediating role between ethical leadership and tacit knowledge sharing behavior.	Support
H14: The self-achievement value orientation of full-time university teachers plays a mediating role between transformative leadership and tacit knowledge sharing behavior.	Support
H15: The self-achievement value orientation of full-time university teachers plays a mediating role between ethical leadership and tacit knowledge sharing behavior.	Support
H16 The transactive memory system of tacit knowledge sharing among full-time university teachers plays a mediating role between transformational leadership and tacit knowledge sharing behavior.	Support
H17: The transactive memory system of tacit knowledge sharing among full-time university teachers plays a mediating role between ethical leadership and tacit knowledge sharing behavior.	Support

From the results in the table above, it can be seen that all 11 direct hypotheses are fully supported, and all 6 mediating hypotheses are fully supported.

Conclusion and Discussion

The research results indicate that the transactive memory system, altruistic value orientation, and self-achievement value orientation are crucial for the tacit knowledge sharing behavior of full-time university teachers. The main conclusions are as follows:

(1) There is a clear positive correlation between leadership styles, especially transformational leadership and ethical leadership, and the value orientation of full-time university teachers. This relationship is mainly derived from the leader's modeling effect and the shaping of organizational culture. On one hand, the leader's behaviors and values directly influence teachers' cognition and emotions through the modeling effect. For example, a leader's demonstration of concern for the team's common interests and values may guide teachers to form a positive altruistic value orientation. Similarly, a leader's pursuit of excellence and individual achievements may inspire teachers to pursue self-achievement. This influencing mechanism directly impacts teachers in their tacit knowledge sharing behaviors. On the other hand, transformational leadership and ethical leadership further strengthen this influence by shaping a positive organizational culture. This culture emphasizes teamwork, knowledge sharing, and shared achievements, which align closely with teachers' tacit knowledge sharing behaviors. In this cultural atmosphere, teachers are more likely to be driven by intrinsic altruism and the pursuit of self-achievement motivation, leading them to actively engage in tacit knowledge sharing.

(2) Both transformational leadership and ethical leadership are significantly positively correlated with the existence of transactive memory systems. The characteristics of these two leadership styles, especially the pursuit of innovation and change by transformational leadership, and the emphasis on ethics and values by ethical leadership, have a significant positive impact on teachers' use of transactive memory systems and knowledge sharing behaviors. Leadership styles, as key environmental factors within organizations, directly influence teachers' work atmosphere and emotional cognition. In this environment, transactive memory systems not only provide teachers with a platform for knowledge storage and sharing, but also create a more transactive and dynamic knowledge sharing environment through promoting effective communication and collaboration. It is worth noting that transformational leadership, due to its focus on innovation and change, may be more inclined to promote the adoption of new tools such as transactive memory systems. They not only support and invest in the implementation of new technologies, but also believe that knowledge sharing through transactive memory systems helps drive progress in the academic field. This leadership style may encourage teachers to more actively share professional knowledge, thereby enhancing the academic strength of the entire organization. Meanwhile, ethical leadership emphasizes morals and values, focusing on establishing a good organizational culture and interpersonal relationships. This leadership style is conducive to creating an atmosphere of trust and respect in a university environment, making teachers more willing to share their experiences and tacit knowledge. Therefore, ethical leadership also promotes the effective use of transactive memory systems in its unique way.

(3) The transactive memory system plays a significant role in promoting the tacit knowledge sharing behavior of full-time university teachers, creating a richly transactive and vivid knowledge sharing environment for them. Firstly, the transactive memory system provides a real-time and convenient communication platform. Teachers can exchange and share information through this platform anytime and anywhere. This instant communication greatly facilitates the transmission and sharing of tacit knowledge. Additionally, the transactive memory system helps establish professional communities and networks among full-time university teachers. In this community environment, teachers can more easily find peers with common interests and goals, forming close collaborative relationships. This community atmosphere not only inspires teachers' spirit of cooperation but also encourages them to share their experiences and knowledge more willingly. Finally, the transactive memory system can also record and track the flow of knowledge, forming a traceable history of knowledge sharing. This function not only helps teachers better understand who is sharing what type of knowledge but also creates a virtuous cycle of learning and sharing. Furthermore, through evaluating and improving sharing behaviors, this system can provide useful feedback and suggestions for teachers.

