

Exploring the Impact of Transformational Leadership Practices on Teacher Self-Efficacy Beliefs: A Systematic Review

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Abstract

Transformational leadership and teacher self-efficacy are two vital educational constructs that predict higher teacher performance and positive student learning outcomes. Large-scale research studies in education consistently demonstrate the statistically significant relationship between the two educational constructs. What remains less explored over the past decades is a comprehensive synthesis of the empirical evidence that clarifies the nature, strength, and mechanisms of this relationship. This study therefore conducts a systematic review with the aim to synthesize existing empirical research findings in the area by eliciting the underlying mechanisms and contextual moderators in the relationship between these two vital variables in education. It also presents useful implications for educational policy and praxis.

Following the PRISMA guidelines, a comprehensive search was conducted across major academic databases such as Google Scholar, Scopus, ERIC, and Research Gate for peer-reviewed articles published between 2015 and 2025. Studies were included if they fulfilled a systematised criterion. Selected studies analysed thematically to identify key patterns and themes. Results indicated significant positive correlations between principals' transformational leadership practices and teachers' self-efficacy beliefs through key mechanisms such as: providing vision and inspiration, individualised consideration, intellectual stimulation, and building collaborative culture for vicarious learning, among others. The results also highlight the contextual mediators and moderators of the relationships, the implications for educational policy and praxis, the identification of the research gaps in the area and recommendations for further study.

Key Terms: *Principal Leadership, Transformational Leadership, Teacher performance, Teacher Self-Efficacy Beliefs*

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1. Introduction

In every educational system, teachers play vital roles in the school improvement and effectiveness strategies. This is because as leaders of the instructional process, teachers work to ensure that effective teaching and learning occurs in the classroom (Rhodes and Brundrett, 2010). Not only are teachers expected to acquire the professional competencies that facilitate effective teaching and learning, but they are also pressurised to maximize student learning outcomes with limited resources (Shatzer et al., 2014; Day et al., 2016). This situation has precipitated significant research studies on the factors that contribute to high teacher performance in schools (Ling et al., 2015; Short, 2016; Hallinger et al., 2017; Afayori, 2020). In most of the empirical studies in the area, while factors such as teacher continuous professional development, life-long learning, job satisfaction, organisational culture, and student wellbeing, variously influence teacher effectiveness and performance in schools (Bush and Middlewood, 2005; Bell and Bolam, 2010:99; Schein, 2010; Hashay & Altundag, 2017), effective school leadership is identified as one of the vital factors that impact directly on teacher performance (Hallinger, 2003; Leithwood and Sun, 2012). Theoretically, among the various school leadership styles such as transactional, instructional, distributive, servant leadership, research studies show that transformational leadership has the capacity to inspire and motivate teachers to achieve high level of performance in teaching and learning (Marks and Printy, 2003; Leithwood et al., 2006; Robinson et al., 2008; Le Fevre et al., 2015).

Vast investigations into the contextual factors that mediate teacher performance also indicate that teachers' sense of efficacy is a significant predictor to their performance (Bandura, 1997; Tschannen-Moran et al., 1998; Goddard et al., 2004; Ross and Bruce, 2007; Tschannen-Moran and McMaster, 2009; Klassen et al., 2010). Understood as the teacher's belief in his or her ability to organise instructional material and achieve positive instructional outcomes (Tschannen-Moran & Hoy, 1998; Ross & Gray, 2006; Gavora, 2010), studies show that teachers with a high sense of efficacy are most likely to achieve high performance levels than their counterparts with a low sense of efficacy (Bandura, 1997; Goddard and colleagues, 2004; Klassen et al., 2011; Versland et al., 2017). For instance, Bandura (1997: 119) discovered in his social learning theory that without a high sense of self-efficacy, people may have the knowledge and skills to undertake tasks, and yet fail in executing them. Hence, perceived self-efficacy is concerned not with the number of skills one has, but the sense of self-belief which

accompanies and regulates these skills in the execution of tasks (see also, Afayori, 2020:). This makes the self-efficacy beliefs of teachers a pivotal construct in the race to improve teaching and learning in schools.

Consequently, one discovers that transformational leadership and teachers' sense of efficacy represent two critical dimensions in contemporary educational research. This is because both play significant roles in enhancing teacher performance in teaching and learning. While transformational leadership has emerged as an influential leadership style in school administration and teacher performance, teachers' sense of efficacy has also been identified as a powerful predictor of high teacher performance. Thus, the relationship between these two constructs offers significant implications for educational policy, school administration, and classroom practice. In the heightened demand for educational accountability throughout educational institutions across continents, significant research in the relationship between transformational leadership and teachers' sense of efficacy has been conducted (Chen and Zimmerman, 2007; Linnenbrink and Pintrich, 2010; Walker and Slear, 2011; Espinoza, 2013; Shumate, 2013; Ling et al., 2015; Short, 2016; Versland and Erickson, 2017; Afayori, 2020; Punzalan & De Jesus, 2024). These studies demonstrate that there is a strong statistical correlation between these two significant variables to teacher performance. Thus, there is scholarly consensus on the positive relationship between transformational leadership and teachers' sense of efficacy. However, there are fewer or non-existent studies which provide synthesis of the empirical evidence in this area, examining the nature of the relationship, the underlying mechanisms, contextual moderators, and practical implications for educational policy. This study therefore seeks to provide a systematic review of the evidence in this area.

Systematic reviews differ from traditional literature reviews in that they synthesize and analyse research studies in unbiased, rigorous, and systematic ways (Baumeister & Leary 1997; Shea et al., 2007; Cooper et al., 2008; Siddaway, et al., 2019). As Shea and colleagues (2007: 2) put it, systematic review "employs an objective search of the literature, applying predetermined inclusion and exclusion criteria to the literature, critically appraising what is found to be relevant. It then extracts and synthesizes data from the available evidence base to formulate findings". In this way, findings from such reviews can be used to support evidenced-based practices (Shea et al., 2007).

2. The Purpose of The Study

There are large-scale research studies which consistently demonstrates school [principals' exercise of transformational leadership traits influences teachers' performance in teaching. However, what is less evident in the literature is the synthesis of the findings of the research studies in the area, for easy comprehension of the trend of influence, the degree of impact, the variance of methods used, and the implications for policy and praxis. This systematic review therefore seeks to achieve the following purpose:

- i. To provide synthesis of findings of various transformational leadership practices that statistically relate to teacher self-efficacy.
- ii. Identify the mediating and moderating factors that may influence the relationship between transformational leadership and teacher self-efficacy.
- iii. To identify the research gaps in the studies.
- iv. To make recommendations for educational policy and praxis.

The systematic review will therefore focus on studies between 2015 and 2025. The compelling rationale here is pre-2015 have largely concentrated on establishing statistical correlations between the two key variables. However, the specific mechanisms through which leaders exert this influence are less understood and require consolidation. A systematic review of the last decade of research can move the field from knowing that it works to understanding how and under what conditions. Secondly, the period between 2015 and 2025 represents a uniquely critical decade for education. Within this period, Covid created a massive unplanned disruption which impacted negatively on educational systems, causing unprecedented stress and burnouts on teachers. A systematic review within this period will also provide evidence-based blueprint for school leaders navigating the complex post-pandemic landscape in education. Thirdly, the absence of any such reviews in the area which specifically investigates the relationship between the transformational leadership and teacher self-efficacy makes it even more compelling.

