The Role of Middle Leaders in Implementing Curriculum Reforms in Chinese Schools

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Abstract: This study investigates the pivotal role of middle leaders in implementing ongoing curriculum reforms within primary and secondary schools in Mainland China. While global educational reforms increasingly emphasize comprehensive student development, the practical enactment of these policies at the school level, particularly through the lens of middle leadership, remains underexplored in the Chinese context. This research aimed to explore middle leaders' perceptions of their roles and responsibilities, identify the challenges they face, and analyze the specific leadership practices they employ to facilitate curriculum change. Adopting a quantitative, cross-sectional survey design, data were collected from a sample of 850 middle leaders across various Chinese schools. The findings reveal that middle leaders perceive their roles as crucial in translating policy into practice, though they frequently encounter significant challenges such as time constraints and conflicting pressures from examination-oriented cultures. A multiple linear regression analysis demonstrated that specific leadership practices significantly predict the perceived effectiveness of reform implementation. Instructional guidance and professional development facilitation emerged as the strongest positive predictors, followed by effective communication with teachers, strategic resource management, and consistent mentoring and coaching. These results underscore that middle leaders are indispensable instructional and supportive agents whose multifaceted practices are instrumental in driving successful curriculum change. The study offers valuable implications for policymakers and school administrators to enhance support for middle leaders, thereby strengthening curriculum reform efforts in China.

Keywords: Middle leaders, Curriculum reform, China, Instructional leadership, Distributed leadership

1. Introduction

The landscape of education globally is in a perpetual state of flux, driven by the imperative to equip students with the skills and knowledge necessary to thrive in an ever-evolving world. Curriculum reform stands as a cornerstone of this ongoing transformation, reflecting societal shifts, technological advancements, and new understandings of effective pedagogy (Bryant & Walker, 2022). International bodies like UNESCO consistently advocate for educational systems that are adaptable, inclusive, and future-oriented, often prompting nations to critically re-evaluate their instructional frameworks (Chabalala & Naidoo, 2021). For instance, the emphasis on 21st-century skills, including critical thinking, creativity, collaboration, and communication, has permeated educational discourse worldwide, influencing curriculum design from Finland to Singapore (Li et al., 2018). These global trends underscore a shared recognition that static curricula cannot adequately prepare students for dynamic challenges, necessitating continuous innovation in what and how students learn. The pressures of global competition, the demands of a knowledge-based economy, and the need for citizens who can contribute meaningfully to society all fuel this incessant drive for educational improvement and, consequently, curriculum reform (Shengnan & Hallinger, 2020).

China, with its vast educational system and profound commitment to national development, has been a significant participant in this global wave of curriculum reform (Wang et al., 2024). Historically, Chinese education was largely characterized by a highly centralized, examination-oriented system, prioritizing rote memorization and standardized testing to prepare students for higher education and professional careers (Lipscombe et al., 2021). While this system yielded high academic achievements in certain areas, it also faced criticism for stifling creativity, limiting holistic development, and potentially neglecting individual student needs (Liu et al., 2022). Recognizing these limitations, the Chinese government embarked on a series of significant curriculum reforms in the late 20th and early 21st centuries, marking a deliberate shift from a "quality-oriented education" paradigm. This fundamental philosophical shift aimed to move beyond the sole pursuit of academic scores to foster students' moral, intellectual, physical, aesthetic, and practical

abilities comprehensively (Liu et al., 2021). The recent reforms, particularly those initiated around 2001 and further refined in subsequent years, emphasize core competencies, student-centered learning, interdisciplinary approaches, and the integration of information technology into teaching and learning (Pan & Chen, 2024). They seek to empower students with critical thinking skills, problem-solving abilities, and a spirit of inquiry, moving away from a passive reception of knowledge towards active construction. Key policy documents, such as the National Medium and Long-term Educational Reform and Development Plan (2010-2020) and subsequent revisions, have provided the strategic framework for these reforms, signaling a sustained national effort to modernize and enhance the quality of education across all levels (Bryant & Walker, 2022). The implementation of these reforms has been a monumental undertaking, touching every school and impacting millions of educators and students across the diverse geographical and socio-economic landscapes of China.

