COLLECTIVE TEACHER EFFICACY AND TEACHER PERFORMANCE IN RESOURCE-CONSTRAINED CONTEXTS: A MULTIDIMENSIONAL AND STRUCTURAL PERSPECTIVE FROM MIDDLE SCHOOLS IN GUIZHOU PROVINCE

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ABSTRACT
This study explores collective teacher efficacy (CTE) as a multidimensional construct influencing teacher performance in resource-constrained contexts, with a focus on middle schools in Guizhou Province, China. Drawing on Bandura's social cognitive theory and professional community research, the study develops a conceptual framework that captures the motivational, cognitive, collaborative, and normative mechanisms linking CTE to teacher performance. It further examines how structural conditions—such as resource inequality, accountability systems, and governance models—moderate this relationship. The findings suggest that improving teacher performance requires not only strengthening collective beliefs but also aligning them with institutional design. By integrating psychological and organizational perspectives, this article contributes to a context-sensitive understanding of CTE and offers practical insights for educational administration in underdeveloped regions.
Keywords: Collective Teacher Efficacy, Teacher Performance, Educational Leadership

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INTRODUCTION

Educational systems worldwide are undergoing profound changes due to globalization, technological advances, demographic shifts, and policy reforms. Governments are demanding higher achievement, greater equity, and measurable accountability. Teacher performance is central to these reforms. Collective teacher efficacy (CTE)—teachers' shared belief in their ability to positively impact student outcomes—is a key factor. Grounded in Bandura's social cognitive theory, CTE has been shown to predict student achievement even after accounting for socioeconomic status (Goddard, Hoy, & Hoy, 2000) and is ranked among the most powerful school-level influences on learning (Hattie, 2012). However, most CTE research has been conducted in Western, well-resourced settings. Less is known about how CTE functions in underdeveloped regions facing structural disadvantages, such as Guizhou in western China. There, middle schools contend with limited funding, unequal teacher distribution, rural–urban gaps, and exam-oriented systems. Despite increased investment, Guizhou faces persistent imbalances, teacher shortages, and challenges in retaining students and staff. Rapid urbanization has led to overcrowded urban schools and underutilized rural ones. These constraints likely affect how CTE is formed and sustained. Examining CTE and teacher performance in such resource-constrained contexts thus holds significant theoretical and practical value. Therefore, this study extends the theoretical conversation by addressing three central questions:1. How can collective teacher efficacy be conceptualized in resource-constrained contexts? 2.Through what mechanisms does CTE influence teacher performance? 3.How do structural conditions moderate this relationship? As a review article, this paper aims to synthesize existing literature to address these questions. The remainder of this paper is structured as follows: Section II outlines the methodology employed for the literature review. Section III explores the theoretical foundations of CTE. Section IV examines the mechanisms linking CTE to teacher performance. Section V analyzes the role of structural moderators. Section VI discusses the implications for educational administration, and Section VII presents the conclusion.

LITERATURE REVIEW METHODOLOGY

The primary goal of this review is to synthesize theoretical and empirical evidence on collective teacher efficacy, with a specific focus on its operation and impact on teacher performance within resource-constrained contexts, particularly as they relate to middle schools in underdeveloped regions like Guizhou Province, China. A systematic approach was taken to gather relevant literature. The following academic databases were searched: Web of Science, Scopus, ERIC (Education Resources Information Center), and the China National Knowledge Infrastructure (CNKI). The search was conducted in both English and Chinese to capture international scholarship and local empirical studies.The search strategy combined keywords related to the core constructs and the context. The inclusion criteria were: (a) peer-reviewed journal articles, books, and doctoral dissertations; (b) studies focusing on collective teacher efficacy or its related constructs; (c) studies that explicitly or implicitly link CTE to teacher or school outcomes; and (d) studies conducted in K-12 educational settings. Given the theoretical nature of this review, seminal theoretical works (e.g., Bandura, 1997) were also included. For the Chinese context,

priority was given to empirical studies published after 2010 that investigated teacher beliefs, school improvement, or resource allocation in western or rural China.

