



**The mediating effect of organizational commitment on the relationship  
between transformational leadership, teachers' personal characteristics,  
and teachers' work performance at Jiangxi University of Technology,  
Nanchang, Jiangxi Province.**

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### **Abstract**

The objectives of this research were: (1) To examine the components of Transformational Leadership, Organizational Commitment, Teachers' Personal Characteristics and Teachers' Working Effectiveness at Jiangxi University of Technology in Nanchang City.

(2) To propose the model of mediating effect of Organizational Commitment on relationship between Transformational Leadership, Teachers' Personal Characteristics and Teachers Working Effectiveness in Jiangxi University of Technology in Nanchang City. (3) To investigated effect of Organizational Commitment on relationship between Transformational Leadership, Teachers personal characteristics and Teachers Working Effectiveness at Jiangxi University of Technology in Nanchang City. The research was quantitative research method. A stratified random sampling method was used to collect data from 425 Chinese teachers among 1483 Chinese teachers in 12 faculties in Jiangxi University of Technology in Nanchang City, the People's Republic of China.

The research results were found that: (1) Transformational leadership consisted of 4 components: inspirational motivation, idealized influence, intellectual stimulation and individualized consideration, Teachers' personal characteristics consisted of 4 components: professional knowledge, teaching skills, personality traits and emotional Intelligence, Organizational commitment consisted of 3 components: affective commitment, continuance commitment and normative commitment, Teachers' working effectiveness consisted of 4 components: teaching effectiveness, curriculum preparation and planning, time management and engagement and mobilization; (2) the proposed SEM showed an excellent fit with the empirical data, with model fit indices such as  $\chi^2/df$  or relative Chi-square = 2.676 (less than 3),  $p=0.001$ ,  $GFI = 0.929$ ,  $AGFI = 0.900$ , and  $TLI = 0.950$ ,  $CFI=0.959$  (all more than 0.9), included  $SRMR = 0.063$ ; and (3) transformational leadership and teachers' personal characteristics have a statistically significant indirect effect on teachers' work effectiveness through organizational commitment.



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**Keywords:** Transformational leadership, Organizational commitment, Teachers' personal characteristics, Teachers' working effectiveness, Jiangxi University of Technology

## Introductions

In the era of globalization and the knowledge economy, teacher effectiveness in higher education institutions is crucial for institutional development, directly influencing academic performance and graduate competitiveness. Studies highlight that improving educational quality significantly contributes to personal income growth and national economic development (Hanushek & Woessmann, 2008), emphasizing the role of teacher effectiveness in institutional reputation and societal recognition.

Faculty research is also vital for an institution's global standing. University rankings prioritize research output, demonstrating its role in enhancing academic influence, attracting funding, and drawing top talent. Moreover, globalization has intensified international collaboration in student exchange, faculty research, and academic partnerships, making teacher effectiveness critical in strengthening institutional influence (Altbach, 2007).

Jiangxi University of Science and Technology, a comprehensive institution emphasizing engineering, management, and arts, aims to nurture high-quality applied talents and promote interdisciplinary development. Understanding the relationships among transformational leadership, teachers' personal characteristics, and work effectiveness—along with the mediating role of organizational commitment—has theoretical and practical significance in optimizing faculty development and improving educational quality.

Transformational leadership is recognized for enhancing organizational performance by fostering leader-employee interactions that inspire higher aspirations and commitment. This leadership style increases teachers' motivation and teaching effectiveness, leading to overall educational improvements (Bass, 1985; Avolio & Bass, 1999). Similarly, teachers' personal characteristics, including professional knowledge, pedagogical skills, and emotional intelligence, significantly influence their effectiveness. Shulman (1986) emphasized that effective teaching requires both subject expertise and the ability to convey knowledge efficiently. Emotional intelligence is also crucial in managing classroom dynamics and student engagement (Salovey & Caruso, 2004).

Organizational commitment, particularly affective commitment, enhances teaching quality and engagement. Meyer and Allen's (1991) three-component model—affective, continuance, and normative commitment—provides a framework for understanding teachers' loyalty and its impact on effectiveness. However, the mediating role of organizational commitment remains underexplored, especially in Chinese higher education. Empirical research on Jiangxi University of Science and Technology is limited, restricting insights into strategies for improving teacher effectiveness in China's higher education landscape.

This study addresses this gap by constructing and validating a structural equation model encompassing transformational leadership, teachers' personal characteristics, organizational commitment, and work effectiveness. By examining organizational commitment as a mediator, this research provides theoretical foundations and practical recommendations for enhancing teacher effectiveness at Jiangxi University of Science and Technology and other Chinese institutions. The findings aim to inform faculty development policies, ultimately improving educational outcomes.



## Research objectives

1. To examine the components of Transformational Leadership, Organizational Commitment, Teachers' Personal Characteristics and Teachers' Working Effectiveness at Jiangxi University of Technology.
2. To propose the model of mediating effect of Organizational Commitment on relationship between Transformational Leadership, Teachers' Personal Characteristics and Teachers Working Effectiveness in Jiangxi University of Technology in Nanchang City, Jiangxi Province.
3. To decompose effect of Organizational Commitment on relationship between Transformational Leadership, Teachers' Personal Characteristics and Teachers' Working Effectiveness in Jiangxi University of Technology in Nanchang City, Jiangxi Province.

## Research hypothesis

H1: Transformational Leadership factors have a direct effect on Teachers' Working Effectiveness.

H2: Teachers' Personal Characteristics factors have a direct effect on Teachers' Working Effectiveness.

H3: Transformational Leadership factors have a direct effect on Organizational Commitment.

H4: Organizational Commitment factors have a direct effect on Teachers' Working Effectiveness.