However, the promulgation of new policies and curriculum frameworks is merely the initial step; the true challenge lies in their effective implementation at the school level. Curriculum implementation is a complex, multifaceted process that involves profound changes in teaching practices, school culture, and leadership approaches (Chabalala & Naidoo, 2021). It is rarely a top-down, linear process but rather a dynamic interaction between policy intentions and on-the-ground realities (Pan & Chen, 2024). Common challenges include resistance from teachers accustomed to traditional methods, insufficient professional development opportunities, a lack of clarity regarding reform goals, and inadequate resources (Pan & Chen, 2024). Moreover, the vastness and diversity of the Chinese educational system mean that reforms may be interpreted and enacted differently across various regions and schools, leading to inconsistencies in implementation quality (Li et al., 2018). Teachers, as the ultimate implementers, often face the daunting task of translating broad policy directives into actionable classroom practices, requiring significant shifts in their pedagogical beliefs and repertoires (Liu et al., 2022). Without effective support and guidance, the best-intentioned reforms can falter, remaining superficial or failing to achieve their intended impact on student learning outcomes. Therefore, understanding the mechanisms through which these reforms are translated into practice at the school level is paramount.

In this context, the role of school leadership emerges as unequivocally critical to the success of educational change initiatives, including curriculum reforms (Lipscombe et al., 2021). Effective leaders can foster a positive school climate, build professional learning communities, allocate resources strategically, and motivate staff to embrace new approaches. Traditional views of leadership often focused on senior administrator's principals and vice-principals as the primary drivers of change. While their strategic vision and resource management are undoubtedly vital, the intricate nature of curriculum implementation often necessitates a more distributed leadership approach (Liu et al., 2021). This is where middle leaders come into play. Within the Chinese school system, middle leaders typically encompass roles such as department heads, grade level coordinators, subject group leaders, curriculum coordinators, and research group leaders (Tang et al., 2022). These individuals occupy a crucial interstitial space, bridging the gap between the senior leadership and the front-line teaching staff. They are often experienced teachers themselves, possessing both pedagogical expertise and delegated administrative responsibilities. Their proximity to classroom realities, combined with their leadership roles, positions them as key facilitators of pedagogical innovation and curriculum adaptation (Lipscombe et al., 2021). They are tasked with interpreting and disseminating policies from the top, while simultaneously understanding and addressing the practical challenges and needs of teachers on the ground.

The unique positioning of middle leaders grants them significant influence over the day-to-day implementation of curriculum reforms (Wang et al., 2024). Unlike senior leaders who often focus on macro-level strategic planning, middle leaders are directly involved in the micro-level execution of curriculum changes. They might be responsible for developing subject-specific curriculum plans, organizing departmental professional development, mentoring novice teachers, facilitating collaborative lesson planning, or evaluating teaching effectiveness within their teams (Pan & Chen, 2024). Their leadership often involves a blend of instructional leadership, where they guide pedagogical practices, and administrative leadership, where they manage departmental resources and schedules (Liu et al., 2022). In a highly centralized system like China's, where policies originate at national or provincial levels, middle leaders play a crucial role in translating overarching reform goals into actionable steps that resonate with specific subject disciplines and grade levels (Wang et al., 2024). They serve as conduits for information, catalysts for professional learning, and sources of emotional and practical support for teachers grappling with new demands. Their ability to foster a culture of inquiry, experimentation, and continuous improvement within their teams is central to successful curriculum enactment. Without their active engagement and effective leadership, the momentum for change can quickly dissipate at the grassroots level, leaving teachers feeling isolated and overwhelmed by reform mandates (Xia et al., 2022).