(4) The altruistic value orientation plays an important facilitating role in the tacit knowledge sharing behavior of full-time university teachers. When teachers emphasize benefiting others in moral principles, they often show a stronger motivation to share. By sharing tacit knowledge. They can positively influence the academic and professional development of others. This altruistic culture not only helps build trust and promote teamwork, but also creates a positive organizational culture. In such a cultural atmosphere, teachers are more willing to share knowledge with colleagues, thereby enhancing the overall academic level. In addition, teachers who hold altruistic beliefs see knowledge sharing as an effective way to improve their own teaching quality and academic reputation. By sharing

knowledge, they not only help others but also make positive contributions to the development of the entire academic community. This value orientation can also create a virtuous cycle, prompting teachers to establish reciprocal relationships and further promote knowledge sharing.

(5) The Self-Achievement value orientation has a significant promoting effect on the tacit knowledge sharing behavior of full-time university teachers. This value orientation drives teachers to pursue professional growth and individual development, making them more inclined to view sharing tacit knowledge as a way to enhance academic levels and enrich teaching experiences. Therefore, they are more willing to actively share their experiences and knowledge in order to establish professional reputation and seek recognition from peers. This value orientation not only stimulates teachers' academic interests, prompting them to inspire others' academic interests through knowledge sharing, but also helps in forming common academic topics and research directions. In addition, the Self-Achievement value orientation also motivates teachers to establish a wide academic network, further promoting interdisciplinary knowledge exchange and collaboration.

Recommendation
Theoretical Significance

1. In comparison to previous research, this study further highlights the differences between transformational and ethical leadership in influencing the extent of transactive memory system use, providing scholars with a more refined theoretical foundation.

2. When exploring teacher motivation, not only external environment and organizational atmosphere are considered, but also the driving role of intrinsic values within individuals is emphasized. This individualized perspective helps managers to more accurately understand teachers' potential needs, providing new basis for personalized motivation and guidance.

3. Emphasizing the convenience and multimedia presentation provided by the system, it also highlights the importance of transactive memory systems in establishing professional communities, tracking knowledge flow, and promoting interdisciplinary collaboration.

4. Adjustments and extensions to the relationship between leadership style, individual values, and transactive memory systems. By integrating leadership style and value orientation with transactive memory systems, this study emphasized the interaction between them, enhancing the theoretical understanding of the mechanism influencing knowledge sharing behavior.

Practical Significance

This study delves into the impact of transformational leadership and ethical leadership on the tacit knowledge sharing behavior of full-time university teachers through empirical methods, providing important theoretical insights and practical operational suggestions for university managers and leaders.

Firstly, The research found that leadership styles directly impact teachers' altruistic and self-achievement values through the demonstration effect and organizational culture construction. Secondly, this study revealed the differential impacts of transformational leadership and ethical leadership on the use of transactive memory systems. This finding is enlightening for university managers, indicating that when promoting the implementation of transactive memory systems, strategies need to be adjusted according to the leadership team's

style characteristics in order to more effectively promote knowledge sharing. Finally, the research results have practical guiding significance for university organizations, leaders, and full-time teachers. Leaders should focus on shaping a positive and united organizational culture to enhance teachers' values and motivation.

Management Insights

(1) Establish incentive mechanisms to promote the integration of leadership styles and knowledge sharing(2) Building a culture of knowledge sharing and fostering organizational identity. (3) Focus on teachers' needs and create a scientific organizational environment.(4) Formulate clear policies to promote the integration of leadership behavior and knowledge sharing.

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