H5: Teachers' Personal Characteristics factors have a direct effect on Organizational Commitment.

H6: Transformational Leadership has an indirect effect on Teachers' Working Effectiveness through Organizational Commitment.

H7: Teachers' Personal Characteristics has an indirect effect on Teachers' Working Effectiveness through Organizational Commitment.

## Conceptual framework

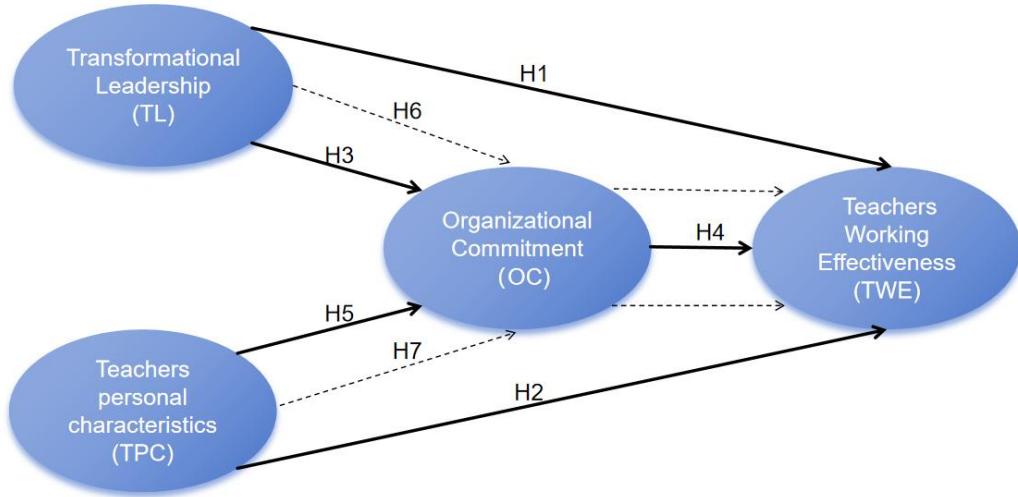
Based on extensive literature analysis, research findings, and expert insights, the researcher developed a conceptual framework illustrating direct and mediated relationships among key variables. The proposed Structural Equation Model (SEM) includes:

1. Transformational Leadership (TL): A leadership style that inspires and motivates employees beyond self-interest. It consists of four dimensions: (1) Inspirational Motivation, (2) Idealized Influence, (3) Intellectual Stimulation, and (4) Individualized Consideration (Bass, 1985; Bass & Avolio, 1994).

2. Teachers' Personal Characteristics (TPC): Essential traits influencing teaching effectiveness and job engagement, categorized into (1) Professional Knowledge, (2) Teaching Skills, (3) Personality Traits, and (4) Emotional Intelligence (Shulman, 1987; Goleman, 1995).

3. Organizational Commitment (OC): Employees' psychological attachment to their organization, divided into (1) Affective Commitment, (2) Continuance Commitment, and (3) Normative Commitment (Meyer & Allen, 1991).

4. Teachers' Working Effectiveness (TWE): A measure of overall performance, including (1) Teaching Effectiveness, (2) Curriculum Planning, (3) Time Management, and (4) Engagement (Danielson, 2013; Marzano, 2007). as the figure 1.



**Figure 1** Conceptual framework of this research

## Research Methodology

This research on topic “The Mediating effect of Organizational Commitment on relationship between Transformational Leadership, Teachers personal characteristics and Teachers Working Effectiveness in Jiangxi University of Technology in Nanchang City Jiangxi Province” The objectives of research were: (1) To examine the components of Transformational Leadership, Organizational Commitment, Teachers' Personal Characteristics and Teachers' Working Effectiveness at Jiangxi University of Technology, and (2) To study mediating effect of Organizational Commitment on relationship between Transformational Leadership, Teachers' Personal Characteristics and Teachers Working Effectiveness in Jiangxi University of Technology in Nanchang City, Jiangxi Province.

## Research Design

Research design of this research adopts the quantitative research method which emphasized on causal relationship model by using the Structural Equation Modelling (SEM) which was a statistical technique used to analysed the relationships among multiple variables. It combines aspects of CFA and Path Analysis to allow for the estimation of a series of interrelated dependence relationships simultaneously. SEM is especially valuable for testing theoretical models that involve complex relationships among observed and latent variables.

## Population and sample

Population and sample used in this research consists of 1483 teachers from 12 school in Jiangxi University of Technology in Nanchang City Jiangxi Provinc.

In this research, G\*Power software was used to determine the sample size, and the specific parameters were set as follows. Effect size  $W = 0.30$ ,  $\alpha$  error prob = 0.05, the degrees of freedom = 87, in order to obtain the statistical power of .80 by using the chi-square test. The relationship between the total sample size and the actual power was at least 425 teachers obtained from proportional stratified sampling method.



### Research instruments

The data was collected through a questionnaire survey, which consists of two parts. The first part collects basic information such as teacher gender and age; The second part was a 5-point rating scale for measure flexible leadership, team trust, team interactive behavior, and innovation team effectiveness, and adjusts them according to research objectives. After had 5 experts evaluate the validity of the questionnaire content, using the IOC index was value between 0.6 to 1.0, and revise the questionnaire to ensure that it accurately reflects the research objectives. and the reliability value for each factor was between .83 to .95.

### Data Collection

The researchers distributed a Likert (5-point) questionnaire to the participants. Select teachers from 1483 teachers from 12 school in Jiangxi University of Technology in Nanchang City Jiangxi Provinc.

