

Mediating Effects of Teacher Motivation and Teacher Self-Efficacy on the Relationship Between Transformational Leadership and English Language Teaching Outcomes in Private Universities in Hainan Province

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Abstract

This research consists purposes were 1. to determine the components and indicators of teacher motivation, teacher self-efficacy, transformational leadership and English language teaching outcomes 2. to develop measurement and structural models of teacher motivation, teacher self-efficacy, transformational leadership and English language teaching outcomes and 3. to decompose the mediating effects of teacher motivation and teacher self-efficacy on the relationship between transformational leadership and English language teaching outcomes. The research sample consisted of 398 full-time English language teachers from 11 private universities in Hainan Province, selected through proportional stratified random sampling. The research instrument was a questionnaire. Data were analyzed using descriptive statistics and Structural Equation Modeling (SEM). The findings revealed that 1) transformational leadership comprised 4 components and 16 indicators, teacher motivation comprised 3 components and 12 indicators, teacher self-efficacy comprised 3 components and 12 indicators and English language teaching outcomes comprised 5 components and 20 indicators 2) the structural model demonstrated an excellent fit with the empirical data ($\chi^2/df = 1.100$, CFI = 0.996, TLI = 0.996, RMSEA = 0.016) and 3) transformational leadership significantly influenced teacher motivation ($\beta = 0.606$), teacher self-efficacy ($\beta = 0.270$), and English language teaching outcomes ($\beta = 0.316$). Teacher motivation significantly influenced teacher self-efficacy ($\beta = 0.460$) and English language teaching outcomes ($\beta = 0.268$), while teacher self-efficacy significantly influenced English language teaching outcomes ($\beta = 0.361$). Furthermore, teacher motivation and teacher self-efficacy demonstrated significant individual and serial mediating effects on the relationship between transformational leadership and English language teaching outcomes.

Keywords: Transformational Leadership, Teacher Motivation, Teacher Self-Efficacy



Introduction

Higher education institutions are increasingly expected to maintain teaching quality while responding to globalization, digital transformation and changing labor-market demands. English language education is especially important because it supports academic mobility, intercultural communication, and graduate employability. In China, these pressures are particularly visible in private universities, where rapid expansion has created opportunities for wider participation but has also intensified concerns about faculty development, instructional consistency, and quality assurance. Hainan Province, as a developing free trade port and an increasingly internationalized region, requires universities to strengthen English language teaching in order to support regional economic and educational goals.

Leadership is a central organizational condition influencing teachers' professional behavior. Transformational leadership emphasizes articulating a compelling vision, modeling appropriate values, stimulating intellectual development, and providing individualized support (Bass & Avolio, 1994, p. 25). The theoretical foundation of transformational leadership can be traced to the distinction between transactional and transformational leadership, in which transformational leaders seek to elevate followers' motivation and values (Burns, 1978, p. 20). Educational leadership generally affects student and teaching outcomes not only through direct actions but also through its influence on teachers' professional conditions, motivation and instructional practices (Leithwood et al., 2004; Robinson et al., 2008).

Teacher motivation explains the reasons teachers initiate, direct, and sustain effort in their professional activities, whereas teacher self-efficacy refers to teachers' beliefs in their capabilities to organize and execute the actions required to accomplish particular teaching tasks (Bandura, 1997, p. 3). From the perspective of Self-Determination Theory, motivation is also associated with the satisfaction of fundamental psychological needs and the internalization of meaningful goals (Ryan & Deci, 2000, pp. 68–69). These psychological factors are therefore plausible mechanisms connecting transformational leadership practices with English language teaching outcomes.

Although prior studies have examined transformational leadership, teacher motivation, teacher self-efficacy and teaching performance, many have considered these constructs separately or focused on public schools and general educational outcomes. Evidence remains limited regarding how teacher motivation and teacher self-efficacy operate simultaneously and sequentially within private universities in Hainan Province. This study addresses this gap by integrating Transformational Leadership, Teacher Motivation, Teacher Self-Efficacy, and English Language Teaching Outcomes within a single structural model and by testing the individual mediating effects of teacher motivation and teacher self-efficacy, as well as their serial mediation effect.

The Purposes

1. To determine components and indicators of teacher motivation, teacher self-efficacy, transformational leadership and English language teaching outcomes
2. To develop the models of teacher motivation, teacher self-efficacy, transformational leadership and English language teaching outcomes.
3. To decompose the mediating effects of teacher motivation and teacher self-efficacy on the relationship between transformational leadership and English language teaching outcomes.

Literary Review

1. Transformational Leadership (TL)

Transformational leadership originated from Burns's (1978) distinction between transactional and transforming leadership and was subsequently developed and operationalized by Bass (1985) and Bass and Avolio (1994). Transformational leadership emphasizes behaviors through which leaders articulate a compelling vision, stimulate followers intellectually, demonstrate appropriate values, and provide individualized support. The present study adopts four dimensions: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (Bass & Avolio, 1994; Avolio & Bass, 2004). In educational settings, these leadership behaviors can establish shared direction, strengthen teachers' professional development, encourage innovation, and create supportive organizational conditions. Previous research suggests that educational leadership influences teaching and learning outcomes not only through direct leadership practices but also through its effects on teachers' motivation, professional capacity, and instructional practices (Leithwood et al., 2004; Robinson et al., 2008). Accordingly, transformational leadership is expected to influence English language teaching outcomes partly through teacher-level psychological mechanisms.