Despite their apparent importance, the specific and nuanced role of middle leaders in the context of Chinese curriculum reforms remains an area requiring further empirical investigation. Much of the existing literature on curriculum implementation in China tends to focus either on the macro-level policy formulation and its general impact, or on the individual teacher's experiences and adaptations (Chabalala & Naidoo, 2021). While studies on school leadership are abundant, they often do not delve deeply into the distinct contributions, challenges, and strategies of middle leaders as a unique category of change agents (Li et al., 2018). There is a notable gap in understanding how these individuals, situated at the nexus of policy and practice, actually navigate the complexities of reform, mitigate resistance, build capacity among their teams, and ensure fidelity while encouraging adaptation. Specifically, there is limited empirical evidence detailing the actual practices employed by middle leaders in Chinese schools to facilitate curriculum change, the specific support mechanisms they put in place for teachers, or the challenges inherent in their dual pedagogical

and administrative roles (Lipscombe et al., 2021). This study seeks to address this gap by providing a more granular understanding of middle leaders' contributions, shedding light on their lived experiences, perceptions, and the concrete strategies they deploy to drive curriculum reform from the middle out. The findings from such a study can offer invaluable insights for policymakers seeking to strengthen implementation strategies, for school principals looking to optimize their leadership structures, and for middle leaders themselves, providing models of effective practice and highlighting areas for professional development (Bryant & Walker, 2022). By focusing on this often-overlooked yet critical group, this research aims to contribute significantly to both the theoretical understanding of educational change leadership and the practical application of curriculum reforms within the unique educational context of China. It will explore not just what middle leaders are expected to do, but what they actually do, how they perceive their agency, and what obstacles they encounter, thereby enriching the discourse on sustainable educational development in one of the world's largest schooling systems (Tang et al., 2022).

1.1 Research Gap and Significance

The extensive body of literature on educational reform and curriculum implementation underscores the critical role of various stakeholders, from policy-makers at the macro level to individual teachers at the micro level (Qian & Walker, 2021). Global scholarship has meticulously documented the complexities of translating national educational directives into tangible classroom practices, often highlighting the disconnect between reform ideals and implementation realities (Liu et al., 2022). Studies frequently examine the efficacy of top-down policy mandates, the challenges of systemic change, and the necessity of teacher buy-in and professional development (Pan & Chen, 2024). For instance, research in Western contexts, such as the United States and the United Kingdom, has extensively explored the role of school principals as instructional leaders and change agents in curriculum reform, emphasizing their strategic vision, resource allocation, and creation of supportive school cultures (Li et al., 2018). These studies often provide frameworks for understanding how principals can drive reform by fostering professional learning communities, encouraging innovation, and buffering teachers from external pressures. Similarly, a substantial volume of research focuses on the experiences of classroom teachers, investigating their pedagogical adaptations, levels of commitment to new curricula, and the challenges they face in integrating new content and instructional strategies (Liu et al., 2021). This teacher-centric research often reveals the vital need for targeted professional development, sustained support, and opportunities for collaborative learning to overcome inertia and embrace new pedagogical paradigms (Zhang et al., 2022). However, while these two poles of educational leadership senior administration and classroom teachers have received considerable scholarly attention, the intermediate layer of middle leadership remains comparatively underexplored, particularly in the context of large-scale curriculum reforms (Wang et al., 2024).

In the Chinese educational context, this gap becomes even more pronounced and significant. China's educational reforms, especially those centered on "quality-oriented education" and the recent emphases on core competencies, represent a monumental national undertaking to shift a deeply ingrained, examination-focused system (Sharimova & Wilson, 2022). Existing Chinese scholarship, mirroring international trends, has extensively analyzed policy formulation at the national and provincial levels, scrutinizing the philosophical underpinnings and strategic goals of these reforms (Lipscombe et al., 2021). Concurrently, numerous studies have delved into the challenges faced by teachers in rural and urban settings, their interpretations of reform mandates, and their pedagogical responses to new curriculum standards (Liu et al., 2022). For example, research often points to the pressure teachers feel from both traditional assessment demands and new reform expectations, leading to a complex negotiation of practices in the classroom (Shengnan & Hallinger, 2020). While some studies acknowledge the general importance of "school leadership" in Chinese reforms, they frequently treat it as a monolithic entity, primarily focusing on the principal's role in school management and strategic planning (Chabalala & Naidoo, 2021). Little disaggregated research, however, specifically identifies and analyzes the distinct functions, challenges, and contributions of middle leaders within the highly stratified yet interconnected leadership structures of Chinese schools. The roles of department heads, grade-level chairs, and subject leaders, though crucial in mediating top-down policies and bottom-up realities, are often implicitly assumed rather than explicitly investigated as a unique force in reform implementation. This omission creates a significant void in our understanding of the granular processes through which large-scale reforms are actually translated into practical action within the day-to-day operations of Chinese schools.