### Data analysis

To facilitate the presentation and interpretation of research results, a series of symbols and abbreviations were used in the study. TL represents Transformational Leadership, TPC represents Teachers' Personal Characteristics, OC represents Organizational Commitment, TWE represents Teachers' Working Effectiveness, etc., The data analyzed on descriptive with percent, mean, SD, Skewness and Kurtosis), and inferential statistic with CFA and SEM.

## Research Result

The data was collecting from the questionnaires, the result on the information of respondents as the table 1.

**Table 1:** The demographics of the respondents.

	General Information	Frequency	Percentage
<b>1. Gender</b>			
Male	221	52.0	
Female	204	48.0	
<b>2. Age range</b>			
Lower than 26 years old	38	8.9	
26 – 35 years old	181	42.6	
36 – 45 years old	127	29.9	
46 – 50 years old	36	8.5	
More than 50 years old	43	10.1	
<b>3. Educational Level</b>			
Bachelor	54	12.7	
Master	247	58.1	
Doctor	124	29.2	
<b>4. Professional title:</b>			
Assistant	255	60.0	
Instructor	105	24.7	
Associate Professor	29	6.8	
Professor	36	8.5	
<b>5. Working Experience</b>			



1 – 5 years	67	15.8
6 – 10 years	70	16.5
11 – 15 years	202	47.5
More than 15 years	86	20.2

From table 1, The study surveyed 425 teachers from 12 schools at Jiangxi University of Technology. Males comprise 52.0%, and females 48.0%. Most are aged 26-45 (72.5%). Master's holders dominate (58.1%). Teaching assistants form 60.0%. Teachers with 11+ years of experience account for 47.5%.

### Research objective 1

Data descriptive analysis on mean, standard deviation, Skewness and Kurtosis from the questionnaires, as the table 2.

**Table 2:** mean, standard deviation, Skewness and Kurtosis

Variable list	$\bar{x}$	S.D.	Sk.	Ku.	Level
TL	3.0881	0.84629	0.038	-0.53	Moderate
IM	3.0731	1.01869	-0.061	-0.952	Moderate
II	3.076	1.01965	0.039	-1.047	Moderate
IS	3.1276	1.03533	-0.115	-0.99	Moderate
IC	3.0728	1.04127	-0.018	-1.069	Moderate
TPC	3.0933	0.85394	0.047	-0.513	Moderate
PK	3.0753	1.01636	-0.129	-0.932	Moderate
TS	3.0944	1.06265	-0.022	-1.131	Moderate
PT	3.1598	1.0233	-0.142	-0.989	Moderate
EI	3.0429	1.06776	-0.001	-1.141	Moderate
OC	3.1067	0.85292	-0.036	-0.524	Moderate
AC	3.0803	1.03366	-0.052	-1.02	Moderate
CC	3.1312	1.0131	-0.113	-0.968	Moderate
NC	3.1135	1.01285	-0.068	-1.043	Moderate
TWE	2.9663	0.88871	0.175	-0.505	Moderate
TE	3.0179	1.04902	-0.206	-0.857	Moderate
TPP	2.952	1.09474	-0.189	-0.892	Moderate
TM	2.957	1.0496	-0.16	-0.892	Moderate
EM	2.9388	1.11715	-0.138	-1.002	Moderate

From the table 2, It can be seen the mean value of each variable was between 3.486-4.093, and the distribution was relatively balanced, and the standard deviation of each variable is between 0.982-1.082, which indicates that the sample data dispersion was small. when the absolute value of skewness of data was less than 3 and the absolute value of kurtosis was less than 10, the observed variables basically conform to the normal distribution, it can be considered that the shape of large sample data basically conforms to the normal distribution, which meets the basic requirements of the research hypothesis in this paper.



3. The Intercorrelation Between Latent Variables, as the table 3.

**Table 3:** Intercorrelation Between Latent Variables

Correlations				
	TL	TPC	OC	TWE
TL	1			
TPC	.831**	1		
OC	.816**	.840**	1	
TWE	.776**	.797**	.772**	1

The correlation coefficients between all variables are positive, indicating a positive relationship between them. The correlation coefficient ranges from 0.375 to 0.542, indicating a moderate to strong correlation. and correlation coefficients were significant ( $p < 0.01$ ), indicating that the relationships between these variables can be considered statistically reliable.

Confirmatory factor analysis model. The research identified four factors and 16 observed variables, namely flexible leadership, team trust, team interactive behavior, and innovation team effectiveness, and constructed a measurement model using AMOS software. On figure 2

Table 3, showed the analysis of Correlation Matrix among independent variables regarding Multicollinearity, the highest observed correlation coefficient was between AC and PK ( $r = 0.628$ ), followed by AC and IC ( $r = 0.621$ ). All other correlation coefficients are well below 0.8. Based on the observed correlation values, there is no evidence of significant Multicollinearity among the independent variables.

None of the variables show strong linear relationships with one another that could compromise the reliability of the regression coefficients. Proceed with regression analysis confidently as the independent variables do not exhibit problematic Multicollinearity. (Gujarati, D. N., & Porter, D. C., 2009; Hair, et al, 2014; Field, A., 2017). However, If needed, validate this conclusion further by analyzing Variance Inflation Factor (VIF) and Tolerance values, which provide additional insights into Multicollinearity was showed in Table 4 as follows:

**Table 4:** Analyzing Variance Inflation Factor and Tolerance values, in the model

Model	Coefficientsa						
	Unstandardized		Standardized		t	Sig.	Collinearity Statistics
	Coefficients	B	Coefficients	Beta			
(Consta							
1 nt)	0.116	0.095			1.211	0.226	
IM	0.083	0.034	0.095	2.419	0.016	0.463	2.159
II	0.077	0.034	0.088	2.242	0.025	0.46	2.176
IS	0.122	0.033	0.142	3.68	<.001	0.484	2.067
IC	0.011	0.035	0.013	0.31	0.757	0.421	2.377
PK	0.129	0.035	0.148	3.733	<.001	0.458	2.186
TS	0.09	0.033	0.107	2.686	0.008	0.448	2.23