2. Teacher Motivation (TM)

Teacher motivation refers to the psychological forces that initiate, direct, and sustain teachers' professional effort. Drawing primarily on Self-Determination Theory, the present study conceptualizes teacher motivation through three dimensions: autonomous motivation, controlled motivation, and task value. Autonomous motivation reflects teachers' engagement in teaching activities based on interest, personal endorsement, and the perceived inherent value of the work, whereas controlled motivation reflects engagement driven by external pressures, obligations, or expectations (Deci & Ryan, 2000; Ryan & Deci, 2000). Task value concerns teachers' perceptions of the importance, usefulness, and interest associated with their teaching work. Supportive leadership may enhance teacher motivation by clarifying organizational purposes, recognizing teachers' contributions, providing opportunities for professional development, and creating conditions that

support meaningful participation. Therefore, transformational leadership is expected to contribute to stronger teacher motivation.

3. Teacher Self-Efficacy (TSE)

Teacher self-efficacy is grounded in Social Cognitive Theory and refers to teachers' beliefs about their capability to organize and execute the actions required to accomplish particular teaching tasks (Bandura, 1997). The present study conceptualizes teacher self-efficacy through three dimensions: efficacy for instructional strategies, classroom management, and student engagement (Tschannen-Moran & Hoy, 2001). Leadership may strengthen teachers' self-efficacy by providing opportunities for professional learning, modeling effective practices, offering constructive feedback and social persuasion, and facilitating access to instructional resources. In addition, teachers with stronger motivation may be more willing to persist in challenging tasks, experiment with instructional approaches, and engage in professional learning, which may contribute to the development of stronger efficacy beliefs. Thus, teacher motivation is expected to be positively associated with teacher self-efficacy, and both constructs may serve as mechanisms through which transformational leadership influences teaching outcomes.

4. English Language Teaching Outcomes (ELTO)

English language teaching outcomes are conceptualized in this study as outcomes associated with the effectiveness of English language instruction, particularly the development of learners' communicative language abilities. The construct includes grammatical, sociolinguistic, strategic, discourse, and pragmatic or illocutionary dimensions of language use. These dimensions extend beyond knowledge of grammatical forms to encompass the ability to use English appropriately, coherently, strategically, and effectively across different communicative contexts (Canale & Swain, 1980). Effective English language teaching therefore requires teachers to sustain instructional effort, apply appropriate pedagogical strategies, engage learners effectively, and adapt instruction to different learning needs. Such teaching practices may be facilitated by teachers' motivation and self-efficacy as well as by organizational leadership conditions that encourage pedagogical innovation and professional learning.

5. Research Gap

Although previous studies have established the importance of transformational leadership for teacher behavior and educational outcomes, important conceptual, methodological, and contextual gaps remain. First, much of the existing literature has examined the direct effects of transformational leadership on teacher or educational outcomes, while comparatively less attention has been given to the psychological mechanisms through which leadership produces such effects. Second, teacher motivation and teacher self-efficacy have generally been examined as separate explanatory factors, and limited research has integrated their individual and sequential mediating roles within a single structural model. In particular, the potential pathway from

transformational leadership to teacher motivation, from teacher motivation to teacher self-efficacy, and subsequently to English language teaching outcomes requires further empirical examination. Third, empirical evidence concerning these relationships in private universities in China, particularly in Hainan Province, remains limited. This study therefore addresses these gaps by examining the direct and mediating relationships among transformational leadership, teacher motivation, teacher self-efficacy, and English language teaching outcomes, including the individual mediating effects of teacher motivation and teacher self-efficacy and their serial mediation effect. The study consequently extends research on educational leadership by explaining not only whether transformational leadership is associated with teaching outcomes, but also how and through which teacher-level psychological mechanisms such effects may occur in the context of Chinese private higher education.

Methodology

1. Research Design

This study employed a quantitative research design to examine the relationships among Transformational Leadership (TL), Teacher Motivation (TM), Teacher Self-Efficacy (TSE), and English Language Teaching Outcomes (ELTO), including the mediating effects of teacher motivation and teacher self-efficacy. The research was conducted in two methodological stages. The first stage involved a theory-driven review and content analysis of relevant literature to identify and synthesize the components and indicators of the four research constructs. The second stage involved quantitative data collection and analysis to validate the measurement and structural models and to test the hypothesized direct and indirect relationships among the variables.

2. Population and Sample

The target population consisted of 1,042 full-time English language teachers from 11 private universities in Hainan Province, China.

The sample size was determined using G*Power 3.1 to ensure adequate statistical power for the proposed structural model. A total of 398 full-time English language teachers were selected using proportional stratified random sampling, with each private university treated as a sampling stratum. The number of teachers selected from each university was determined proportionally according to the size of its English language teaching faculty.