3. Literature Review

Boote and Beile (2005) indicate that no researcher can perform significant research without first understanding the literature in the field. The purpose for conducting this review is to understand the literature in the area in terms of the theoretical frameworks of transformational leadership and teacher sense of efficacy, their effects on

teacher performance, and the evidence of studies on their interrelationships.

i. *Transformational Leadership Theory*

The concept of transformational leadership was first developed by James McGregor Burns in 1978 to describe the relationship between leaders and their followers in organisations. He drew a sharp distinction between what he called “transforming leaders” and “transactional leaders.” While transactional leaders achieve organisational goals based on a *quid pro quod* (give-and-take) where employees strive to achieve organisation goals based on the rewards they get, transforming leaders achieve such goals by appealing to the values, interests, motivations, expectations, and capacities of members. They achieve this through leadership characteristics such as establishing vision and direction, providing inspirational motivation and intellectual stimulation, among others. Following these leadership traits, transforming leaders seek to persuade or convince members of an organisation to act in response to the vision and mission of the organisation. It is not so much about the leader’s exercise of authority over members but the leader’s ability to persuade members to work in response to organisational goals (Burns, 1978). Consequently, Burns (1978) sees transformational and transactional leadership to be mutually exclusive.

Bernard Bass (1985) extended Burns’ (1978) concept of transformational leadership to include transactional leadership in his two-factor theory of leadership. Unlike Burns (1978), Bass (1985) views the two forms of leadership as a single continuum rather than two mutually exclusive forms of leadership practices. For Bass (1985), while transformational leaders often appeal to the commitment of members to achieve organisational goals, transactional leaders use techniques such as contingent rewards, active management by expectations, and passive management by exception to accomplish organisational goals. According to Bass (1985), while transactional leadership practices are good for maintaining the standards of performance in the organisation in the short-term, transformational leadership practices appeal to the long-term shared goals and interests of both followers and leaders in the organisation (Bass and Bass, 1985; Avolio, 1994). Bass and Avolio (1994) therefore indicated that leadership characteristics that are associated to this leadership continuum include: *idealised influence, inspirational motivation, intellectual stimulation and individualised consideration, contingent reward, management-by-exception, and laissez-faire leadership*. Bass and Avolio developed the Multifactor Leadership Questionnaire (MLQ Form 5X) as the instrument for measuring these leadership practices (see also, Afayori, 2020).

Developed for organisational contexts, transformational leadership was introduced into the educational context by Leithwood and colleagues (1992; 1994; 1999) during the school improvement and restructuring and improvement process in the 1990s. The purpose was to see how the positive effects of this form of leadership in other organisational contexts can be replicated in school leadership. Consequently, Leithwood and colleagues (1994) developed the Principal Leadership Questionnaire (PLQ) as the instrument for measuring leadership practices that are associated to transformational leadership in schools. The instrument measures leadership traits such as: *providing intellectual stimulation; offering individualized support; modelling best practices and important organizational values; demonstrating high performance expectations; creating a productive school culture; and developing structures to foster participation in school decision-making* (Leithwood, 1994; Leithwood et al., 1999; Leithwood and Sun, 2012: 399-401).

Within the context of school leadership, substantial volumes of research studies have established a positive, albeit often indirect, relationship between principal transformational leadership and teacher variables. Studies show that principals who demonstrate transformational leadership behaviours are consistently linked to increased Job Satisfaction and Commitment (Griffith, 2004); enhanced teacher sense of efficacy and collective efficacy (Ross & Gray, 2006; Goddard et al., 2004; Versland et al., 2017; Afayori, 2020). Consequently, the literature on transformational leadership demonstrates compelling evidence on how it significantly impacts on teachers and the school. Its primary strength lies in its capacity to motivate and empower teachers, thereby creating the conditions for enhanced teaching and learning. By building a shared vision, stimulating intellectual growth, and attending to individual needs, transformational leaders foster a professional culture that is directly linked to higher teacher satisfaction, commitment, and efficacy, which in turn supports improved student outcomes.

ii. *Teacher Self-Efficacy Theory*

Teacher self-efficacy is rooted in Albert Bandura’s (1997) Social Cognitive theory of “perceived self-efficacy”. Bandura (1997) conceived the concept as a self-regulatory mechanism which determines a person’s performance levels. For Bandura (1997: 3), perceived self-efficacy connotes to “beliefs in one’s capacity to organise and execute the courses of action required to produce given attainments”. Bandura (1997: 2) posited the concept as a performance predictor since “it influences the courses of action people choose to pursue, how much effort they

put forth in given endeavours, how long they will persevere in the face of obstacles and failures, their resilience to adversity... and the level of accomplishment they realised” (See also, Afayori, 2020: p.26). For Bandura (1997) perceived self-efficacy is not so much about the measure of competence (acquired knowledge and skills), but rather the self-perception of one’s competence. Competencies equip a person with the knowledge and skills required to execute appropriate actions, but it is perceived self-efficacy that gives the person the confidence to apply such knowledge and skills required to succeed in accomplishing required tasks (See, Bandura, 1997: 34).

- **Mastery Experience:** Bandura (1997) identified *mastery experience*, *vicarious experience*, *verbal persuasion*, and *affective state* as the four sources of information that contribute to the development of perceived self-efficacy. Bandura (1997: 80) views *mastery experiences* as “the most influential source of self-efficacy information because they provide the most authentic evidence of whether one can muster whatever it takes to be successful. Successes build robust belief in one’s personal efficacy. Failure undermines it, especially if failure occurs before a sense of one’s efficacy is firmly established”.
- **Vicarious Experience:** Bandura (1997) relates *vicarious experiences* to the experience of *modelling*. Here, people appraise their capabilities in relation to the attainment of others. As Goddard and colleagues (2004) put it, “when a model with whom the observer identifies performs well, the efficacy beliefs of the observer are most likely to be enhanced. When the model performs poorly, the efficacy beliefs of the observer tend to diminish” (Goddard et al., 2004: 5).
- **Verbal Persuasion:** According to Bandura (1997), *verbal or social persuasion* underscores the degree to which a person’s self-efficacy is boosted by the positive and realistic appraisals others make about his or her capability to succeed in attaining given tasks. For Bandura (1997: 101), “it is easier to sustain a sense of efficacy, especially when struggling with difficulties, if significant others express faith in one’s ability than if they convey doubts”. In other words, people who are verbally persuaded or encouraged that they possess the ability to succeed in given task, are most likely to mobilise and sustain greater effort than those who harbour and dwell on self-doubts and deficiencies (Bandura, 1997: 101).
- **Affective State:** This involves how people react to the somatic information conveyed by their physical and emotional states. In other words, it entails how people cope with stress and tasking situations, especially in domains that involve physical accomplishments, health functioning and coping with stressors (Bandura, 1997). For Bandura (1997), people sometimes interpret their “physiological activation in stressful or taxing situations as signs of vulnerability to dysfunction. Because high arousals can debilitate performance, people are more inclined to expect success when they are not beset by aversive arousals than if they are tensed and viscerally agitated” (Bandura, 1997: 106). That is, the constant thoughts of ineptitude and stress reactions can increase people’s levels of distress which may lead to the very dysfunction they feared.

From a social cognitive theoretical perspective, perceived self-efficacy was introduced into the educational field as Teacher’s Sense of Efficacy (TSE) over the past four decades or so. While scholars defined it as “a teacher’s belief in their capability to organize and execute the courses of action required to successfully accomplish a specific teaching task in a particular context” (Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998), the concept soon emerged as a critical construct in educational research, consistently demonstrating a powerful correlation with teacher behaviour, teacher performance, and positive student outcomes (Goddard et al., 2004; Caprara et al., 2006; Ross and Gray, 2006; Klassen et al., 2011; Versland et al., 2017; Afayori, 2020). Robust research studies have consistently demonstrated high levels of teacher performance in different tasks because of the influence of teachers’ sense of efficacy. For instance, in their comprehensive synthesis of 40 years of research in teacher self-efficacy beliefs, Zee & Koomen (2016) discovered a strong link between teacher self-efficacy and improvement instructional quality and student motivation. They also discovered that highly efficacious teachers exhibited greater enthusiasm and commitment to teaching. In terms of its direct impact on student outcomes, Caprara and colleagues (2011) conducted a study on teacher self-efficacy and its impact on job satisfaction and students’ achievement. Results indicated that enhancing teachers’ sense of efficacy leads to improved job satisfaction and potentially leads to high students’ academic achievements.