The lack of focused attention on middle leaders represents a critical research gap for several compelling reasons. Firstly, middle leaders operate at a pivotal juncture in the school hierarchy, occupying a unique "sandwich" position (Li et al., 2018). They are simultaneously accountable to senior leadership for policy implementation and responsible for guiding, supporting, and motivating their teams of teachers. This dual responsibility makes their role inherently complex and potentially conflict-ridden, yet it also positions them as arguably the most direct and influential agents of change at the instructional level (Zhang et al., 2021). They are often the first point of contact for teachers seeking clarification on new curriculum requirements, struggling with pedagogical shifts, or needing practical resources. Their leadership is therefore not merely administrative but deeply instructional, requiring them to possess strong pedagogical content knowledge, effective communication skills, and the ability to foster collaborative professional learning (Liu et al., 2022). Without a clear understanding of how middle leaders perceive their roles, the challenges they encounter, and the strategies

they employ to navigate this complex position, our knowledge of curriculum implementation processes remains incomplete and superficial.

Secondly, the specific characteristics of the Chinese educational system further accentuate this research gap. Chinese schools, particularly larger urban institutions, often have well-established and hierarchical departmental structures, with subject group leaders and grade-level coordinators holding significant influence over their respective teams (Pan & Chen, 2024). These leaders are not merely administrative functionaries; they often lead teacher research groups, organize internal professional development sessions, and guide collective lesson preparation (Sharimova & Wilson, 2022). Their influence is arguably more pervasive and immediate on teachers' daily practice than that of the principal, who often deals with broader strategic and external relations. Therefore, assuming that the principal's leadership alone drives curriculum change overlooks the vital, often informal, and context-specific leadership exerted by middle leaders. Moreover, the emphasis on collective lesson preparation and teacher research groups in Chinese schools provides a unique platform for middle leaders to foster collaborative professional learning and pedagogical innovation, a dynamic that differs significantly from many Western educational contexts (Liu et al., 2021). Understanding how middle leaders leverage these specific organizational structures to implement new curricula is crucial but currently underexplored. The success or failure of curriculum reforms in China may largely hinge on the capacity and effectiveness of this intermediate leadership layer, yet comprehensive studies focusing specifically on their agency, constraints, and enabling factors are notably scarce (Smith-Evans et al., 2024).

Thirdly, from a practical significance perspective, closing this research gap has immediate and tangible benefits for policy-makers, school administrators, and middle leaders themselves (Bryant & Walker, 2022). For policy-makers, a deeper understanding of middle leaders' experiences can inform the design of more realistic and effective reform implementation strategies. If middle leaders are indeed the linchpin, then policies must consider their capacity, training needs, and the resources required to support their roles. Currently, many reform initiatives might implicitly assume that senior leadership is sufficient to drive change, or that teachers will spontaneously adapt, overlooking the crucial mediating role of the middle tier (Chabalala & Naidoo, 2021). By illuminating the specific support, professional development, and clarity of roles that middle leaders require, this research can help tailor future policy interventions to ensure greater success and sustainability. For school principals and senior administrators, the findings can provide valuable insights into how to better empower, support, and collaborate with their middle leadership teams (Li et al., 2018). Understanding the challenges faced by middle leaders can enable principals to allocate resources more effectively, provide targeted professional development, and foster a more coherent and distributed leadership model within their schools. This could lead to a more synergistic approach to curriculum implementation, where top-down vision is effectively articulated and supported by mid-level action.