3. Research Instrument

The research instrument was a structured questionnaire developed through a systematic synthesis of internationally recognized theoretical frameworks and measurement scales. Twenty representative measurement scales and theoretical sources relevant to Transformational Leadership, Teacher Motivation, Teacher Self-Efficacy, and English Language Teaching Outcomes were purposively selected based on their theoretical relevance, conceptual clarity, and applicability to the research context.

A citation matrix was developed to systematically record the constructs, dimensions, indicators, operational definitions, and theoretical foundations identified from the selected literature. Similar or conceptually overlapping indicators were compared, integrated, and synthesized, while redundant indicators were eliminated. The resulting construct–dimension–indicator framework was used as the basis for developing the questionnaire.

The questionnaire consisted of five sections: Section 1: Demographic information of the respondents. Section 2: Transformational Leadership (TL). Section 3: Teacher Motivation (TM). Section 4: Teacher Self-Efficacy (TSE). Section 5: English Language Teaching Outcomes (ELTO).

All substantive measurement items were assessed using a five-point Likert scale, ranging from 1 = Strongly Disagree to 5 = Strongly Agree.

Instrument Validation and Reliability

The quality of the questionnaire was assessed through content validation, pilot testing, and measurement model evaluation.

First, the initial questionnaire was reviewed by five experts with expertise in educational leadership, English language education, and research methodology. The experts evaluated the relevance, clarity, and appropriateness of each item. Content validity was assessed using the Index of Item–Objective Congruence (IOC). Items with acceptable IOC values were retained, while items requiring revision were modified according to the experts' recommendations.

Second, a pilot study with approximately 30 English language teachers who were not included in the main sample was conducted to examine item clarity, item discrimination, and internal consistency reliability. Cronbach's alpha coefficients were calculated, with values of 0.70 or higher considered acceptable for internal consistency.

Third, the measurement model was evaluated using Confirmatory Factor Analysis (CFA). Standardized factor loadings, Composite Reliability (CR), and Average Variance Extracted (AVE) were examined to assess construct reliability and convergent validity. Discriminant validity was assessed using the Fornell–Larcker criterion and the Heterotrait–Monotrait ratio (HTMT).

4. Data Collection

Data were collected through an online questionnaire administered using the Wenjuanxing survey platform. Before completing the questionnaire, participants were informed of the purpose and procedures of the study, the voluntary nature of participation, and the confidentiality and anonymity of their responses. Participation was voluntary, and respondents could decline to participate.

The collected questionnaires were screened before analysis. Responses with substantial missing data or other evidence of invalid response patterns were excluded from the final dataset. The final dataset consisted of 398 valid responses for statistical analysis.

5. Data Analysis

Data analysis was conducted in accordance with the three research objectives.

For Research Objective 1, theory-driven content analysis was used to synthesize the relevant literature and identify the components and indicators of Transformational Leadership, Teacher Motivation, Teacher Self-Efficacy, and English Language Teaching Outcomes. The analysis involved comparing, categorizing, integrating, and synthesizing conceptually related constructs and indicators.

For Research Objective 2, descriptive statistics and Confirmatory Factor Analysis (CFA) were used to validate the measurement model. Descriptive statistics included frequency, percentage, mean, and standard deviation. CFA was conducted to examine the factor structure, standardized factor loadings, Composite Reliability (CR), Average Variance Extracted (AVE), convergent validity, discriminant validity, and overall model fit.

For Research Objective 3, Structural Equation Modeling (SEM) was employed to examine the hypothesized direct relationships among Transformational Leadership, Teacher Motivation, Teacher Self-Efficacy, and English Language Teaching Outcomes.

The mediating effects were examined using bias-corrected bootstrap analysis with 5,000 resamples and 95% confidence intervals. The following indirect pathways were tested:

TL → TM → ELTO

TL → TSE → ELTO

TL → TM → TSE → ELTO

A mediating effect was considered statistically significant when the corresponding 95% bootstrap confidence interval did not include zero.

The adequacy of the measurement and structural models was evaluated using commonly accepted model-fit indices, including χ^2/df , Comparative Fit Index (CFI), Tucker–Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR).

Results

This Research The researcher can classify the research results as follows

1. Content analysis identified a coherent measurement structure for all four variables.

TL consisted of four components and 16 indicators TM consisted of three components and 12 indicators; TSE consisted of three components and 12 indicators and ELTO consisted of five components and 20 indicators.

Table 1 Components and indicators identified through content analysis.

Variables	Components	Number of Indicators
Transformational Leadership	Idealized Influence; Inspirational Motivation; Intellectual Stimulation; Individualized Consideration	16
Teacher Motivation	Autonomous Motivation; Controlled Motivation; Task Value	12
Teacher Self-Efficacy	Instructional Strategies; Classroom Management; Student Engagement	12
English Language Teaching Outcomes	Grammatical Competence; Sociolinguistic Competence; Strategic Competence; Discourse Competence; Pragmatic/Illocutionary Competence	20

2. to develop the models of four variables

The CFA results verified the proposed measurement model. Standardized factor loadings, Composite Reliability, and Average Variance Extracted satisfied the recommended criteria, confirming convergent validity, while discriminant validity was also supported. The subsequent SEM analysis demonstrated that the structural model achieved an excellent fit with the empirical data.