	PT	0.009	0.035	0.01	0.248	0.804	0.432	2.314
	EI	0.153	0.032	0.183	4.739	<.001	0.478	2.093
	AC	0.127	0.035	0.148	3.636	<.001	0.434	2.306
	CC	0.074	0.034	0.085	2.185	0.029	0.475	2.103
	NC	0.049	0.035	0.056	1.416	0.158	0.454	2.201

a. Dependent Variable: TWE

The analysis of Multicollinearity using Variance Inflation Factor (VIF) and Tolerance values is shown in Table 4. The results were interpreted as follows:

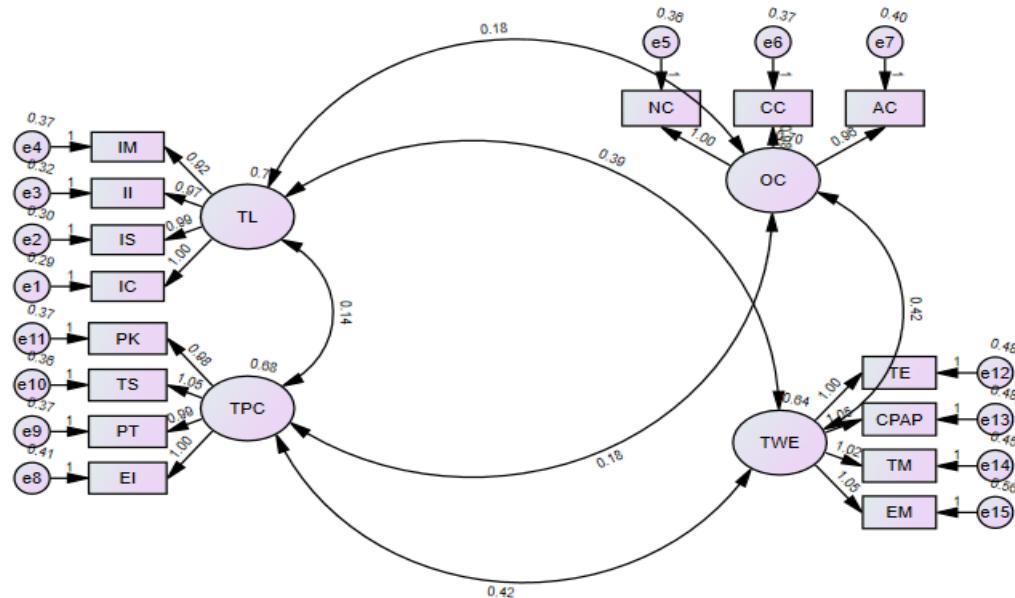
1. Tolerance Values: all Tolerance values range between 0.421 and 0.484, which were greater than the acceptable threshold of 0.1 (Hair, et al, 2014; Field, A., 2017). This indicates that there is no severe Multicollinearity among the independent variables, as the amount of shared variance between each variable and the others is not excessive.

2. VIF Values: the VIF values for all variables range between 2.067 and 2.377, which are well below the threshold of 10 (Hair, et al, 2014; Field, A., 2017). This confirms that the regression model is not affected by high Multicollinearity, as the variance of each coefficient was not overly inflated.

Summary: Based on these results, the independent variables (IM, II, IS, IC, PK, TS, PT, EI, AC, CC, NC) were not highly correlated with each other. Therefore, the regression analysis can proceed without concerns about Multicollinearity.

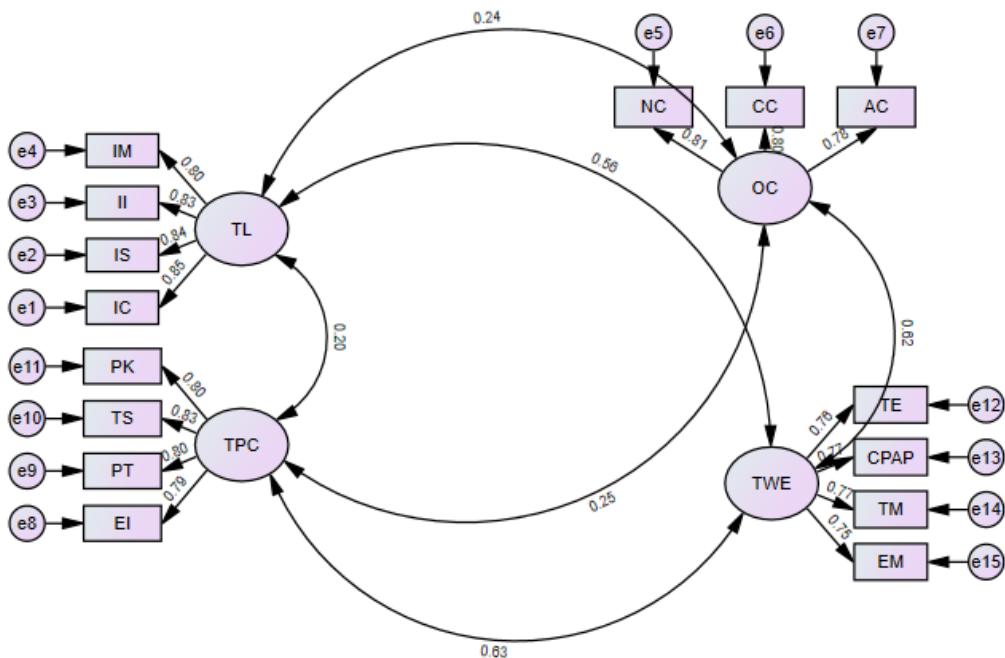
## Research objective 2

### CFA Model specification



Chi-square=1.514, p-value=0.002, DF=84, GFI=0.963, AGFI=0.947, CFI=0.988, TLI=0.985, RMR=0.026, RMSEA=0.035