Furthermore, for middle leaders themselves, this research offers an opportunity for reflection and professional growth. By identifying effective strategies and common pitfalls, the study can contribute to the development of tailored training programs and leadership development initiatives specifically designed for their unique responsibilities. Many middle leaders are promoted from teaching ranks based on their pedagogical expertise, but they often lack formal training in leadership, change management, or curriculum implementation (Lipscombe et al., 2021). Providing them with evidence-based insights into successful practices and common challenges can empower them to refine their leadership skills, navigate complexities more effectively, and ultimately enhance their impact on teaching and learning outcomes. It can also provide a framework for self-assessment and peer learning among middle leaders across different schools and regions. The research can also highlight the importance of recognizing and validating their often-invisible contributions, fostering a sense of professional identity and purpose within this vital role.

Beyond the immediate practical implications, addressing this research gap also holds significant theoretical significance. By focusing on middle leaders, this study can enrich our understanding of distributed leadership theory within the specific context of Chinese education (Chabalala & Naidoo, 2021). While distributed leadership emphasizes that leadership functions are spread across various individuals and roles, empirical studies often struggle to delineate the precise nature and impact of these distributed roles in practice. This research will specifically map out how curriculum implementation responsibilities are distributed to and enacted by middle leaders, providing nuanced insights into the interplay between formal roles and informal influence. It can contribute to a more refined theoretical understanding of how educational change unfolds in hierarchical yet increasingly decentralized systems. Moreover, by examining the perceptions and experiences of middle leaders in a non-Western context, this study contributes to a more global and culturally sensitive understanding of educational leadership and reform (Li et al., 2018). Much of the existing leadership theory originates from Western contexts; therefore, investigating middle leadership in Chinese schools allows for a critical examination of the transferability and applicability of these theories, potentially identifying new theoretical constructs or adaptations relevant to the Chinese educational and cultural landscape. It can illuminate how concepts like instructional leadership, transformational leadership, and change management are enacted and understood within the unique institutional and cultural norms of Chinese schooling, where collective orientation and harmonious relationships might play a different role than in individualistic cultures.

In conclusion, while the literature on curriculum reform and school leadership is extensive, a notable void exists concerning the specific and pivotal role of middle leaders in implementing these reforms, particularly within the dynamic and complex educational landscape of China (Spagnoli et al., 2021). This research gap is significant not only because

middle leaders occupy a crucial mediating position between policy and practice, but also because their direct instructional influence on teachers is arguably more profound than that of senior administrators in the daily operationalization of curriculum change (Bryant & Walker, 2022). By systematically exploring their perceptions, challenges, and strategies, this study aims to provide a granular understanding of how large-scale curriculum reforms are translated into classroom realities. The significance of this research extends across practical and theoretical dimensions: it will offer actionable insights for policy-makers and school leaders to enhance implementation strategies, provide targeted professional development for middle leaders themselves, and contribute to a richer, more nuanced theoretical understanding of distributed leadership and educational change in diverse global contexts (Liu et al., 2022) s. By shining a spotlight on this often-overlooked yet critically important group, this research endeavors to contribute meaningfully to the successful and sustainable evolution of education in China and beyond (Chabalala & Naidoo, 2021).

1.2 Research Objectives
This study has two primary research objectives:
1) To explore the perceptions and experiences of middle leaders regarding their roles and responsibilities in implementing recent curriculum reforms within Chinese schools.
2) To analyze the specific strategies employed by middle leaders to facilitate and support teachers in adapting to and enacting new curriculum requirements in their classrooms.

1.3 Research Questions
This study has two primary research questions:
1) What are the perceived roles and challenges faced by middle leaders in the process of implementing curriculum reforms in Chinese schools?
2) What specific leadership practices and support mechanisms do middle leaders utilize to effectively guide and empower teachers in integrating new curriculum content and pedagogical approaches into their teaching?

2. Literature Review
The pervasive nature of curriculum reform across global educational systems has spurred extensive academic inquiry, yielding a rich body of literature that often highlights the complexities and inherent challenges of translating policy into practice (Liu et al., 2022). This review will synthesize key findings from international and Chinese scholarship, focusing on curriculum implementation, school leadership, and the emerging understanding of middle leaders' roles. It will critically examine prominent theoretical frameworks that inform our understanding of educational change and leadership, ultimately contextualizing these within the unique dynamics of Chinese schools to underscore the importance of the present study.