Table 2 Model Fit Indices of the CFA Measurement Model

Fit index	Obtained Value	Recommend Threshold	Interpretation
Chi-square (χ^2)	92.415, P=0.248		
Relative Chi-square(χ^2/df)	1.100	< 3	Excellent fit
GFI	0.970	> 0.80	Excellent fit
AGFI	0.957	> 0.80	Excellent fit
TLI	0.996	> 0.90	Excellent fit
CFI	0.996	> 0.90	Excellent fit
RMR	0.020	< 0.05	Excellent fit

RMSEA	0.016	<0.08	Excellent fit
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The final measurement model demonstrated an excellent fit with the empirical data ($\chi^2 = 92.415$, $p = 0.248$; $\chi^2/df = 1.100$). All goodness-of-fit indices met the recommended criteria, including GFI = 0.970, AGFI = 0.957, TLI = 0.996, CFI = 0.996, RMR = 0.020, and RMSEA = 0.016. The results confirmed satisfactory construct validity and supported the adequacy of the measurement model for subsequent structural equation modeling (SEM) and hypothesis testing.

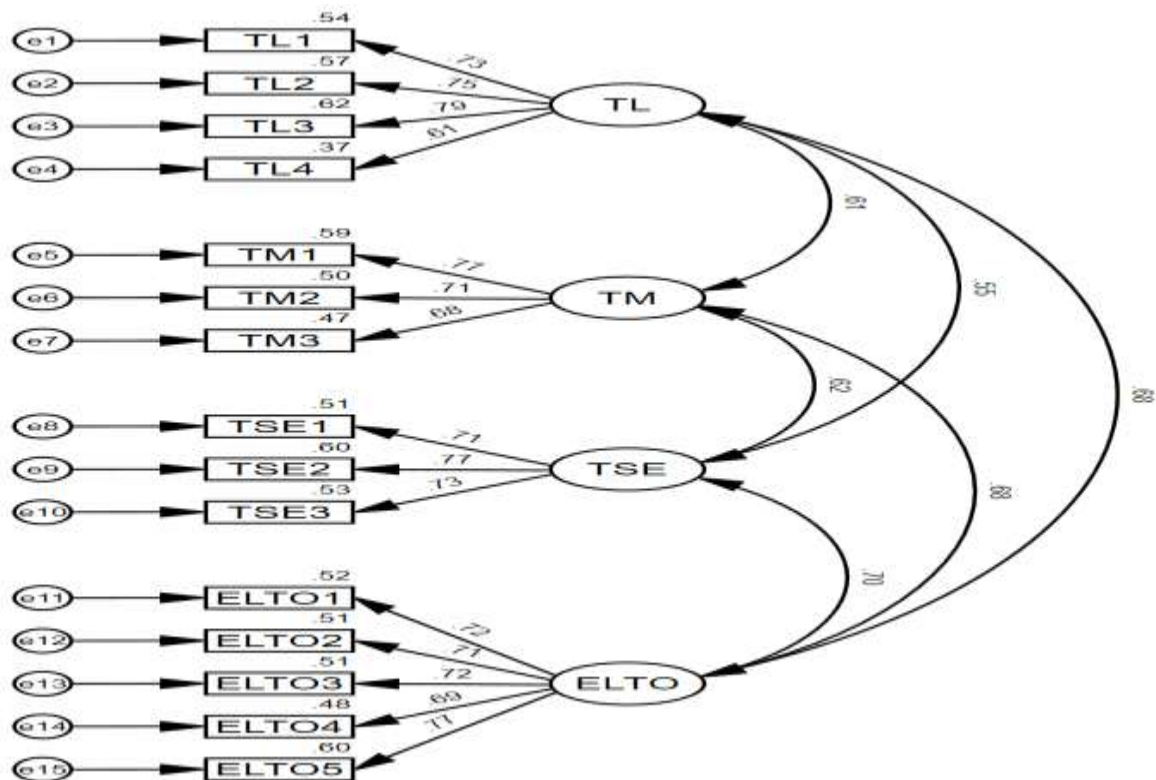


Figure 2 The CFA Model

Table 3 Critical statistics for the CFA model

Latent/Observe d Variable	Factor Loading	S.E.	C.R.	P	Std.Factor Loading	CR	AVE	MSV
TL→TL1	1.000				0.733	0.813	0.523	0.457
TL→TL2	0.917	0.068	13.553	***	0.753			
TL→TL3	0.973	0.069	14.013	***	0.785			
TL→TL4	0.697	0.063	11.086	***	0.608			
TM→TM1	1.000				0.768	0.764	0.519	0.468
TM→TM2	0.923	0.075	12.353	***	0.708			
TM→TM3	0.897	0.075	12.017	***	0.684			
TSE→TSE1	1.000				0.713	0.782	0.545	0.491
TSE→TSE2	0.978	0.077	12.766	***	0.772			
TSE→TSE3	0.961	0.078	12.306	***	0.729			
ELTO→ELTO1	1.000				0.722	0.846	0.523	0.491
ELTO→ELTO2	0.965	0.073	13.173	***	0.711			
ELTO→ELTO3	0.964	0.073	13.258	***	0.716			
ELTO→ELTO4	0.902	0.071	12.789	***	0.690			
ELTO→ELTO5	1.029	0.072	14.292	***	0.775			

The standardized factor loadings ranged from 0.608 to 0.785 for TL, 0.684 to 0.768 for TM, 0.713 to 0.772 for TSE, and 0.690 to 0.775 for ELTO. All factor loadings were above 0.50 and statistically significant ($p < 0.001$). The CR values (0.764–0.846) and AVE values (0.519–0.545) exceeded the recommended thresholds, while all MSV values were lower than their corresponding AVE values. These findings confirmed satisfactory reliability, convergent validity, and discriminant validity, indicating that the measurement model was appropriate for subsequent SEM analysis and hypothesis testing.