Figure 2: CFA Model (Unstandardized estimates)



Chi-square=1.514, p-value=0.002, DF=84, GFI=0.963, AGFI=0.947, CFI=0.988, TLI=0.985, RMR=0.026, RMSEA=0.035

**Figure 3:** CFA Model (Standardized estimates)

Figure 2, the model was specified to compose of 3 factors, there were administrators' transformational leadership (TL) with 4 observed variables (indicators), Teachers' Personal Characteristics(TPC) with four observed variables, Organizational Commitment(OC) with 3 observed variables , and Teachers' Working Effectiveness (TWE) with 4 observed variables. The correlations between each latent variables were range from 0.494 to 0.628, and factor loading of each observed variables within constructs the value between 0.75 – 0.84. High factor loadings generally indicate a well-performing model in both convergent validity and reliability, and they are particularly valuable in multi-group CFA for ensuring measurement consistency across groups. However, researcher would be also checking the model fit indices (e.g., RMSEA, CFI, TLI), included CR: Composite reliability, AVE: Average variance extraction, and MSV: Maximized share variance to ensure that the overall model fit is acceptable across groups. (Hu & Bentler, 1999; Hair et al, 2010; Kline, 2015) .



### Model validity and reliability analysis

**Table 5:** Convergent validity both Composite reliability (CR) and Average variant extraction (AVE)

Variable		Estimate factor loading	S.E.	Z-test	p	CR	AVE
<b>Administrators' transformational leadership (TL)</b>							
IC	<---	TL		0.848			
IS	<---	TL	0.842	0.048	20.724	***	
II	<---	TL	0.829	0.048	20.28	***	
IM	<---	TL	0.795	0.048	19.091	***	0.89 0.69
<b>Teachers' Personal Characteristics(TPC)</b>							
EI	<---	TPC	0.792				
PT	<---	TPC	0.803	0.057	17.386	***	
TS	<---	TPC	0.826	0.059	17.951	***	
PK	<---	TPC	0.799	0.057	17.29	***	0.88 0.65
<b>Organizational Commitment(OC)</b>							
NC	<---	OC	0.814				
CC	<---	OC	0.805	0.059	16.525	***	
AC	<---	OC	0.784	0.059	16.188	***	0.84 0.64
<b>Teachers' Working Effectiveness (TWE)</b>							
TE	<---	TWE	0.756				
CPAP	<---	TWE	0.769	0.067	15.641	***	
TM	<---	TWE	0.772	0.065	15.711	***	
EM	<---	TWE	0.746	0.069	15.138	***	0.85 0.58

From Table 5, it can be seen that all standardized estimate factor loadings of the measurement model are above 0.5, excluding the paths that are set as fixed parameter of 1, the Z-test value of the path coefficients in the model meets the requirements, and the P-value in the model is significant, which indicates that the model has better quality in all dimensions.

Calculated by the formula of AVE and CR, the value of convergent validity and the value of composite reliability of each dimension, Based on the suggestions of Rong Taisheng (2009) according to the standard, the AVE value is required to reach a minimum of 0.5, and the CR value is required to reach a minimum of 0.7, in order to indicate that there is a good convergent validity and composite reliability. According to the analysis results in Table 4.7, it can be seen that the AVE is between 0.58-0.69, and the AVE value of each dimension has reached more than 0.5, and the CR is between 0.84-0.89, and the CR value has reached more than 0.7, which comprehensively can indicate that each dimension has good convergent validity and composite reliability. Fornell & Larcker, 1981; Hair,et al, 2010; Henseler, et al, 2015)

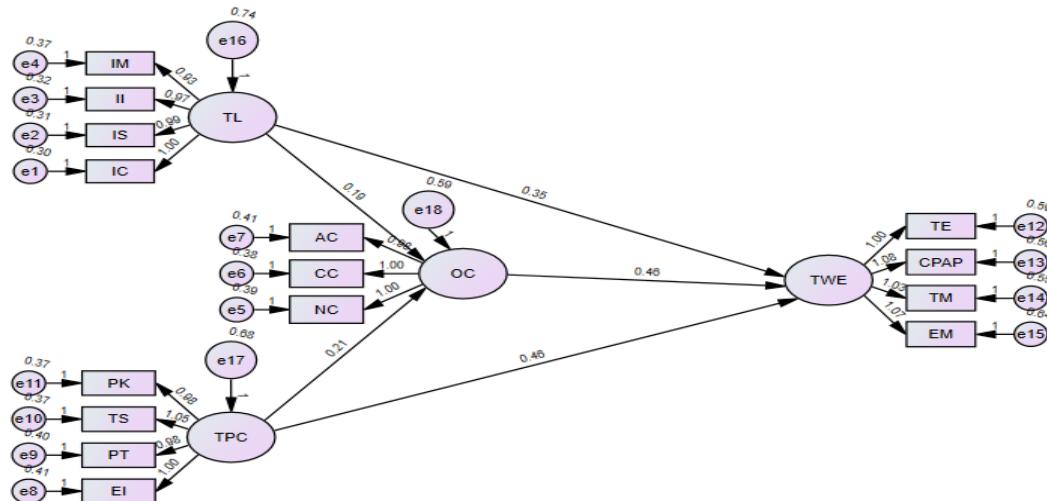
**Table 6:** Discriminant validity test

	TL	TPC	OC	TWE
TL	<b>0.69</b>			
TPC	0.24	<b>0.65</b>		
OC	0.20	0.26	<b>0.64</b>	
TWE	0.56	0.63	0.62	<b>0.58</b>
Square root AVE	0.83	0.81	0.80	0.76

From Table 6, in this discriminant validity test, the standardized correlation coefficients between each dimension are less than the square root of the AVE value corresponding to the dimension, thus indicating that each dimension has good discriminant validity.