The measurement of teachers’ sense of efficacy (TSE) has evolved over the years. The earliest scale was the one proposed by the RAND studies (1976). This was a two-item scale which measured a teacher’s perceptions of their ability to influence student learning. While this scale was criticised as crude and simplistic, Gibson and Dembo (1984) proposed a two-factors scale for measuring this variable: *Personal Teaching Efficacy* (which focused on the teacher’s belief in his/her own skills) and *Teaching Efficacy* (which focused on the teacher’s belief that his/her teaching can influence student learning). However, it was Tschannen-Moran and Woolfolk Hoy (2001) who developed the most widely used instrument for measuring a teacher self-efficacy; the *Teachers’*

Sense of Efficacy Scale (TSES). This scale measures efficacy in the following three key domains:

- **Efficacy in Student Engagement:** This involves the teacher's ability to motivate students and promote their active participation in learning.
- **Efficacy in Instructional Strategies:** concerns the teacher's ability to use a variety of teaching methods and assessments to facilitate student comprehension.
- **Efficacy in Classroom Management:** this involves the teacher's ability to control disruptive behaviour and create a positive learning environment within the classroom (see, Tschannen-Moran and Woolfolk Hoy, 2001: p.799)

In terms of the contextual and developmental influences of the teacher effect construct, research studies show that teachers' sense of efficacy is not a static construct but varies over career and contexts. Woolfolk Hoy & Burke Spero (2005) indicate that TSE is sensitive to career stages. Here, it often follows a *U-shaped* curve where it is high in pre-service teachers but dips sharply during the early years of teaching, and gradually rebuilds with accumulated experience and mastery. It may decline again late in a career due to burnout or resistance to new reforms (Woolfolk Hoy & Burke Spero, 2005: p.352-353). In terms of contextual factors, Skaalvik & Skaalvik (2017) discovered that specific school factors such as supportive leadership, staff collaboration, resource availability, continuous professional development, and positive student-staff engagements strongly correlated with higher TSE.

Essentially, the literature on teacher sense of efficacy consistently establishes the construct as a pivotal teacher performance efficacy variable in education. It acts as a mediator between a teacher's knowledge and their actual performance, influencing everything from instructional quality to personal well-being. Thus, understanding its sources of influence and areas of impacts has profound implications for teacher recruitment, preparation, and professional development (Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998).

iii. *Integrating Transformational Leadership and Teacher Sense of Efficacy*

Findings of large-scale research studies consistently indicate that transformational leadership directly influence the sources from which teachers derive their self-efficacy (Tschannen-Moran & Gareis, 2004; Afayori, 2020; Francisco, 2019; Fairis & Mydin, 2022; Noor et al., 2025). Findings of some of these studies indicate that the influence of transformational leadership on teacher self-efficacy is both direct and mediated through several key variables. In the conceptual analysis of the components of transformational leadership, one perceives a direct relationship between these components and Bandura's (1997) sources of self-efficacy. For instance, there is a direct mapping relationship between the leadership trait of *individualized consideration* and *mastery experience* as a source of self-efficacy. Here, studies support the claim that principals who provide personalized feedback, recognizes individual strengths, and offers targeted professional development directly creates opportunities for mastery experiences (Leithwood & Jantzi, 2006; Gkolia et al., 2021).

There is also a theoretical relationship between *intellectual stimulation* and *vicarious experience* in school contexts where principals encourage risk-taking and create collaborative cultures like Professional Learning Communities where teachers learn to successfully navigate intellectual challenges (Jaewoo & Woonsun, 2021). These contexts provide powerful vicarious and mastery experiences. The transformational leadership traits of *inspirational motivation* and *idealized influence* also influence *verbal persuasion* and *emotional regulation* as sources of teachers' sense of efficacy. This is realized in contexts where school principals articulate positive, achievable vision and model optimism and resilience in the face of adversity. Their positive sense of modelling and ability to encourage staff to pursue instructional goals provides a continuous form of verbal persuasion.

From a mediated point of view, substantial body of quantitative and qualitative research corroborates this theoretical linkage between principals' transformational leadership and teachers' sense of efficacy. In the seminal and correlational studies conducted by Griffith (2004), results indicated that principal transformational leadership was significantly correlated with higher teacher efficacy, which in turn was linked to improved school performance. Ross and Gray (2006) also conducted a path modelling and mediation analysis between the two key constructs. Results indicated that transformational leadership influenced teachers' beliefs in their personal efficacy indirectly by building commitment to professional community and by shaping teachers' perceptions of the collective efficacy of the staff.

Similarly, a study by Klassen and colleagues (2011) across different cultural contexts confirmed that principal transformational leadership was a strong predictor of teachers' sense of efficacy. In the study conducted by Espinoza (2013), results indicated that transformational leadership traits such as setting directions and redesigning the organizations significantly impacted on teachers' sense of efficacy in instructional strategies and

classroom management. Furthermore, in the studies conducted by Gkolia and colleagues (2018), the results reveal that transformational leadership practices such as model behaviour, fosters commitment, provide intellectual stimulation, and holds high performance expectations significantly related to teachers' sense of efficacy in student engagement (See, Gkolia et al., 2018, p.190). In consequence, the literature in the area reveals that the relationship between transformational leadership practices and teachers' sense of efficacy is overwhelmingly positive.

4. Methodology

Extant research studies demonstrate positive relationship between transformational leadership practices and teachers' self-efficacy or sense of efficacy. Whereas myriads of empirical research studies present this relationship differently as *direct*, *mediated*, or *catalytic*, one finds fewer or non-existent studies which provide synthesis of the empirical evidence in this area. Synthesis of evidence on the transformational leadership styles that significantly impact on teachers' sense of efficacy is almost absent. There is also little synthesis of evidence on the variance of research methods and designs that are used for the study of the relationship between transformational leadership and teacher self-efficacy beliefs. The presence of these gaps is the motivation for employing the method of systematic reviews to analyse and synthesize the findings on the nature of the relationship between these two constructs, and to underline some practical implications for educational policy and praxis.

4.1. Research Design

The study uses systematic review as its research design. Cochrane Collab (2003) defines systematic review as "a review of a clearly formulated question that uses systematic and explicit methods to identify, select, and critically appraise relevant research, and to collect and analyse data from the studies that are included in the review" (Cited in Siddaway et al., 2019: p.751). In the search of the synthesis of evidence for variant studies in particular fields of endeavour, systematic reviews are considered as useful because of their robust, methodical, comprehensive, transparent, and replicable nature. They employ clearly defined and systematic processes to search and locate all relevant data that address the research questions (Siddaway et al., 2019). Thus, systematic reviews are often placed on a high pedestal because of their capacity to present evidence of the synthesis of the findings of varied research studies.

To achieve this objective, this current study utilized the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to ensure a comprehensive and transparent approach to literature identification, screening, and inclusion (Moher et al., 2009). The PRISMA guidelines facilitate methodological consistency, detects potential biases, and enhance the validity and reliability of research findings (Moher et al., 2009). Consequently, this review process involved four distinct stages: identification, screening, eligibility assessment, and inclusion of relevant studies. It is this methodological rigor that helps in minimizing bias and enhancing the reliability of the findings (Siddaway et al., 2019).