3. to decompose the mediating effects of the four variables

All six direct hypotheses were supported at $p < .001$. Transformational Leadership exerted its strongest direct influence on Teacher Motivation ($\beta = 0.606$). Teacher Motivation significantly strengthened Teacher Self-Efficacy ($\beta = 0.460$), while Teacher Self-Efficacy was the strongest direct predictor of English Language Teaching Outcomes among the two mediators ($\beta = 0.361$).

Table 4 Direct Effects Analysis

Hypothesis	Latent and observable	Un-standardized Factor loading	Standardized Factor loading	S.E.	C.R.	p	Result
H1	TL→ELTO	0.282	0.316	0.059	4.761	***	Supported
H2	TL→TM	0.552	0.606	0.061	9.007	***	Supported
H3	TL→TSE	0.252	0.270	0.072	3.499	***	Supported
H4	TM→ELTO	0.263	0.268	0.074	3.576	***	Supported
H5	TSE→ELTO	0.345	0.361	0.069	5.040	***	Supported
H6	TM→TSE	0.471	0.460	0.086	5.502	***	Supported

Structural Equation Modeling (SEM) was employed to examine the hypothesized relationships among the latent constructs. The results indicated that all structural paths were positive and statistically significant ($p < 0.001$). Specifically, Transformational Leadership (TL) significantly influenced Teacher Motivation (TM) ($\beta = 0.606$), Teacher Self-Efficacy (TSE) ($\beta = 0.270$), and English Language Teaching Outcomes (ELTO) ($\beta = 0.316$). Teacher Motivation also had significant positive effects on TSE ($\beta = 0.460$) and ELTO ($\beta = 0.268$), while TSE significantly predicted ELTO ($\beta = 0.361$). Among the direct effects, the strongest relationship was observed between TL and TM ($\beta = 0.606$). Overall, all hypothesized direct relationships were supported, indicating that Transformational Leadership positively influenced English Language Teaching Outcomes both directly and indirectly through Teacher Motivation and Teacher Self-Efficacy. These findings provided empirical support for the proposed structural model.

Table 5 Indirect Effects and Mediation Analysis

Hypothesis	Indirect Path	Indirect Effect	95%CI (Bootstrapped)	p-value	mediation Type	Result
H7	TL→TM→ELTO	0.162	[0.066,0.271]	0.002	partial mediation	Supported
H8	TL→TSE→ELTO	0.097	[0.031,0.169]	0.004	partial mediation	Supported
H9	TL→TM→TSE→ELTO	0.101	[0.051,0.171]	0.000	sequential mediation	Supported

Bootstrap mediation analysis was conducted using the bias-corrected nonparametric percentile method with 5,000 resamples and 95% confidence intervals. The results showed that all indirect effects were statistically

significant, as none of the confidence intervals included zero. Specifically, H7 (TL → TM → ELTO) was supported, with an indirect effect of 0.162 (95% CI [0.066, 0.271], $p = 0.002$), indicating that Teacher Motivation (TM) partially mediated the relationship between Transformational Leadership (TL) and English Language Teaching Outcomes (ELTO). H8 (TL → TSE → ELTO) was also supported, with an indirect effect of 0.097 (95% CI [0.031, 0.169], $p = 0.004$), confirming the partial mediating role of Teacher Self-Efficacy (TSE). Furthermore, H9 (TL → TM → TSE → ELTO) was supported, with an indirect effect of 0.101 (95% CI [0.051, 0.171], $p < 0.001$), demonstrating a significant serial mediation effect of TM and TSE. Among the three indirect pathways, H7 showed the strongest mediation effect, followed by H9 and H8. Overall, the findings supported all three mediation hypotheses, providing empirical evidence that Transformational Leadership enhances English Language Teaching Outcomes through both independent and serial mediating mechanisms.