THEORETICAL FOUNDATIONS OF COLLECTIVE TEACHER EFFICACY

This chapter explores the theoretical foundations of collective teacher efficacy, drawing on Bandura's social cognitive theory and professional community research to develop a multidimensional framework suitable for resource-constrained contexts.

Social Cognitive Theory and the Formation of Collective Beliefs

Collective teacher efficacy (CTE) is grounded in Bandura's (1997) social cognitive theory, which posits that efficacy beliefs influence motivation, perseverance, and performance outcomes. While self-efficacy concerns individuals' beliefs about their own capabilities, collective efficacy refers to a group's shared belief in its conjoint ability to organize and execute actions required to achieve desired results. In educational settings, this concept emphasizes collective professional agency rather than isolated teacher competence. Bandura (1997) argues that efficacy beliefs are shaped by four sources: mastery experiences, vicarious experiences, social persuasion, and affective states. In schools, these sources are embedded in everyday collaborative activities—lesson planning meetings, peer observations, teaching-research seminars. When teachers work together and see their efforts pay off—say, improved student engagement or a successfully adapted curriculum—their shared confidence grows. Goddard, Hoy, and Hoy (2000) demonstrated that collective teacher efficacy predicts student achievement beyond what can be explained by socioeconomic factors. Their findings suggest that what teachers believe they can accomplish together shapes instructional expectations and effort across the entire school. Tschannen-Moran and Barr (2004) added that schools with high collective efficacy tend to have stronger teacher commitment and more coherent instructional practices.

Professional Community and Organizational Culture

Professional community theory helps explain how collaborative culture reinforces collective beliefs. Louis, Marks, and Kruse (2010) argue that professional learning communities foster shared norms, mutual accountability, and reflective dialogue. These elements, in turn, strengthen collective efficacy by generating consistent mastery experiences and building professional trust. Bryk and Schneider (2002) emphasize the importance of relational trust in schools. Whenteachers trust one another and trust their leaders, they are more willing to communicate openly, take risks, and tackle problems together. In resource-constrained contexts, where material support is often limited, this kind of trust becomes especially important. Harris (2013) and Spillane (2006) suggest that distributed leadership—giving teachers a real voice in decision-making—enhances collective agency. When teachers feel their expertise is valued and that they help shape school directions, collective efficacy strengthens.

A Multidimensional and Context-Sensitive Framework

Synthesizing the theoretical literature (Bandura, 1997; Goddard et al., 2000) with empirical findings from studies on school culture and leadership (Bryk & Schneider, 2002; Louis et al.,

2010), and paying close attention to challenges identified in resource-constrained contexts (to be detailed in Section V), this study conceptualizes CTE as comprising eight distinct yet interconnected dimensions. Each dimension is derived from specific strands of the literature:

● Instructional competence efficacy: confidence in delivering quality teaching. Derived from: Foundational CTE research (Goddard et al., 2000; Tschannen-Moran & Barr, 2004).

● Collaborative engagement efficacy: belief in the power of working together. Derived from: Professional community and PLC literature (Louis et al., 2010).

● Reform adaptability efficacy: shared confidence in implementing policy changes. Derived from: Educational change and leadership literature (Fullan, 2014; Leithwood & Jantzi, 2006).

● Student guidance efficacy: belief in the collective ability to support student development beyond academics. Derived from: Broader conceptualizations of teacher work and student outcomes (Day & Sammons, 2016).

● Leadership support efficacy: trust that school leaders will back teachers' efforts. Derived from: Research on trust (Bryk & Schneider, 2002) and transformational leadership (Leithwood & Jantzi, 2006).

● Resource support efficacy: confidence in making creative use of limited materials. Derived from: Studies on organizational resilience and adaptation in under-resourced settings (Bryk & Schneider, 2002), and the structural challenges documented in contexts like Guizhou.