4.2. Research Questions

The systematic review of the relationship between transformational leadership and teachers' sense of efficacy in schools was guided by the research questions below. The purpose was to understand and synthesize findings of studies (between 2015-2025) on the nature of the relationship between the two variables, and its relevance for educational practice and development of policy. Unlike earlier reviews that often focus on various leadership styles and teachers' sense of efficacy (Luo et al., 2024) or the influence of school leadership on teacher performance (Punzalan & De Jesus, 2024), this analysis specifically examines the dynamic interplay between transformational leadership and teachers' sense of efficacy across diverse educational settings. The review addresses the following research questions:

RQ1. What is the relationship between principals' transformational leadership and teacher self-efficacy?

RQ2. Through what mechanisms does transformational leadership practice affect teacher self-efficacy?

RQ3. What contextual factors account for variations in the relationship between principals' transformational leadership and teacher efficacy?

RQ4. What are the significant research gaps in this area?

4.3. The Search Strategy

A meticulous search strategy was developed to identify relevant literature published between January 2015 and August 2025. Using this search strategy, a comprehensive search was conducted across multiple electronic databases including Google Scholar, Research Gate, Educational Resource Information Centre (ERIC), Taylor and Francis (Online), Web of Science, and Scopus. The search utilized a combination of keywords and Boolean

operators related to the core concepts of interest: ("transformational leadership" OR Principal leadership", OR "educational leadership") AND ("teacher self-efficacy" OR "teacher sense of efficacy" OR Teacher efficacy beliefs) AND ("education" OR "schools" OR "educational institutions"). While acknowledging the presence of significant research in this area, the search was limited to articles published between 2015 and 2025 to ensure the inclusion of current literature in the relationship between principals' transformational leadership and teachers' sense of efficacy. Table 1 shows the outcome of the initial search results and the selected studies for screening.

Table 1: *Summary of Databases searched and included Studies.*

Database	Initial Search Results	Selected Studies
Google Scholar	218	11
Scopus/Science Direct	117	9
Taylor and Francis Online	114	7
ERIC	87	5
Research Gate	31	4
Total	567	36

4.1. Inclusion and Exclusion Criteria

The review included studies if they: (1) empirically examined the relationship between transformational leadership and teacher self-efficacy; (2) were conducted in educational settings; (3) were published in peer-reviewed journals and other scholarly publications between 2015 and 2025; and (4) were available in English and accessible to the researcher. Exclusion criteria eliminated: (1) studies not focused on educational contexts; (2) scholarly articles or journals published before 2015; (3) studies that use Meta-analysis; (4) books and conceptual papers without empirical data; and (4) publications that are not written in English.

Table 2: *Summary of Inclusion and Exclusion Criteria.*

Parameters	Inclusion Criteria	Exclusion Criteria
Types of Research	Published peer reviewed journal and scholarly publications.	Unpublished research studies, book reviews, Editorial works, literary work analyses, and non-empirical research studies
Result of Research	Such publications that examine the relationship between Principals' transformational leadership and Teachers' sense of efficacy.	Research studies that do not examine the relationship between transformational leadership and teachers' sense of efficacy
Language	Studies that are written in English Language.	Research studies that are not written in English Language
Database	All relevant databases that are accessible to the researcher.	Databases that are not accessible to the researcher
Timeframe	All relevant research studies that are published between 2015 to 2025.	All research studies that were published before 2015.

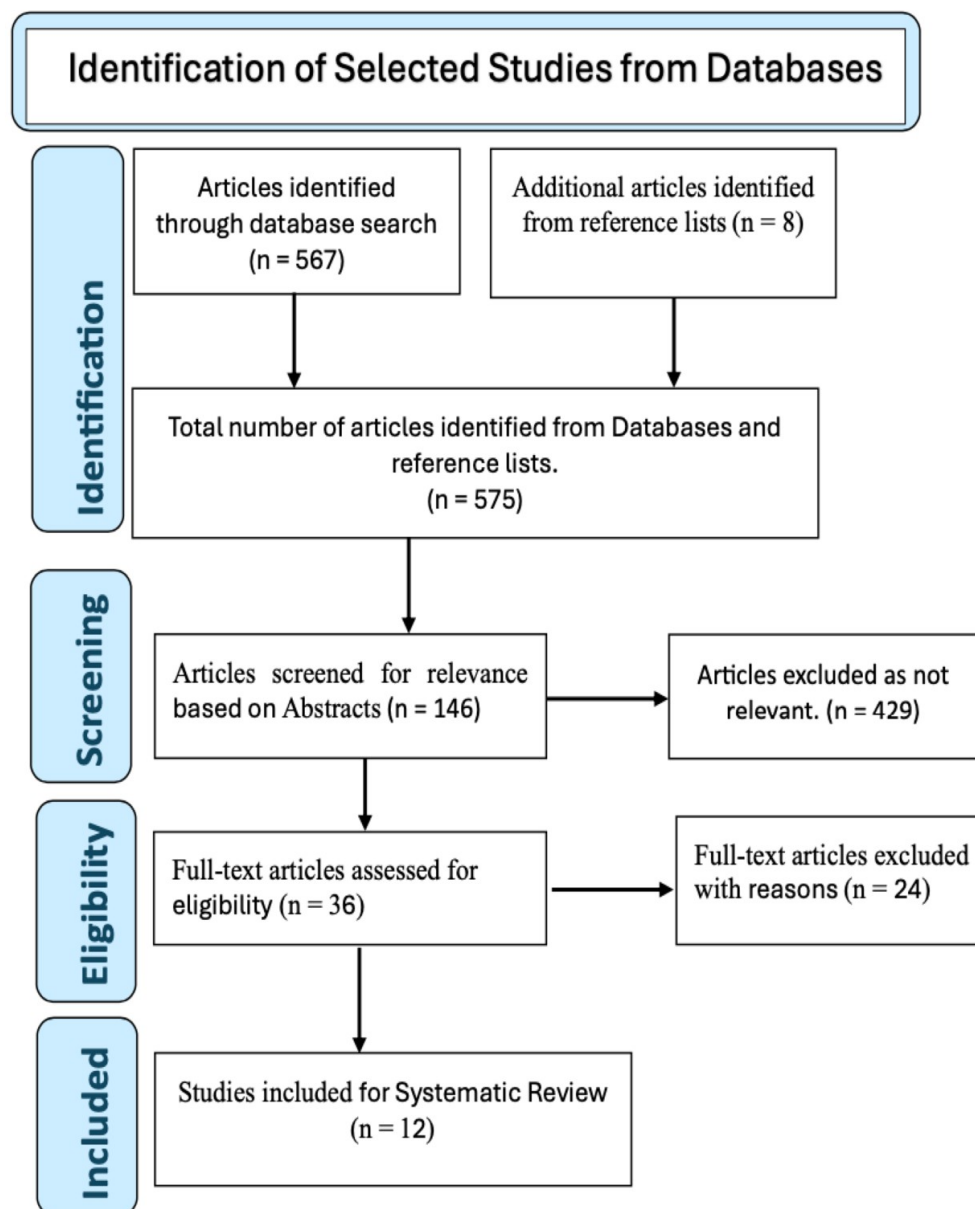


Figure 1: PRISMA Flow Chart of Literature search (Moher et al., 2009).

4.2. Method of Evaluation of the Selected Studies

Following the extraction process, an adapted version of Kmet and colleagues' (2004) quality check lists criteria for assessing the quality of quantitative and qualitative studies (QualSyst tools) was used to critically appraise the selected studies to guarantee their quality "in terms of the internal validity of the studies, or the extent to which the design, conduct, and analyses minimized errors or biases" (Kmet et al, 2004: 2).

This check list involved assessing and scoring (from the scale of 0 to 2) the quality of studies from various dimensions such as the clarity of the theoretical framework, research objectives, the appropriateness of sample size, data collection processes, research design, the analysis and credibility of findings (Kmet et al., 2004: 2-3). Tables 3, 4, and 5 display the QualSyst check list tools for the assessment of the selected studies and their respective scorings. This methodical and systematic scoring procedure emphasizes the reviews commitment to

including only rigorously researched studies in the analysis.