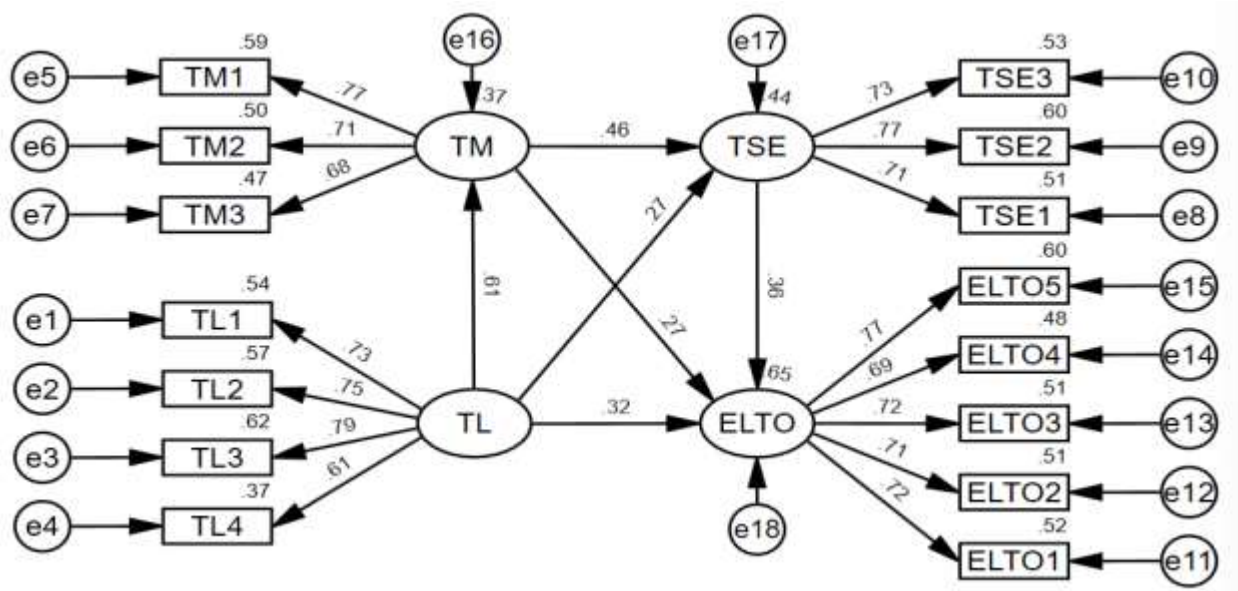


Figure 3 The SEM Model

Conclusion and Discussion

This Research The researcher can discuss the research results as follows.

This study identified the components and indicators of Transformational Leadership (TL), Teacher Motivation (TM), Teacher Self-Efficacy (TSE), and English Language Teaching Outcomes (ELTO), validated the measurement and structural models, and examined the direct and mediating relationships among the study variables. The findings demonstrated that transformational leadership had significant positive effects on teacher motivation, teacher self-efficacy, and English language teaching outcomes. Teacher motivation significantly

influenced both teacher self-efficacy and English language teaching outcomes, while teacher self-efficacy also significantly influenced English language teaching outcomes. In addition, teacher motivation and teacher self-efficacy demonstrated significant individual mediating effects, while their sequential relationship also produced a significant serial mediating effect. These findings provide empirical support for an integrated psychological mechanism through which transformational leadership contributes to English language teaching outcomes in private universities in Hainan Province. The findings suggest that the effectiveness of transformational leadership is not limited to its direct influence on teaching outcomes but also operates through teachers' motivation and beliefs in their instructional capabilities.

Discussion of Objective 1. The identified components and indicators provide a theoretically coherent representation of the four constructs examined in this study. The four-dimensional structure of Transformational Leadership (TL) idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration is consistent with the Full Range Leadership Model and the transformational leadership framework developed by Bass and Avolio (1994, pp. 3–4; Avolio & Bass, 2004). This structure reflects the major behavioral dimensions through which transformational leaders establish direction, inspire followers, stimulate new ways of thinking, and provide individualized support. The findings are also consistent with the foundational distinction between transactional and transforming leadership proposed by Burns (1978) and subsequently developed by Bass (1985).

The Teacher Motivation (TM) structure combines autonomous and controlled reasons for teaching with task value. The distinction between autonomous and controlled forms of motivation is consistent with Self-Determination Theory, which emphasizes differences in the quality and regulation of motivation (Deci & Ryan, 2000; Ryan & Deci, 2000). The inclusion of task value further reflects the importance teachers attach to the usefulness, importance, and interest of their professional activities. Thus, the identified structure captures both the reasons underlying teachers' engagement and the perceived value of teaching work.

The Teacher Self-Efficacy (TSE) structure, consisting of efficacy for instructional strategies, classroom management, and student engagement, is consistent with the multidimensional conceptualization of teacher efficacy proposed by Tschannen-Moran and Hoy (2001, pp. 796–797). It also corresponds to Bandura's (1997, p. 3) broader conceptualization of self-efficacy as beliefs concerning one's capability to organize and execute actions required to achieve designated performances. The five dimensions identified for English Language Teaching Outcomes (ELTO) provide a broader conceptualization of language teaching outcomes by extending beyond narrow measures of test performance toward communicative language use. This perspective is consistent with the communicative competence framework of Canale and Swain (1980).

Taken together, the identified components establish a logical conceptual sequence linking leadership behavior, teacher motivation, teacher psychological capability, instructional practice, and English language

teaching outcomes. The findings therefore provide a theoretically grounded basis for examining the relationships among TL, TM, TSE, and ELTO within private universities in Hainan Province.

Discussion of Objective 2. The excellent structural model fit provides strong empirical support for the proposed integrated theoretical framework. The model fit indices ($\chi^2/df = 1.100$, CFI = 0.996, TLI = 0.996, and RMSEA = 0.016) indicate that the hypothesized structural relationships are highly consistent with the observed data. The use of structural equation modeling is appropriate for examining complex relationships among latent constructs and their direct and indirect effects (Hair et al., 2019; Kline, 2016).