● Teaching-research collaboration efficacy: belief in the value of structured professional inquiry. Derived from: Literature on professional learning communities and lesson study (Louis et al., 2010), and its specific instantiation in the Chinese "teaching-research" (jiaoyan) system.

● Professional identity efficacy: shared moral commitment to teaching as a meaningful profession. Derived from: Research on teacher identity, commitment, and the normative dimension of schools (Day & Sammons, 2016; Schein, 2010).

MECHANISMS LINKING CTE AND TEACHER PERFORMANCE

This chapter examines the motivational, cognitive, collaborative, and normative mechanisms through which collective teacher efficacy influences teacher performance, while also engaging with ongoing theoretical debates regarding the directionality and stability of this relationship.

Motivational and Affective Mechanisms

From a social cognitive perspective, CTE boosts performance by strengthening teachers' motivation and helping them manage stress together as a professional community. When teachers share confidence in their collective capacity, they view instructional challenges as manageable rather than threatening. This shared belief reduces anxiety and increases persistence. A meta-analysis by Eells (2011) confirms this motivational pathway: collective teacher efficacy shows a strong relationship with both student achievement and teacher engagement. Teachers in high-efficacy schools are more likely to align personal goals with institutional objectives. Instead of seeing instructional difficulties as personal failures, they treat them as collective challenges to be solved together. Klassen et al. (2010) note that efficacy beliefs are closely tied to lower occupational stress and stronger professional resilience. In underdeveloped regions, where teachers often face heavy workloads and socio-economic

pressures, collective efficacy serves as a psychological anchor. Emotional regulation becomes a shared responsibility, not an individual burden.

Cognitive and Expectancy Mechanisms

Beyond motivation, collective teacher efficacy reshapes cognitive expectations and instructional judgment. Teachers ' beliefs about what is achievable significantly influence their pedagogical decisions. Research suggests that collective efficacy reduces external attribution of student failure. Instead of attributing low performance solely to family background or structural disadvantages, teachers collectively emphasize instructional responsibility. This cognitive reframing enhances proactive behavior and instructional innovation. By shaping professional judgment and instructional reasoning, collective efficacy functions as a cognitive schema guiding pedagogical practice across classrooms.

Collaborative and Professional Learning Mechanisms

Collective teacher efficacy is deeply intertwined with collaborative professional learning.Shared belief in joint capability encourages teachers to engage in reflective dialogue and peer observation. Professional interaction in high-efficacy schools often evolves into structured inquiry processes, such as collaborative lesson design and data-driven reflection. These repeated mastery experiences reinforce collective confidence. Importantly, collaboration contributes to distributed expertise within the faculty. Teachers recognize complementary strengths and leverage them strategically. This distributed knowledge network increases instructional adaptability and innovation.

Normative and Cultural Mechanisms

Collective teacher efficacy also reshapes the normative and cultural foundations of school organizations. Shared belief in collective capacity influences professional standards, expectations, and moral responsibility. Organizational culture theory provides insight into this process. Schein (2010) argues that shared assumptions and collective beliefs form the deepest level of organizational culture. When collective teacher efficacy becomes embedded at this level, it shapes implicit norms regarding responsibility, collaboration, and instructional quality. Normative mechanisms operate through shared standards of accountability. Teachers internalize collective goals and perceive student success as a joint responsibility. This reduces blame orientation and encourages collaborative problem-solving.

Theoretical Debates on the Directionality and Stability of the Relationship

Despite strong empirical support for a positive efficacy–performance relationship, theoretical debates persist. Some scholars question whether collective efficacy is the cause or consequence of performance. Bandura (1997) emphasizes mastery experience as the primary source of efficacy beliefs, implying that improved performance may precede strengthened efficacy. This reciprocal perspective suggests a cyclical model in which success reinforces belief, which in turn promotes further success. Thus, causality may be dynamic rather than linear.