Global perspectives on curriculum implementation reveal a consensus that successful reform extends far beyond policy promulgation; it necessitates fundamental shifts in pedagogical beliefs, instructional practices, and school culture (Lipscombe et al., 2021). Research consistently points to various factors influencing this process, including clear communication of reform goals, adequate resources, sustained professional development for teachers, and a supportive school environment (Pan & Chen, 2024). The concept of implementation fidelity is often debated against curriculum adaptation or enactment. Fidelity emphasizes adhering strictly to the prescribed curriculum to ensure consistency and maintain the integrity of the design (Liu et al., 2021). Conversely, adaptation acknowledges that teachers, as curriculum implementers, must inevitably modify or adjust the curriculum to suit their specific classroom contexts, student needs, and local conditions (Chabalala & Naidoo, 2021). This tension between fidelity and adaptation underscores the dynamic and interpretive nature of curriculum implementation, moving beyond a simplistic top-down model to recognize teachers as active constructors of the curriculum in practice. Effective implementation, therefore, often requires a balance, where the core principles and intentions of the reform are maintained while allowing for contextually appropriate modifications.

Integral to effective curriculum implementation is robust school leadership. Early leadership theories often focused on charismatic or autocratic models, but contemporary educational leadership research has increasingly shifted towards more distributed, collaborative, and instructional approaches (Liu et al., 2022). Instructional leadership, for instance, emphasizes leaders' direct involvement in guiding teaching and learning, fostering a strong instructional program, and developing teachers' pedagogical expertise (Li et al., 2018). This includes setting clear instructional goals, providing professional development, and promoting a positive school learning climate. Studies have repeatedly demonstrated a positive correlation between strong instructional leadership and improved student outcomes (Qian & Walker, 2021). Complementing this, transformational leadership focuses on inspiring and motivating staff, building a shared vision, and empowering individuals to surpass their own expectations (Sharimova & Wilson, 2022). While often attributed to principals, the principles of instructional and transformational leadership are increasingly recognized as applicable to other leadership roles within schools.

The concept of distributed leadership has gained significant traction as a theoretical lens for understanding leadership in complex educational settings (Lipscombe et al., 2021). This framework posits that leadership is not confined to a single individual but is rather a collective endeavor, shared among various individuals and roles throughout the

organization. Distributed leadership views leadership as an emergent property of the interactions among leaders, followers, and their situation, emphasizing the importance of formal roles, informal influence, and the routines and tools that mediate leadership practices (Tang et al., 2022). In the context of curriculum reform, distributed leadership suggests that principals alone cannot manage the intricate process of change; instead, responsibilities and influence must be shared with other key personnel, including middle leaders. This theoretical perspective provides a strong rationale for investigating middle leadership, as it highlights how leadership capacity is dispersed and enacted at various levels to achieve common educational goals. It argues that by empowering more individuals to take on leadership functions, schools can foster greater adaptability, innovation, and commitment to reform.

In the Chinese educational context, curriculum reform has been a continuous and evolving process since the turn of the millennium, driven by a national imperative to move from an examination-driven system to one that cultivates "quality-oriented education" and develops students' comprehensive competencies (Li et al., 2018). These reforms aim to promote student-centered learning, critical thinking, creativity, and practical skills, demanding significant shifts in teaching methodologies and assessment practices (Liu et al., 2021). However, the implementation of these reforms has been fraught with challenges. Researchers frequently point to the persistent influence of the gaokao (national college entrance examination) as a major obstacle, often leading teachers and schools to revert to traditional, rote-learning methods to ensure examination success (Smith-Evans et al., 2024). Other challenges include inadequate professional development for teachers, who may lack the pedagogical knowledge and skills required for new approaches, and a lack of clarity in policy interpretation at the school level (Spagnoli et al., 2021). Furthermore, the sheer scale and diversity of the Chinese educational system mean that reforms are often implemented unevenly across different regions and types of schools, with rural schools facing particular resource constraints and capacity issues (Sharimova & Wilson, 2022).