The particularly strong positive effect of Transformational Leadership on Teacher Motivation ($\beta = 0.606$) indicates that transformational leadership is closely associated with teachers' willingness to invest effort in their professional work and perceive greater meaning in their teaching responsibilities. This finding is consistent with Transformational Leadership Theory, which emphasizes vision, inspiration, intellectual stimulation, and individualized consideration as mechanisms through which leaders influence followers' motivation (Bass, 1985; Bass & Avolio, 1994). It is also consistent with the broader educational leadership literature, which indicates that leadership practices can influence teachers' professional attitudes and behaviors by shaping organizational conditions and teachers' experiences at work (Leithwood et al., 2004).

The significant positive effect of Transformational Leadership on Teacher Self-Efficacy ($\beta = 0.270$) is consistent with Social Cognitive Theory. According to Bandura (1997, pp. 79–113), efficacy beliefs are influenced by sources such as mastery experiences, vicarious experiences, social persuasion, and physiological or affective states. Transformational leaders may create opportunities for these efficacy-enhancing experiences through modeling, constructive feedback, encouragement, professional development, and support for teachers' instructional experimentation. The finding is also consistent with the multidimensional conceptualization of teacher efficacy developed by Tschannen-Moran and Hoy (2001), particularly in relation to instructional strategies, classroom management, and student engagement.

The significant positive relationship between Teacher Motivation and Teacher Self-Efficacy ($\beta = 0.460$) further suggests that teachers who are more strongly motivated to engage in their professional responsibilities may be more willing to persist in challenging instructional tasks, participate in professional learning, experiment with teaching strategies, and reflect on their instructional experiences. Such sustained engagement may generate successful experiences that contribute to stronger efficacy beliefs. This interpretation is compatible with the motivational processes emphasized in Self-Determination Theory (Deci & Ryan, 2000; Ryan & Deci, 2000) and the role of mastery experiences in the development of self-efficacy (Bandura, 1997).

The significant positive effects of Teacher Motivation ($\beta = 0.268$) and Teacher Self-Efficacy ($\beta = 0.361$) on English Language Teaching Outcomes further indicate that teachers' psychological characteristics are important

for effective English language teaching. Motivated teachers may be more willing to sustain instructional effort and engage in professional activities, whereas teachers with stronger self-efficacy may be more confident in applying instructional strategies, managing classrooms, and engaging students. These findings are consistent with the teacher-efficacy perspective of Tschannen-Moran and Hoy (2001) and with research demonstrating that educational leadership can influence teaching and educational outcomes through teacher-level processes (Leithwood et al., 2004; Robinson et al., 2008).

Finally, the significant positive direct effect of Transformational Leadership on English Language Teaching Outcomes ($\beta = 0.316$) supports the argument that leadership remains an important organizational condition for educational effectiveness. This finding is consistent with Robinson et al. (2008), who demonstrated that leadership practices are associated with educational outcomes, while also supporting the broader proposition that leadership influences educational quality by shaping teachers' professional conditions and practices (Leithwood et al., 2004).

Discussion of Objective 3. The mediation findings demonstrate that Transformational Leadership affects English Language Teaching Outcomes through more than one teacher-level psychological pathway. First, the significant indirect pathway from TL through Teacher Motivation to ELTO indicates that transformational leadership contributes to teaching outcomes partly by strengthening teachers' motivation and the perceived value of their professional responsibilities. This interpretation is consistent with Self-Determination Theory, which emphasizes the importance of meaningful and internally regulated motivation in sustaining engagement and effective behavior (Deci & Ryan, 2000; Ryan & Deci, 2000).

Second, the significant indirect pathway from TL through Teacher Self-Efficacy to ELTO indicates that transformational leadership also operates by strengthening teachers' confidence in their instructional capabilities. This finding is consistent with Bandura's (1997, p. 3) conceptualization of self-efficacy and with Tschannen-Moran and Hoy's (2001) multidimensional model of teacher efficacy. Leaders who provide encouragement, professional support, role modeling, feedback, and opportunities for professional learning may strengthen teachers' beliefs that they can successfully perform demanding instructional tasks.

Third, the significant serial mediation pathway from TL $\rightarrow$ TM $\rightarrow$ TSE $\rightarrow$ ELTO provides evidence for a sequential psychological mechanism. The finding suggests that transformational leadership may first strengthen teachers' motivation and sense of purpose, which encourages sustained effort, professional learning, and engagement with challenging instructional activities. These experiences may subsequently contribute to stronger self-efficacy beliefs, which are then associated with improved English language teaching outcomes. The serial pathway therefore extends a simple direct-effect explanation by demonstrating that leadership may operate through interconnected motivational and efficacy-related mechanisms.