Table 3: *Summary of Included Studies*

S/N	Evaluation Criteria	Requirements for Quality	Scoring Criteria
1	Relevance of the research design	Does the study investigate the relationship between TL and TSE?	Yes/No/Partial
2	Appropriateness of research design	Is the research methodology (research design, sampling and data collection procedures, and analyses) clearly defined?	Yes/No/Partial
3	Theoretical Framework	Is the study supported by a clear theoretical framework that is linked to the wider body of knowledge in the area?	Yes/No/Partial
4	Population and Sampling	Has the study used appropriate sampling methods and procedures?	Yes/No/Partial
5	Data collection and Analyses	Are the data collection methods clearly described and systematic?	Yes/No/Partial
6	Support for conclusions	Are the study's conclusions well supported by the findings	Yes/No/Partial
7	Research credibility	Are verification procedures or methods used ensure credibility?	Yes/No/Partial
8	Applicability and practicality	Does the study provide strategies for applying TL on TSE variables	Yes/No/Partial
9	Detail results	Are the research findings adequately presented including estimated variances	Yes/No/Partial
10	Reflexivity of research	Are there reflections on the research process, the results, discussions of limitations, and recommendations for future study	Yes/No/Partial

Table 4: The Evaluation of Selected Studies

S/N	Study	Title	Research Design	Score
1	Ling, T. P., Pihie, Z. A. L., Asimirin, S., & Fooi, F. S. (2015)	The Influence of Transformational School Leadership on Teacher Efficacy in Malaysian Secondary School Teachers	Quantitative methods. Descriptive surveys, Correlational analysis, Regression analysis	17
2	Hoxha, L. & Duraku, Z. H. (2017)	The Relationship Between Educational Leadership and Teachers' Self-Efficacy	Quantitative surveys, Correlation analysis, Linear Regression Analysis	19
3	Sharma, R. & Singh, S. (2017)	Transformational Leadership Style and Self-Efficacy among Teaching Professionals.	Quantitative Survey, Correlation analysis, Multiple regression analysis.	17
4	Francisco, C. D. (2019).	School Principals' Transformational Leadership Styles and Their Effects on Teachers' Self-Efficacy	Quantitative Surveys, Correlation analysis, Multiple Regression Analysis	18
5	Afayori, R. (2020)	The Impact of Principals' Transformational Leadership Practices on Tutors' Self-Efficacy Beliefs in the University Colleges of Education in Ghana	Quantitative surveys, Correlation analysis, multiple regression analysis	19
6	Phyu, L. K., Khin, H., & Htwe, N. N. (2020)	Principal Leadership Style and Teacher Self-Efficacy in Basic Education High Schools	Quantitative and qualitative surveys, Descriptive statistics, One-Way ANOVA, and Pearson Correlation analysis	17
7	Alrechaili, S. M. (2021)	Teacher Perception of Principals' Transformational Leadership and the Self-Efficacy of Teachers in Selected All-Female Schools in Saudi Arabia	Quantitative surveys, Bivariate correlation analysis, Multiple linear regression analysis	19
8	Jaewoo, C. & Woonsun, K (2021)	Effects of transformational leadership on teachers' self-efficacy in education for sustainable development: A serial mediation analysis	Quantitative surveys, Descriptive statistics, Correlation analysis, Multiple regression, and Serial mediation analysis.	20
9	Gkolia, A. K., Charalampaki, C. & Belias, D. (2021)	Principal's individualized support and teacher's self- efficacy: An Empirical Research.	Cross-sectional quantitative methods, Structural Equation Modelling (SEM)	18
10.	Fairos, S & Mydin, A.A. (2022).	The Influence of Transformational Leadership by the Principal on Teachers' Self-Efficacy in a Private Preschool	Quantitative surveys, Partial Least Squares Structural Equation Modelling (PLS-SEM).	17
11	Noor, S., Adnan, M., Rehman, L., & Shafiq, A. (2025)	The Impact of Leadership Styles on Teacher Self-Efficacy and Professional Development	Quantitate surveys, correlation analysis, Multiple regression analysis, Mediation analysis.	20
12	Lefteri, A., & Menon, M. E. (2025)	Transformational And Transactional School Leadership as Predictors of Teacher Self-Efficacy	Quantitative Surveys; Correlational Analysis, Multiple Regression Analysis	19

Table 5: Summary of Selected Reviewed Studies

S/N	Study	Educational Context	Theoretical Framework	Research Findings	Mediating Factors
1	Ling, T. P., Pihie, Z. A. L., Asimirin, S., & Fooi, F. S. (2015)	137 Secondary Schools Teachers in Malaysia.	Transformational Leadership (TL) theory (Burns, 1978; Bass, 1985) Social Cognitive Theory of Self-Efficacy (Bandura, 1997).	Transformational school leadership practices predicted 17.7% of teachers' sense of efficacy. TL dimensions such as: <i>school goals, model behaviour and individual support</i> contributed significantly to teacher efficacy in teaching.	No mediated factors are reported
2	Hoxha, L. & Duraku, Z. H. (2017)	357 teachers of elementary schools, middle schools and secondary schools in Prishtina, Kosovo.	Transformational Leadership theories (Burns, 1978 & Bass, 1985) Bandura's (1997) Social Cognitive Theory of Self-Efficacy.	Transformational leadership styles are strong predictor of teachers' self-efficacy beliefs in teaching. The strongest predictor of teachers' self-efficacy is <i>Intellectual Stimulation Individual Consideration</i> .	No explicit statistical test for mediated factors
3	Sharma, R. & Singh, S. (2017)	120 Teachers and Principals from Indian Schools in India	Transformational Leadership theory (Burns, 1978; Bass, 1985). Social Cognitive theory of Self-Efficacy (Bandura, 1997)	Transformational Leadership had positive correlations with teachers' self-efficacy beliefs. Leadership attributes such as <i>idealized influence and individualized consideration</i> showed significant relations with self-efficacy. Contingent reward (a transactional leadership aspect) also revealed positive correlations with self-efficacy. Demographic factors such gender and teaching experience had a significant impact on self-efficacy.	No reported mediating factors.
4	Francisco, C. D. (2019).	260 Secondary School Teachers in Plaridel District, SDO-Bulacan in the Philippines	Transformational Leadership theory (Burns, 1978; Bass, 1985). Social Cognitive theory of Self-Efficacy (Bandura, 1997)	Principals' transformational leadership practices like <i>idealized influence, inspirational motivation, intellectual stimulation, individualized consideration</i> had positive significant effects on teachers' self-efficacy.	No reported mediating factors
5	Afayori, R. (2020)	629 Tutors of the Colleges of Education in Ghana	Transformational Leadership Theory (Burns, 1978; Bass, 1985). Social Cognitive theory of Self-efficacy (Bandura, 1997).	Principals' transformational leadership practices such as <i>providing vision and direction and holding high performance expectations</i> accounted for most of the variances in tutors' sense of efficacy in all three factors.	There were no stated mediating factors.
6	Phyu, L. K., Khin, H., & Htwe, N. N. (2020)	211 teachers from Basic Education High Schools located in Kyauktaga Township in Bago region, Myanmar.	TL theory (Bass and Avolio). Social Cognitive theory of self-efficacy (Bandura, 1997).	There were significant and positive relationships among transformational leadership style and teacher self-efficacy.	No mediation analysis was conducted.