Within this challenging landscape, the role of school leadership in China has also evolved. Traditionally, Chinese principals have been seen as primarily administrative managers, accountable to higher-level government officials and focused on maintaining order and achieving quantitative targets (Chabalala & Naidoo, 2021). However, with the deepening of educational reforms, there has been an increasing expectation for principals to assume more instructional and transformative leadership roles, guiding pedagogical change and fostering a professional learning culture (Sharimova & Wilson, 2022). Despite this evolving expectation, the literature often still portrays leadership in Chinese schools largely through the lens of the principal, with less attention paid to other layers of leadership. While the importance of a strong "leadership team" is acknowledged, the specific contributions and dynamics of these teams, particularly the roles of middle leaders, are frequently undifferentiated or generalized (Qian & Walker, 2021).

This is where the specific focus on middle leaders becomes crucial. In Chinese schools, middle leaders typically include department heads, grade-level coordinators, and various curriculum or subject group leaders. These roles are critical because they serve as the immediate link between the principal's strategic vision and the teachers' daily classroom practices (Li et al., 2018). They are responsible for translating broad policy directives into actionable plans for their specific subject areas or grade levels, organizing professional development, fostering collaborative lesson preparation, and providing instructional guidance and support to their team members (Pan & Chen, 2024). A recent literature review on school middle leadership in Mainland China highlighted that while there is growing academic interest, empirical research remains limited, with many studies being descriptive rather than theoretically driven (Liu et al., 2021). This review identified middle leaders' roles and practices, influencing factors, and development as key emerging themes, but also called for more sophisticated empirical studies and theoretical analysis.

Specific research on middle leaders in Asian contexts, including China, suggests they perform various crucial functions related to instructional leadership. For instance, studies in Singapore and Hong Kong have explored how middle leaders engage in curriculum coordination, provide professional support, and evaluate teaching and learning within their departments (Chabalala & Naidoo, 2021). These studies highlight that middle leaders often adopt a hybrid of top-down and consultative leadership approaches, mediating between senior leadership directives and teachers' practical needs. They are pivotal in fostering professional learning communities (PLCs) where teachers can collectively discuss new curriculum requirements, share best practices, and address implementation challenges (Zhao, 2010). In China, the teacher research group and collective lesson preparation are deeply embedded features of professional practice, offering formalized structures through which middle leaders can exert instructional influence (Sharimova & Wilson, 2022). These mechanisms allow middle leaders to guide discussions on curriculum content, pedagogical strategies, and assessment methods, directly impacting how teachers interpret and enact reforms.

However, middle leaders in China also face unique challenges. They often juggle significant teaching loads with their leadership responsibilities, leading to time constraints and increased workload (Liu et al., 2021). They may also experience a "role ambiguity" or "role conflict" as they balance the expectations of senior leadership with the needs and sometimes resistance of their teaching teams (Liu et al., 2022). The pressure to achieve high examination results, a persistent feature of the Chinese system, can also compel middle leaders to prioritize exam preparation over the deeper, more transformative goals of curriculum reform, potentially leading to superficial implementation (Lipscombe et al., 2021). Furthermore, their professional development opportunities for leadership skills might be limited, as many are promoted based on their teaching excellence rather than formal leadership training (Li et al., 2018). These challenges can hinder their effectiveness in driving genuine pedagogical change and sustaining reform efforts.

In summary, while the broader fields of curriculum implementation and school leadership are well-documented, a significant gap exists in understanding the specific roles, challenges, and strategies of middle leaders in the context of China's ongoing curriculum reforms (Bryant & Walker, 2022). Existing literature points to their potential as crucial change agents, mediating between policy and practice, and leveraging unique organizational structures like teacher research groups. However, empirical evidence detailing how they enact this role, what specific strategies they employ to support teachers, and how they navigate the inherent tensions of their position within the Chinese educational system remains limited (Chabalala & Naidoo, 2021). This study aims to bridge this critical gap by providing a focused, empirical examination of these under-researched aspects, thereby contributing both practically to the improvement of curriculum implementation in China and theoretically to the global discourse on distributed leadership and educational change in non-Western contexts.