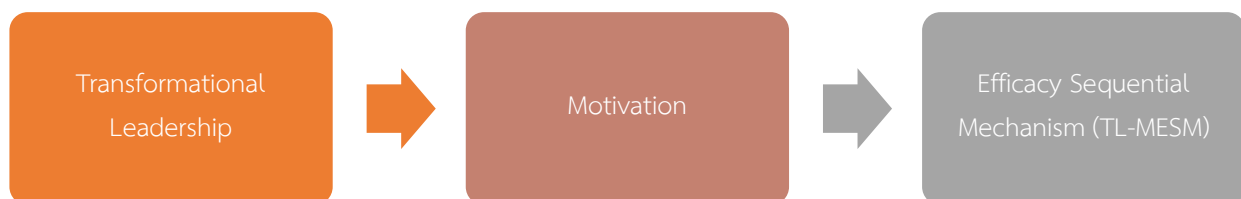
The finding that both individual mediation pathways and the serial mediation pathway were significant provides stronger evidence for the role of teacher-level psychological mechanisms than would be obtained from examining only direct relationships. In this respect, the present study extends previous educational leadership research by demonstrating that transformational leadership can operate through multiple interconnected mechanisms rather than through a single direct pathway. The findings are consistent with the broader educational leadership literature emphasizing the indirect influence of leadership on educational outcomes through teachers and organizational processes (Leithwood et al., 2004; Robinson et al., 2008).

Importantly, the direct effect of Transformational Leadership on English Language Teaching Outcomes remained significant after the mediating variables were included in the model. This indicates partial mediation, suggesting that teacher motivation and teacher self-efficacy explain part, but not all, of the relationship between transformational leadership and teaching outcomes. The remaining direct effect may reflect other organizational or professional mechanisms not included in the present model, such as organizational climate, instructional resources, teacher collaboration, professional development structures, or institutional support.

Overall, the findings demonstrate that transformational leadership should not be viewed solely as a direct determinant of English language teaching outcomes. Rather, its influence can be understood as a multidimensional process in which leadership strengthens teacher motivation, motivation contributes to teacher self-efficacy, and stronger efficacy contributes to improved teaching outcomes. This integrated explanation provides a more comprehensive account of how transformational leadership may contribute to English language teaching quality in private universities in Hainan Province.

Academic Findings or New Knowledge

From the study entitled “Mediating Effects of Teacher Motivation and Teacher Self-Efficacy on the Relationship Between Transformational Leadership and English Language Teaching Outcomes in Private Universities in Hainan Province,” a new body of knowledge can be synthesized as the “Leadership–Motivation–Efficacy–Outcomes Mechanism.” The findings demonstrate that Transformational Leadership (TL) influences English Language Teaching Outcomes (ELTO) not only through a direct pathway but also through two individual psychological mediation pathways and a sequential mediation pathway involving Teacher Motivation (TM) and Teacher Self-Efficacy (TSE).



The model demonstrates that transformational leadership functions as an initiating mechanism by providing vision, inspiration, intellectual stimulation, and individualized support, thereby strengthening teachers' motivation. Teacher motivation then functions as a motivational mechanism that encourages sustained effort, professional learning, and engagement in instructional activities. These processes contribute to stronger teacher self-efficacy, which functions as an efficacy-to-action mechanism by enabling teachers to translate motivation, effort, and experience into confident instructional practices. These interconnected mechanisms ultimately contribute to improved English language teaching outcomes.

The most important new knowledge is the sequential mechanism of $TL \rightarrow TM \rightarrow TSE \rightarrow ELTO$, which demonstrates that transformational leadership can initiate a developmental process in which leadership strengthens teacher motivation, motivation contributes to teacher self-efficacy, and self-efficacy contributes to improved teaching outcomes. In addition, the findings demonstrate two individual mediation pathways, $TL \rightarrow TM \rightarrow ELTO$ and $TL \rightarrow TSE \rightarrow ELTO$, as well as a direct pathway from $TL \rightarrow ELTO$.

Suggestion

1. Recommendations for Applying the Findings

1.1 Private university leaders should institutionalize transformational leadership development focused on shared vision, ethical role modeling, intellectual stimulation, and individualized support.

1.2 Universities should strengthen autonomous motivation and task value through meaningful participation in decision-making, recognition, career development, and opportunities to design innovative English courses.

1.3 Professional development should prioritize mastery-oriented experiences, peer observation, mentoring, coaching and constructive feedback to strengthen efficacy for instructional strategies, classroom management, and student engagement.

1.4 Quality assurance systems should monitor leadership practices, teacher motivation, teacher self-efficacy, and multidimensional English teaching outcomes rather than relying only on examination scores.

1.5 Policy authorities should provide differentiated support for private universities, including leadership certification, faculty development funding, and institutional mechanisms that protect teacher autonomy and professional growth.

2. Recommendations for Future Research

2.1 Replicate the model in public universities, vocational institutions, and other Chinese provinces to test generalizability.

2.2 Use longitudinal or experimental designs to establish temporal and causal relationships among leadership, motivation, efficacy, and teaching outcomes.

2.3 Collect multi-source data from leaders, teachers, and students, including objective language performance indicators, to reduce common-method bias.

2.4 Examine additional mediators and moderators such as organizational climate, professional learning communities, digital teaching competence, workload, and institutional support.

2.5 Compare alternative serial arrangements and multilevel models to distinguish individual teacher processes from university-level leadership effects.

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