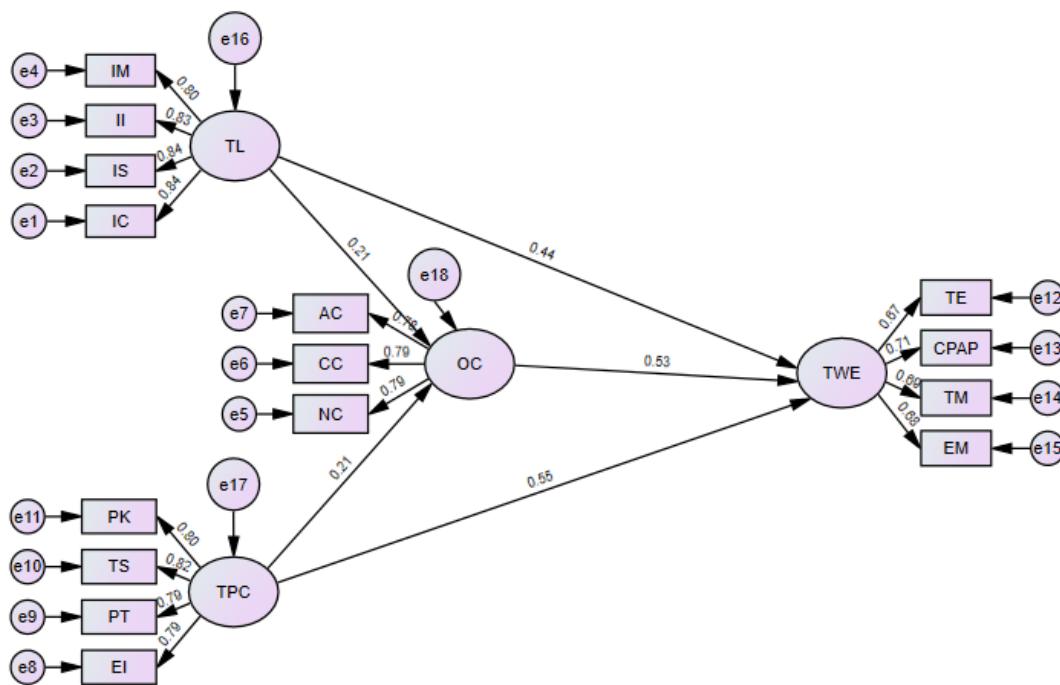
To propose a Structural Equation Model (SEM) of administrators' transformational leadership and organizational justice effects on teachers' job engagement that mediated by teachers' job satisfaction at the universities in Jiangxi Province.

The test of reliability, the convergent validity and the discriminant validity were met with the criteria and assumption of the model's measurement quality. This showed that the measurement model was sufficiency for the testing of the path coefficients which seek to determine the theoretically developed relationship of the model to the research which is conducted (Gerbing & Anderson, 1992). Figure 4.2 shows the structural model (SEM) which is tested in this research and it was analyzed by AMOS software. The indices of the model fit report that the overall fit was within acceptable range as can be seen in Figure blow



Chi-square=2.676, p-value=0.000, DF=86, GFI=0.928, AGFI=0.900, CFI=0.959, TLI=0.950, RMR=0.073, RMSEA=0.063

**Figure 4:** Structural Equation Model (Unstandardized estimates) of administrators' transformational leadership and organizational justice effects on teachers' job engagement mediated by teachers' job satisfaction at the universities in Jiangxi Province.



Chi-square=2.676, p-value=0.000, DF=86, GFI=0.928, AGFI=0.900, CFI=0.959, TLI=0.950, RMR=0.073, RMSEA=0.063

**Figure 5:** Structural Equation Model (Standardized estimates) of administrators' transformational leadership and organizational justice effects on teachers' job engagement mediated by teachers' job satisfaction at the universities in Jiangxi Province.

**Table 7:** Result of model fitting index

Measure	Estimate	Threshold	Interpretation
$\chi^2$	230.115	-	-
df	86	-	-
$\chi^2/df$	2.676	$\leq 3$	Accept
GFI	0.928		Accept
CFI	0.959	$>0.90$	Accept
AGFI	0.900		Accept
TLI	0.950		Accept
SRMR	0.063	$<0.08$	Accept
RMSEA	0.063	$<0.08$	Accept

From Table 7, the measurement model fit index was evaluated by the value of Chi-square test, and other fit index criteria. In this data analysis found that, the  $\chi^2/df$  or relative Chi-square = 2.676 (less than 3), p=0.001, GFI = 0.929, AGFI = 0.900, and TLI = 0.950, CFI=0.959 (all more than 0.9), included SRMR = 0.063, and RMSEA = 0.063 (all less than 0.8). This is indicated that the SEM of this research has a very good fit with the empirical data,



and overall selected factors have predictive power toward teachers' job engagement at 40%

### Research objective 3

The research objective 3 was stated that to decompose the administrators' transformational leadership, Teachers' Personal Characteristics, organizational commitment effect on Teachers' Working Effectiveness at the universities in Jiangxi Province.