S/N	Study	Educational Context	Theoretical Framework	Research Findings	Mediating Factors
7	Alrechaili, S. M. (2021)	208 Primary and Secondary School Teachers within a single all-female school district in Jeddah, Saudi Arabia.	Transformational Leadership theory (Burns, 1978; Bass, 1985). Social Cognitive theory (Bandura, 1997).	<i>Providing vision, modelling behaviour, and goal acceptance</i> were significantly correlated to efficacy for student engagement and instructional strategies.	No mediating factors reported
8	Jaewoo, C. & Woonsun, K (2021)	193 Korean In-Service Teachers in South Korea	Transformational leadership theory (Burns, 1978; Bass, 1985). Social Cognitive Theory (Bandura, 1997). Education for Sustainable Development (ESD).	Transformational leadership showed significantly high levels of effect on teachers' efficacy in ESD. The Path Analysis (SEM Analysis) show indirect effect of transformational leadership on teachers' self-efficacy.	Mediating factors were Teacher collaboration (mediating). Professional learning (mediating).
9	Gkolia, A. K., Charalampaki, C. & Belias, D. (2021)	843 Greek Primary and Secondary School Teachers in Greece.	Transformational Leadership Theory (Burns, 1978; Bass, 1985). Social Cognitive Theory (Bandura, 1997).	There are strong statistical relations between Principals' transformational leadership and teachers' sense of efficacy. SEM analysis shows culture of trust and respect as influencing efficacy of teachers related only to student engagement.	Indications of mediation factors: Culture of trust and respect (mediating). Teacher perceptions of leadership (mediating)
10	Fairos, S & Mydin, A.A. (2022).	150 Early Childhood (Preschool) Teachers in Pinang, Malaysia.	Transformational Leadership (TL) theory (Burns, 1978; Bass, 1985). Social Cognitive theory (Bandura, 1997). Person-Organisation Fit Theory (Chatman, 1989).	The analysis shows a positive and significant influence of each dimension of Transformational Leadership on Teacher Self-Efficacy. Specific leadership styles like: <i>Idealised influence, inspirational motivation and intellectual stimulation</i> showing higher significant levels	No was explicitly identified
11.	Noor, S., Adnan, M., Rehman, L., & Shafiq, A. (2025)	300 Primary and Secondary School Teachers in Pakistan.	Transformational Leadership Theory (Burns 1975; Bass, 1985). Social Cognitive theory (Bandura, 1997). Professional Development theory (Desimone, 2009).	Significant positive relationship exists between transformational leadership and both teacher self-efficacy and their participation in professional development. There is strong, reciprocal relationship between teacher self-efficacy and professional development.	The study reports that effective transformational leadership Style → enhanced Professional Development → Increased Teacher Self-Efficacy.
12.	Lefteri, A., & Menon, M. E. (2025)	683 secondary education teachers employed in 32 upper secondary schools in Cyprus.	Transformational Leadership Theory (Burns, 1978; Bass, 1985). Social Cognitive theory of Self-Efficacy (Bandura, 1997).	Transformational leadership is a significant predictor of teacher self-efficacy than transactional leadership. Leadership attributes such as <i>intellectual stimulation and individual consideration</i> strongly predicted teachers' self-efficacy beliefs. Transactional leadership traits like contingent rewards and management-by-exception had relative impact.	Study discusses potential mediating factors such as: <i>school climate/culture, teacher motivation and commitment, professional collaboration and perceived autonomy and trust.</i>

5. Analyses and Discussions of Results

This section provides a critical engagement with the findings of the selected studies by focusing on relevant themes across studies such as the statistical relationships between the two key variables of principals'

transformational leadership and its impact on teachers' sense of efficacy. It considers whether there are certain mediating and moderating factors that contribute to enhancing the relationship. It also identifies the research gaps in the area, and provides suggested practical implications of the studies, and directions for future research.

5.1. *The Correlations between Transformational leadership and Teacher Self-Efficacy*

In educational research, statistical correlations quantitative measure that provide decryptions which demonstrate the linear relationship between educational variables in terms of their strength and direction (McMillan & Schumacher, 2014). Although the relationship between variables may not necessarily be causative (Salkind, 2017), it nonetheless provides strong basis for studying complex real-world phenomena, identifying relationships, for predictability, and for informing educational policy and practice (Gall, Gall & Borg, 2007; Johnson & Christensen, 2020) among others. Consequently, the 12 selected studies empirically demonstrate the positive statistical relationships which exist between transformational leadership and teachers' sense of efficacy in schools.

As table 6 illustrates, while the correlational analysis of each study registered strong robust positive relationships between transformational leadership and teacher self-efficacy (Phyu et al., 2021; Gkolia et al., 2021; Jaewoo & Woonsun, 2021), the multiple regression analysis identified the specific transformational leadership traits that impacted more on teacher self-efficacy (Ling et al., 2015; Hoxha & Duraku, 2017; Sharma & Singh, 2017; Francisco, 2019; Afayori, 2020; Fairos & Mydin, 2022; Lefteri & Menon, 2025). Whereas Ling and colleagues (2015) report that Transformational school leadership practices predicted 17.7% of teachers' sense of efficacy in teaching, most of other studies identify the specific transformational leadership practices that produce higher significant levels in teacher self-efficacy included: *providing vision and direction, holding high performance expectations, Idealised influence, inspirational motivation, individual consideration, and intellectual stimulation* (Sharma & Singh, 2017; Francisco, 2019; Afayori, 2020; Fairos & Mydin, 2022).

For instance, Furthermore, Fairos & Mydin (2022) conducted a study involving 150 early childhood (Preschool) teachers in Malaysia on the influence of transformational leadership on Teachers' Self-Efficacy in a private pre-school. Consistent with previous studies, the study found a strong statistically significant positive relationship between principals' transformational leadership and teachers' self-efficacy beliefs. This outcome implied that teachers who perceived their principals as transformational leaders reported significantly higher levels of self-efficacy. The analysis showed that specific leadership traits such as idealised influence, individualized consideration, inspirational motivation, and intellectual stimulation had the strongest impact on teachers' self-efficacy. In the study conducted by Afayori (2020) on the relationship between tutors' perceptions of their principals' transformational leadership and their sense of efficacy (in student engagement, instructional strategies, and classroom management) in Ghana, the results also showed that transformational leadership practices such as providing vision and direction and holding high performance expectations accounted for most of the variances in tutors' sense of efficacy in all three factors.

The collective and consistent finding of positive statistical relationship between the two variables across diverse cultural contexts (e.g. Ghana, Kosovo, Philippines, Myanmar, Korea, India, Pakistan, and Saudi Arabia) and educational backgrounds (e.g. Pre-school, primary, secondary, and tertiary institutions) provides a powerful and evidence-based foundation for policy. Unlike some studies which have long suggested that hierarchical and collectivist cultural systems (e.g. India, Pakistan, Saudi Arabia) influence the perception of leadership and practice compared to the more individualistic Western cultural systems (Hofstede, 2001; Deepika, et al., 2024; House, 2004; Luo et al., 2024), these studies provide rare findings which suggests the statistically significant influence of transformational leadership on teacher efficacy across cultural systems. In this way, ministries of education and other education stakeholders can use this robust correlational evidence to justify investment in workshops and educational seminars on transformational leadership development programs. As Luo and colleagues (2024: 13) indicated, "effective educational strategies that are tailored to enhance teacher leadership and self-efficacy are paramount for educational success. Policymakers and educational administrators are urged to design and implement professional development programs address the specific needs of teachers across various educational contexts".

5.2. *Mediating and Moderating factors*

While a correlation analysis demonstrates whether or not two variables are related, mediation and moderation analysis help in understanding how and when that relationship works. These analyses go beyond simple relationships to explore the underlying mechanism and the boundary conditions that influence them (Aiken & West, 1991; Hayes, 2018). While Hayes (2018: 84) sees mediation as representing "the generative mechanism through which the focal independent variable is able to influence the dependent variable of interest", moderation tests whether the strength or direction of the relationship between two variables (X and Y) depends on a third

level variable. Put together, mediation and moderation analysis allow researchers to move from simplistic statistical relationships to finding nuanced, sophisticated models that reflect the complexity of real-world educational settings ((Aiken & West, 1991; Hayes, 2018).