STRUCTURAL MODERATION AND INSTITUTIONAL CONSTRAINTS

This chapter analyzes how structural and institutional conditions—including resource inequality, accountability systems, governance models, and professional development arrangements—moderate the relationship between collective teacher efficacy and teacher

performance.It synthesizes international research with empirical evidence from the Chinese context to substantiate the paper's geographical focus.

Resource Inequality and Institutional Capacity

In underdeveloped western regions such as Guizhou, resource inequality manifests in particularly concrete and complex ways. Empirical studies from China provide robust evidence for these constraints. For example, a 2023 survey in Zunyi City documented significant regional disparities in teacher allocation across its 15 counties/districts: junior secondary schools in Honghuagang District, Xinpu New District, and Xishui County faced severe teacher shortages, while Daozhen County and Meitan County had relatively abundant teaching staff. The urban--rural divide showed a clear dual structure---"rural schools have surplus teachers, urban schools face shortages"---a pattern of imbalance that directly constrains the formation and exercise of collective teaching efficacy. Complementing this, a study of 17 county secondary schools in Guizhou found that over half faced hardware deficiencies such as outdated laboratory equipment and inadequate IT facilities, directly limiting instructional diversification and collaborative research (as cited in the introduction). As Bryk and Schneider (2002) note, in resource-constrained environments, relational trust and organizational resilience become especially important. The Chinese empirical evidence supports this. In the face of material shortages, the capacity of teacher collectives to compensate for hardware deficiencies through collaboration and shared wisdom is critically dependent on the level of trust and willingness to cooperate.

Accountability Systems and Evaluation Frameworks

Accountability systems are designed to ensure quality and transparency, yet their unintended consequences may include excessive performance pressure and competitive culture. When evaluation systems prioritize individual student examination scores, teachers may focus on short-term measurable outcomes rather than collaborative instructional improvement. In China, the high-stakes, examination-oriented nature of the system amplifies these pressures. School evaluations are often tightly linked to student test scores, which can foster competition among teachers and schools, potentially eroding the collaborative foundation necessary for strong CTE. Sun and Leithwood (2015) emphasize that leadership plays a crucial role in moderating accountability effects. Principals who frame evaluation as developmental rather than punitive can preserve collaborative culture. In such contexts, collective teacher efficacy supports reflective dialogue instead of defensive compliance. Hoy and Miskel (2013) suggest that balanced evaluation frameworks incorporating collective indicators—such as team-based curriculum design, peer mentoring, and shared instructional innovation—better align with collaborative professionalism. Recognition of collective achievements reinforces shared identity and strengthens normative commitment.

Governance Structures and Leadership Models

Governance structure shapes how authority, responsibility, and professional discretion are distributed within schools. In highly centralized systems, teachers may experience limited autonomy, which can restrict opportunities to translate collective beliefs into action. The Chinese educational system, with its centralized curriculum and top-down policy implementation, exemplifies this challenge. Transformational leadership fosters shared vision and moral commitment (Leithwood &Jantzi, 2006). Leaders who articulate clear instructional goals

and model collaborative behavior strengthen teachers ' confidence in collective capacity. Shared vision reduces fragmentation and aligns professional efforts. Distributed leadership further enhances collective agency by involving teachers in decision-making processes (Spillane, 2006; Harris, 2013). When teachers participate in curriculum planning and school governance, they perceive themselves as co-constructors of institutional success. This participatory structure reinforces ownership and shared accountability. For schools in Guizhou, this suggests that even within a centralized system, principals can foster a school-level governance culture that distributes leadership and creates professional space for teachers, thereby strengthening CTE.

Nevertheless, distributed leadership requires clarity in role definition. Without structured coordination, decision-making may become fragmented. Thus, effective governance combines distributed participation with coherent strategic direction.