Above when considered at path line of the SEM (both CFA measurement model and Path analysis), focus on the estimate factor loading value between each latent variables in the research, included the statistics detail that showed in Table 4.11. It was found that all of independent latent variable has statistically significant direct effect on dependent latent variable of Teachers' Working Effectiveness. The detail of statistics was showed in Table as follow:

**Table 8:** Hypotheses test of direct effects

	Path	Estimate	Std. Estimate	S.E.	Z-test	p-value
OC	<--- TL	0.192	0.206	0.052	3.721	***
OC	<--- TPC	0.208	0.212	0.055	3.773	***
TWE	<--- TL	0.35	0.437	0.033	10.484	***
TWE	<--- TPC	0.464	0.552	0.04	11.511	***
TWE	<--- OC	0.457	0.533	0.042	10.964	***

**Note:** Significance of p: \*p<0.050, \*\*p<0.010, \*\*\* p < 0.001

From the statistics results in Table 8, especially the standardized estimate factor loading, ( $\beta$ ), Z-test, and p-value, this indicated that

1. administrators' transformational leadership (TL) has statistically significant direct effect on organizational commitment (OC) because of Z-test = 3.721, p = 0.000.
2. Teachers' Personal Characteristics (TPC) has a statistically significant direct effect on organizational commitment (OC) because of Z-test = 3.773, p = 0.000.
3. Administrators' transformational leadership (TL) has a statistically significant direct effect on Teachers' Working Effectiveness (TWE) because of Z-test = 10.484, p = 0.00,
4. Teachers' Personal Characteristics (TPC) has a statistically significant direct effect on Teachers' Working Effectiveness (TWE) because of Z-test = 11.511, p = 0.00.
5. Organizational commitment (OC) has a statistically significant direct effect on Teachers' Working Effectiveness (TWE) because of Z-test = 10.964, p = 0.00.

Therefore, in this event, the research hypothesis that stated can indicated as follows:

H1: Transformational Leadership factors have a direct effect on Teachers' Working Effectiveness ( $\beta=0.35$ , p<0.001), therefore, the hypothesis 1 was acceptable.

H2: Teachers' Personal Characteristics factors have a direct effect on Teachers' Working Effectiveness ( $\beta=0.464$ , p<0.001), therefore, the hypothesis 2 was acceptable.

H3: Transformational Leadership factors have a direct effect on Organizational Commitment ( $\beta=0.192$ , p<0.001), therefore, the hypothesis 3 was acceptable.

H4: Organizational Commitment factors have a direct effect on Teachers' Working



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Effectiveness ( $\beta=0.457$ ,  $p<0.001$ ), therefore, the hypothesis 4 was acceptable.

H5: Teachers' Personal Characteristics factors have a direct effect on Organizational Commitment ( $\beta=0.208$ ,  $p<0.001$ ), therefore, the hypothesis 5 was acceptable.

### Mediating effect

The same as the path analysis showed in the Figure 3 and included the statistical value that showed in Table8, 9

**Table 9:** The mediator role of teachers' job satisfaction in the path analysis model

path	Estimate	Bias-corrected 95% CI	
		Lower	Upper
TWE<---OC<---TL	0.201	0.049	0.417
TWE<---OC<---TPC	0.170	0.043	0.348

Among the indirect effects, the indirect effect value of transformational leadership (TL) on Teachers' Working Effectiveness (TWE) through organizational commitment (OC) is 0.201, and the 95% confidence interval does not include 0, the indirect effect is acceptable :

H6: that stated, administrators' transformational leadership (TL) has a positive significant indirect effect on Teachers' Working Effectiveness (TWE) through organizational commitment (OC). Therefore, hypothesis 6 is acceptable.

The indirect effect value of Teachers' Personal Characteristics (TPC) on Teachers' Working Effectiveness (TWE) through organizational commitment (OC) is 0.170, the 95% confidence interval does not include 0, and the indirect effect is significant.

H7: that stated, Teachers' Personal Characteristics (TPC) has a positive and significant indirect effect Teachers' Working Effectiveness (TWE) through organizational commitment (OC). Therefore, hypothesis 7 is acceptable.

And from Table 4.12, were indicated that organizational commitment (OC), as a mediating variable, plays a mediating role in the relationship between transformational leadership (TL) and Teachers' Working Effectiveness (TWE). Because H6 and H1 are both acceptable, it is a partial mediating effect.

Organizational commitment (OC), as a mediating variable, plays a mediating role in the relationship between Teachers' Personal Characteristics (TPC) and Teachers' Working Effectiveness (TWE). Because H7 and H2 are both acceptable, it is a partial mediating effect.

## Summary

In this chapter, the research data is presented, employing a quantitative analysis approach for statistically examining the collected information. Initially, a descriptive analysis of the data was conducted using SPSS, and Amos software. Subsequently, both the identified variables and potential variables underwent thorough examination. The data analysis was further extended using AMOS to assess confirmatory factor analysis (CFA) and structural equation models (SEM).



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Upon scrutinizing the direct and indirect effects posited in the hypotheses, the final outcomes revealed that out of the seven hypotheses investigated in this research, hypotheses H1, H2, H3, H4, H5, H6, H7 were accepted.

## Research Discussions

This section discusses research findings through three key aspects: 1) results, 2) reasons supported by literature, and 3) practical recommendations to enhance leadership and teachers' effectiveness in Jiangxi's technology universities.

**Objective 1** The study examined Transformational Leadership (TL), Organizational Commitment (OC), Teachers' Personal Characteristics (TPC), and Teachers' Working Effectiveness (TWE). The SEM analysis confirmed model reliability, validity, and an excellent fit (e.g.,  $\chi^2/df = 1.514$ , RMSEA = 0.026, CFI = 0.988). Key findings:

TWE aligns with Campbell (2004) and Kyriakides et al. (2006), emphasizing teaching effectiveness, curriculum planning, time management, and student engagement.