Most of the selected studies as shown in tables 5 and 6 did not statistically test for specific mediating and moderating variables (Ling et al., 2015; Sharma & Singh, 2017; Francisco, 2019; Afayori, 2020; Alrechaili, 2021). Other studies report implicit mediating and moderating factors which can influence the relationship between the two vital educational variables of transformational leadership and teacher self-efficacy (Sharma and Singh, 2017; Gkolia et al., 2021; Lefteri & Menon, 2025). These reports are implied by the theoretical frameworks and discussed as the logical explanations for the observed statistically significant correlations. For instance, in the study conducted by Sharma and Singh (2017) involving 120 teachers in India, although the correlational analysis does not statistically test for specific mediating variables, they nonetheless suggest that transformational leadership may boost teacher self-efficacy through psychological and organizational mechanisms such as: teacher empowerment and autonomy, teacher professional development, and the cultivation of a positive school climate/culture.

Similarly, the study conducted by Gkolia and colleagues (2021) involving 843 Greek Primary and Secondary School Teachers does not also statistically test for mediation and moderating factors in established direct correlation between principals' leadership practice of providing individualised support and teacher self-efficacy beliefs. However, the study logically discusses the psychological and relational pathways (mediating factors) through which individualized support operates to boost self-efficacy. It identifies factors such as: perceived organisational support, social/verbal persuasion, and the establishment of trust and safety as mediatory. In their study of 683 secondary school teachers in Cyprus, Lefteri & Menon (2025) also discussed mediating factors such as school climate/culture, teacher motivation and commitment, professional collaboration and perceived autonomy and trust, as potentially responsible for accounting for the statistically positive correlations between transformational leadership and teachers' sense of efficacy.

Consistent to the existent claims that mediating and moderating factors contribute to the robust statistically positive relationship between principals' transformational leadership practices and teacher self-efficacy beliefs, three studies in the selected studies conducted various forms of mediation and moderation analyses (Jaewoo & Woonsun, 2021 and Noor et al., 2025). For instance, the study conducted by Jaewoo & Woonsun (2021) involving 193 Korea In-Service teachers regarding the effects of transformational leadership on teachers' self-efficacy in education for sustainable development (ESD), while transformational leadership showed significantly high levels of effect on teachers' efficacy in ESD, the path analysis (SEM Analysis) showed indirect effect of transformational leadership on teachers' self-efficacy. This suggested that transformational leadership doesn't just directly influence teachers' self-efficacy but works through identified interrelated factors such as teacher collaboration and professional learning and development. This confirms the understanding that other interrelated variables may sometimes serve as mediators between transformational leadership and self-efficacy (Sharma and Singh, 2017; Gkolia et al., 2021; Lefteri & Menon, 2025).

Furthermore, Noor and colleagues (2025) also conducted a study involving 300 Primary and Secondary School Teachers in Pakistan on the impact of leadership style on teacher self-efficacy and professional development. The result reports a significant positive relationship exists between principals' transformational leadership styles and both teacher self-efficacy and their participation in meaningful professional development. This finding is consistent with existent body of literature in the area (Ling et al., 2015; Sharma & Singh, 2017; Francisco, 2019; Afayori, 2020; Alrechaili, 2021). However, the path analysis (SEM analysis) in the study shows that transformational leadership enhanced teacher professional development, which in turn impacted significantly on teacher self-efficacy. Thus, Noor et al. (2025) provide evidence from a Pakistani context that affirms the global consensus on the importance of transformational leadership while specifically highlighting the critical role of professional development as the mechanism through which leaders build their teachers' sense of efficacy.

The above results therefore support the growing need for the identification of the specific mediating and moderating factors that contribute to enhancing the direct and statistically positive relationship that exist between transformational leadership and teacher self-efficacy beliefs. Many studies in the area have consistently highlighted the relevance of teacher *professional development* (Jaewoo & Woonsun, 2021, Noor et al., 2025), *teacher demographics*, *creating a positive school culture/climate*, and *teacher empowerment and autonomy* (Sharma & Singh, 2017; Hoxha & Duraku, 2017; Luo et al., 2024) among others. Luo and colleagues (2024) assert that the provision of appropriate professional development opportunities to teachers by school administrators are pivotal mediators to teacher to teachers' sense of efficacy. Institutions that provide adequate

resources, training, and contingent rewards contribute to bolstering teacher commitment and empowerment, and confidence in teaching (Sharma & Singh, 2017; Luo et al., 2024; Noor et al., 2025). As Noor and colleagues (2025:248-249) indicated, “without strong leadership support, professional development initiatives may lack depths and fail to produce long lasting improvements in teaching quality”.

Furthermore, when principals’ transformational leadership contributes to creating a positive and supportive school climate or culture through the promotion of trust, collaboration, and mutual respect, it reduces stress and anxiety, allowing teachers to take instructional risks and innovate, thereby strengthening their efficacy. As Deepika and colleagues (2024: 17) indicated, cultivating a culture of “openness, trust, and collaboration promote organizational effectiveness. Understanding the cultural elements that influence leadership in academic settings, where developing collaboration and trust is essential for long-term success”.

5.3. Identified Research Gaps and Recommendations

While the integration of transformational leadership theory (Burns, 1978; Bass, 1985) and self-efficacy theory (Bandura, 1997; 1998) provides a powerful framework for understanding how school leaders can influence teacher performance and effectiveness (Ross & Gray, 2006; Espinoza, 2013; Gkolia et al., 2018), the selected studies in this systematic review have also consistently demonstrated that principals’ transformational leadership practices (such as providing idealised inspiration, inspirational motivation, intellectual stimulation, individual consideration) enhance teacher self-efficacy across diverse cultures and educational contexts. Whereas results from all educational research studies do not provide all-encompassing findings that satisfy every educational problem, Luo, and colleagues (2024) also indicate that methodological limitations and the challenge of cultural homogeneity can skew findings and diminish their power of applicability across diverse educational contexts. In the case of the selected studies for this review, the following gaps were identified: *lack of qualitative or mixed methods of research*, *lack of robust statistical analysis*, and the *challenge of cultural diversity*.

First, it was found that all the 12 selected studies conducted cross-sectional quantitative studies into the relationship between transformational leadership and teacher self-efficacy. Although quantitative analysis provides predictable and generalisable results on transformational leadership influences teacher self-efficacy, qualitative analysis tends to provide rich insights into the processes through which the two key educational variables interrelate. Without intending to reignite the 20th century “paradigm war” between the two research methods, this paper identifies that there is limited literature on the use of qualitative methods and mixed methods approaches to the study of the relationship between transformational leadership and teacher self-efficacy. As Luo and colleagues (2024) intimated, most of the studies in this area employ cross sectional approaches which only capture partial dimensions of the variables within specific timeframes. Consequently, longitudinal studies and mixed methods approach to the study of these vital educational variables are recommended.

Secondly, it is observed that while all the selected studies conducted correlation analysis and regression analysis to establish the strength and direction between the dependent and independent variables, most of them did not conduct mediation and moderation analyses which enable the researcher to move from simplistic statistical relationships to more subtle and sophisticated models that reflect the complexity of the relationships (Hayes, 2018). As Hayes (2018) indicates, mediation analysis identifies the active ingredients and generative mechanisms, telling practitioners what levers to pull. For example, if collaboration is a key mediator, principals should focus on fostering it. Moderation identifies the boundary conditions, telling practitioners the contexts in which an intervention is most effective. This allows for targeted, resource-efficient implementation. These two approaches to quantitative research provide deeper understanding and support more actionable conclusions (Hayes, 2018) on the relationship between principals’ transformational leadership and teachers’ sense of efficacy. In all the selected studies, Noor and colleagues (2025) applied these two approaches to determining the mediating and moderating factors in the relationships between the two key variables.