Professional Development Systems

Professional development is a critical mechanism through which collective efficacy evolves.Traditional workshop-based training often isolates teachers and fails to generate sustained collaborative engagement. By contrast, embedded professional learning communities promote continuous reflection and shared inquiry (Fullan, 2014). In the Chinese context, the existing "Teaching-Research Group" (jiaoyan zu) system presents a powerful, indigenous structure for fostering collaborative professionalism. When functioning effectively, these groups provide a formal platform for the very mastery experiences (collaborative lesson planning, peer observation) that build CTE. However, in resource-constrained schools, these groups may become perfunctory due to workload or lack of expert guidance.

IMPLICATIONS FOR EDUCATIONAL ADMINISTRATION

This chapter discusses the implications of collective teacher efficacy for educational governance and policy reform, focusing on collaborative governance, accountability redesign, leadership development, and strategies for addressing structural inequality.

Institutionalizing Collaborative Governance

Institutionalizing collaboration requires formal structures rather than informal encouragement alone. Schools should establish stable teaching-research groups, interdisciplinary curriculum committees, and structured peer observation cycles. These mechanisms institutionalize interaction rather than leaving collaboration to voluntary initiative.In Guizhou, this means strengthening and adequately resourcing the existing jiaoyan zu system. Donohoo (2017) argues that structured collaborative inquiry strengthens collective efficacy by generating consistent mastery experiences. When teachers systematically analyze student work and instructional strategies, collective problem-solving becomes embedded in organizational routines.

Redesigning Accountability Frameworks

Redesigning accountability systems involves integrating both individual and collective performance indicators. Traditional evaluation often focuses on individual classroom outcomes, which may inadvertently discourage knowledge sharing. Hoy and Miskel (2013) emphasize that organizational learning requires shared goals.Collective indicators such as collaborative curriculum innovation, peer mentoring outcomes, and team-based improvement initiatives should be incorporated into performance assessment.For Chinese schools, this could

involve formally recognizing and rewarding the work of teaching-research groups, rather than only rewarding individual teachers whose students achieve top exam scores.

Strengthening Leadership Capacity

Leadership development should prioritize relational competence, instructional vision, and collaborative facilitation skills. Transformational leaders inspire shared purpose, while distributed leadership models empower teacher participation (Leithwood & Jantzi, 2006; Harris, 2013). Effective leaders create psychological safety, enabling teachers to experiment with new strategies without fear of punitive consequences. This safety enhances mastery experiences and strengthens collective efficacy.

Addressing Structural Inequality

Structural inequality remains a fundamental barrier to sustainable educational improvement.Resource disparities across regions create unequal opportunities for teacher professional growth and student learning. OECD (2020) highlights the importance of targeted funding mechanisms to support disadvantaged schools. Policy intervention should prioritize infrastructure development, digital access, and equitable professional training opportunities.For Guizhou, this implies continued and increased provincial and national investment to address the hardware and staffing gaps documented in the research.

CONCLUSION

This study set out to understand how collective teacher efficacy works in under-resourced schools—and what that means for educational leadership.Through a systematic synthesis of international and Chinese literature, the findings suggest that CTE is more than just a motivational boost; it is deeply embedded in how teachers collaborate, how schools are organized, and how policies are implemented.It has explored collective teacher efficacy as a multidimensional construct and examined its mechanisms, structural contingencies, and administrative implications within underdeveloped educational contexts. By integrating psychological, organizational, and structural perspectives, the analysis demonstrates that collective teacher efficacy functions not merely as a motivational variable but as a systemic driver of professional culture and institutional improvement. Moreover, educational reform in underdeveloped regions should integrate structural equity with professional capacity building. Investment in infrastructure, technology, and professional development is necessary but insufficient. Without strengthening collective agency, material resources may not translate into sustained improvement. Conversely, psychological empowerment without structural support risks generating frustration. Sustainable reform depends on the synergy between these two dimensions.

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