TL is defined by Kouzes & Posner (1997) and Bass (1999) as idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration.

OC follows Meyer & Allen (2001) with three dimensions: affective, continuance, and normative commitment.

TPC includes personal knowledge, teaching skills, personality traits, and emotional intelligence (Myers et al., 1979; Güngören et al., 2014).

CFA and SEM analysis confirmed strong model reliability, with high factor loadings for TL (IC = 0.848), OC (NC = 0.814), TPC (TS = 0.826), and TWE (IM = 0.772).

**Objective 2** Hypothesis 1: TL positively affects TWE (estimate = 0.35,  $p < 0.001$ , correlation = 0.56). This aligns with Mansor et al. (2021), who found TL enhances effectiveness by inspiring commitment and motivation. Windlinger et al. (2020) emphasized TL's role in improving engagement through direct interaction.

Hypothesis 2: TPC positively influences TWE (estimate = 0.464,  $p < 0.001$ , correlation = 0.63). Kim et al. (2019) and Sherman & Blackburn (1975) confirmed personality traits impact effectiveness, with extraversion and agreeableness playing key roles.

Hypothesis 3: TL positively impacts OC (estimate = 0.192,  $p < 0.001$ , correlation = 0.2). Purwanto (2020) and Keskes et al. (2018) highlighted TL's role in fostering commitment through motivation and shared goals.

Hypothesis 4: OC positively affects TWE (estimate = 0.457,  $p < 0.001$ , correlation = 0.62). Özgenel & Koç (2020) found commitment enhances teaching quality and engagement.

Hypothesis 5: TPC positively impacts OC (estimate = 0.208,  $p < 0.001$ , correlation = 0.26). GURU (2021) and Kappagoda (2013) emphasized the influence of personality traits, such as emotional stability and extraversion, on commitment.

**Objective 3** Hypothesis 6: TL indirectly affects TWE via OC (estimate = 0.201, confidence interval = 0.049-0.417). Madjid & Samsudin (2021) and Sutrisno et al. (2023) confirmed TL strengthens commitment, which improves effectiveness.

Hypothesis 7: TPC indirectly affects TWE via OC (estimate = 0.170, confidence interval = 0.043-0.348). Özgenel & Koç (2020) and McGill et al. (2008) found strong commitment enhances teacher engagement and performance.

Conclusion: The research confirms TL and TPC significantly influence TWE, both directly and through OC. Educational institutions should focus on leadership development and fostering positive teacher characteristics to improve effectiveness.

## Recommendation



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This study provides three key recommendations: policy formulation, practical applications, and areas for further research.

### **Recommendations for Policy Formulation**

#### **Transformational Leadership Training**

Transformational leadership significantly enhances teachers' work effectiveness and organizational commitment. Educational administrators should implement training programs for school leaders, emphasizing idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. Such programs will help leaders better support teachers, fostering a more effective and engaging work environment.

#### **Policies to Strengthen Organizational Commitment**

Given the positive correlation between organizational commitment and teachers' work effectiveness, policies should focus on improving teachers' sense of belonging. Schools can achieve this by offering attractive career development opportunities, improving working conditions, enhancing welfare benefits, and promoting effective communication between teachers and administrators. These initiatives will help align teachers with institutional goals and improve teaching quality.

#### **Considering Teachers' Personal Characteristics in Recruitment**

Since personal characteristics significantly influence work effectiveness, recruitment policies should assess both vocational skills and psychological traits. Education departments should integrate personality assessments into hiring, training, and evaluation processes to ensure candidates possess traits conducive to effective teaching.

### **Recommendations for Practical Application**

#### **Enhancing Transformational Leadership in Schools**

Leadership training should extend beyond skill development to emphasize meaningful interactions with teachers. Leaders must actively listen to teachers, understand their concerns, and establish open communication channels to boost teachers' engagement and satisfaction. A supportive leadership approach fosters a positive work environment and enhances overall effectiveness.

#### **Strengthening Organizational Commitment**

Schools should create a supportive environment where teachers feel valued and fairly treated. Recognizing contributions, fostering trust, and ensuring transparent evaluation and promotion processes can enhance teachers' commitment. A just and open system builds trust, increasing teachers' responsibility and motivation to improve their performance.

#### **Developing Teachers' Personal Characteristics**

Institutions should provide professional development programs focusing on self-efficacy, resilience, and stress management. Workshops on emotional intelligence and coping strategies will not only enhance teachers' effectiveness but also reinforce their commitment to the institution.

### **Recommendations for Further Research**

#### **Transformational Leadership Across Different Disciplines**

Future studies should investigate whether transformational leadership affects teachers differently across disciplines such as arts, sciences, and vocational education. Understanding these variations can help design targeted leadership training programs tailored to specific subject areas.

#### **Teachers' Personal Characteristics and Mental Health**

While this study highlights the impact of personal characteristics on work effectiveness, further research should examine how these traits influence teachers' mental health, stress levels,



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and burnout. Such insights could inform policies promoting teachers' well-being and job satisfaction.

#### Job Engagement and Teaching Effectiveness

Although this study explored organizational commitment and work effectiveness, the direct relationship between job engagement and teaching effectiveness remains unexplored. Future research could analyze how job engagement influences instructional quality, offering empirical support for improving teaching methodologies and educational outcomes.

By implementing these recommendations, educational institutions and policymakers can enhance teacher effectiveness, improve organizational commitment, and foster a more productive learning environment.

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