Thirdly, it is observed that all the studies were conducted in contexts that were culturally homogenous (i.e. Ghana, Kosovo, South Korea, India, Pakistan, Cyprus, Greece, Myanmar, Malaysia, Saudi Arabia, and the Philippines). Some studies indicate that the relationship between transformational leadership and teacher self-efficacy is not uniform across all contexts but influenced by various cultural and organizational factors that moderate the strength and nature of this relationship (Kaya & Koçyiğit, 2023; Deepika, 2024; Luo et al., 2024). They suggest that research studies in collectivist cultures (e.g., many Asian countries) highlight the importance of collaborative approaches to leadership that enhance collective efficacy and teamwork. In contrast, research in individualistic cultures (e.g., Western countries) often emphasizes personal achievement and empowerment.

Consequently, these cultural differences suggest that the implementation of transformational leadership practices must be adapted to fit specific cultural contexts to effectively enhance teacher self-efficacy (Kaya & Koçyiğit,

2023; Luo et al., 2024: 11-12).). As table 6 shows, apart from the studies conducted in Kosovo ((Hoxha & Duraku, 2017), Cyprus (Lefteri & Menon, 2025)) and Greece (Gkolia et al., 2021), the rest of the selected studies were conducted in countries that can be heuristically described as culturally collectivist. This might explain for similarities in the findings between studies. Consequently, it is good that any future study can broaden the scope of the research to include diverse cultures (Luo et al., 2024). “Doing so will not only enhance the universality of findings but also aid the in the development of culturally sensitive teacher professional developments programs” (Luo et al., 2024: 11).

5.4. *Practical Implications for Educational Policy and Practice*

All the findings obtained from the 12 selected studies in this systematic review highlights and reaffirms the findings of extant studies that principals’ transformational leadership practices influence teachers’ sense of efficacy. Most of the studies identified leadership practices such as *providing vision and direction and holding high performance expectations, Idealised influence, inspirational motivation, individual consideration, and intellectual stimulation* (Sharma & Singh, 2017; Francisco, 2019; Afayori, 2020; Fairoos & Mydin, 2022). These findings offer some important implications for educational policy and practice.

Firstly, the findings suggests that educational policy makers, school principals and administrators could consciously develop and implement transformational leadership practices characterized by visionary leadership, inspirational motivation, intellectual stimulation, and individualized consideration. These leadership traits proved to produce statistically significant relationships between transformational leadership and teachers’ self-efficacy beliefs. Although statistical correlations are not necessarily causative, they are suggestive of the understanding that the more principals exhibit patterns of these leadership trait, the increase in teacher self-efficacy beliefs in student engagement, instructional strategies, and classroom management.

Secondly, the mediation and moderation analysis of the some of the studies showed that teacher collaboration and professional learning (Jaewoo & Woonsun (2021) and professional development (Noor et al., 2025) respectively served as significant mediators between transformational leadership and self-efficacy. These results suggest that planning appropriate professional development programs for current and aspiring school leaders should incorporate training in these specific practices, emphasizing their relationship to teacher self-efficacy and student achievement (Afayori, 2020; Luo et al., 2024). As Luo and colleagues (2024) indicate, enhance the effectiveness of transformational leadership practices on teacher self-efficacy, it is important that professional development programs are tailored to address the mediating factors that significantly enhance the relationships between the two key educational variables.

Thirdly, the theoretical foundations of teachers’ self-efficacy beliefs have consistently demonstrated its relevance as a strong predictor of teacher performance efficacy (Tschannen-Moran, et al., 1998; Ross and Gray, 2006; Gavora, 2010). Consistent with the results of some of the selected studies (Francisco, 2019; Afayori, 2020), teachers’ sense of efficacy determines their performance. Consequently, educational institutions and administrators should create structures and processes that facilitate the development of teacher self-efficacy. These might include professional learning communities, mentoring programs, collaborative planning time, and opportunities (Jaewoo & Woonsun, 2021; Luo et al., 2024). By fostering environments where teachers can experience success, observe effective practices, receive encouragement, and manage stress effectively, schools can enhance the efficacy beliefs of their teaching staff (Luo et al., 2024). For instance, in the serial mediation pathway conducted by Jaewoo & Woonsun (2021), results indicated that transformational leadership first increased teacher collaboration. This enhanced collaboration then created a rich environment for meaningful professional learning and development, which in-turn enhanced teachers’ self-efficacy for education for sustainable development (ESD).

Fourthly, the findings of this systematic review further highlight the significant claims that among the different leadership styles in education, transformational leadership practices produce direct effects on teacher performance (Hallinger, 2003; Leithwood, 2006; Leithwood & Sun (2012; Day et al., 2016). For instance, in the studies conducted by Sharma & Singh (2017) and Noor and colleagues (2025) revealed that transformational leadership was more significant predictor of teacher self-efficacy than transactional leadership. This implied that principals who practiced transformational leadership practices are more likely to impact on their teachers’ efficacy beliefs than those who practiced transactional leadership traits. Consequently, this could help education policymakers to place importance on transformational leadership development to enhancing teacher performance and student academic achievements. Investments in transformational leadership preparation and ongoing professional development for school administrators may yield significant returns in terms of teacher effectiveness, retention, and student achievement.

6. Conclusion

This systematic review has examined the substantial body of research exploring the relationship between transformational leadership practices and teacher self-efficacy across various cultural boundaries and educational contexts. The evidence consistently demonstrates that transformational leadership practices such as *providing vision and direction, holding high performance expectations, Idealised influence, inspirational motivation, individual consideration, and intellectual stimulation* significantly enhance teachers' sense of efficacy in student engagement, instructional strategies, and classroom management (Francisco, 2019; Afayori, 2020; Gkolia et al., 2021). This relationship casts across diverse educational contexts, although studies suggest that cultural and organizational factors moderate its strength and specific manifestations (Kaya & Koçyiğit, 2023; Deepika, 2024; Luo et al., 2024).

Reflections on the insights from this systematic review provides some suggested implications for educational practice and policy. Identified areas of interest include: (1) encouraging school principals to practice transformational leadership traits in order to enhance their teachers' sense of efficacy for teaching; (2) organising seminars and workshops that are tailored to promoting teacher continuous professional development; (3) creating structures and processes that facilitate the development of teacher self-efficacy as teacher performance predictor; and (4) organising transformational leadership programs to ensure that school principals who adopt transformational leadership practices can create conditions that support the development of teacher self-efficacy, which in turns, drives instructional innovation, professional commitment, and student achievement. Consequently, this emphasis on the development of transformational leadership capabilities among current and aspiring school administrators is a promising strategy for educational improvement at individual, institutional, and system levels (Francisco, 2019; Gkolia et al., 2021; Luo et al., 2024).

Despite the robust evidence supporting the positive relationship between transformational leadership and teacher self-efficacy beliefs, important questions remain unanswered. These questions relate to the observed gaps that remain to be covered in the research studies involving the interplay between transformational leadership and teacher self-efficacy beliefs. Some of these proposed gaps for future research include: (1) conducting longitudinal and mixed methods designs to better understand the causal mechanisms underlying this relationship and how it evolves over time; (2) conducting mediation and moderation analyses which move from simplistic statistical relationships to more nuanced and sophisticated explanations on the relationships between the two key educational variables; and (3) conducting cross-cultural comparative studies which will demonstrate how cultural values and institutional contexts shape the expression and effectiveness of transformational leadership practices across diverse schools systems and cultures. Such research studies would contribute to the development of more nuanced and contextually appropriate approaches to transformational leadership development that effectively enhance teacher self-efficacy beliefs and, ultimately, enhance student learning and academic achievements (Luo et al., 2024).

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