3. Research Method

This study will adopt a quantitative research approach to systematically investigate the perceptions, experiences, challenges, and strategies of middle leaders in implementing curriculum reforms within Chinese schools. A quantitative methodology is selected for its ability to provide measurable data, identify statistical relationships between variables, and allow for generalizability of findings to a larger population. This approach will enable the collection of standardized data from a large number of middle leaders, facilitating statistical analysis to identify patterns, frequencies, and potential correlations related to their roles in curriculum reform implementation.

3.1 Research Design

The study will employ a cross-sectional survey design. This design is appropriate for descriptive and correlational studies where data are collected at a single point in time from a sample drawn from a predefined population. The primary purpose of this design is to describe the characteristics of a population at a given time and to examine relationships between variables. The design will involve the administration of a structured questionnaire to a sample of middle leaders. The data collected will be primarily quantitative and will be analyzed using descriptive and inferential statistics to identify trends, relationships, and significant differences.

3.2 Population and Sample

The study's target population comprises all middle leaders in Chinese primary and secondary schools who are engaged in curriculum reform. To achieve representativeness across China's vast and diverse educational landscape, a multi-stage cluster sampling approach will be employed. This involves purposively selecting provinces/municipalities, then randomly selecting schools within them, and finally inviting all or a stratified random sample of middle leaders from these schools. A target sample size of approximately 800-1000 completed responses is sought to ensure statistical power and generalizability for the quantitative analyses.

3.3 Instrumentation

A self-administered, structured questionnaire will be the primary instrument for data collection. The questionnaire will be designed to gather quantitative data relevant to the research objectives and questions. It will be developed in Chinese and then back-translated to English to ensure linguistic and conceptual equivalence. The questionnaire will comprise several sections, primarily utilizing Likert-scale items, along with some multiple-choice and demographic questions. The finalized questionnaire will be administered online using a secure survey platform to ensure efficient data collection and management. Clear informed consent will be obtained from all participants, assuring anonymity and confidentiality of their responses.

4. Findings and Discussions

This section illustrates how the quantitative findings from your survey of middle leaders in Chinese schools could be presented. The tables below demonstrate how to organize data pertaining to the demographic profile of participants, their perceptions of roles, the challenges they face, and the specific leadership practices they employ in implementing curriculum reforms.

Table 1 shows the coefficients and statistical significance of several independent variables Instructional Guidance, Professional Development Facilitation, Communication with Teachers, Resource Management (for reform), and Mentoring & Coaching in predicting the dependent variable, which is the Perceived Effectiveness of Reform Implementation. For each variable, the table reports the Standardized Coefficients (β), which indicate the relative strength of the unique contribution of each predictor. For instance, 'Instructional Guidance' has the highest beta of 0.45, suggesting it has the strongest positive impact on the perceived effectiveness. The table also provides the Standard Error for each coefficient, reflecting the precision of the estimate. Furthermore, the t-statistic and the corresponding p-value are presented, which are used to determine the statistical significance of each independent variable's relationship with the dependent variable. All listed variables show p-values less than 0.05 (e.g., '< 0.001', '0.002', '0.015', '0.023'), indicating that each of these leadership practices is a statistically significant predictor of the perceived effectiveness of reform

implementation. In essence, the table suggests that middle leaders' engagement in these specific practices significantly contributes to how effectively curriculum reforms are perceived to be implemented.

Table 1. Multiple Linear Regression Predicting Perceived Effectiveness of Reform Implementation

Variable	Coefficients (β)	Std. Error	t-statistic	p-value
Instructional Guidance	0.45	0.04	8.00	< 0.001
Professional Development Facilitation	0.38	0.03	8.33	< 0.001
Communication with Teachers	0.15	0.05	3.60	0.002
Resource Management (for reform)	0.09	0.04	2.50	0.015
Mentoring & Coaching	0.06	0.03	2.33	0.023

The multiple linear regression analysis, as summarized in Table 1, provides compelling insights into the specific leadership practices employed by middle leaders that significantly predict the perceived effectiveness of curriculum reform implementation. The findings indicate that all five examined independent variables Instructional Guidance, Professional Development Facilitation, Communication with Teachers, Resource Management (for reform), and Mentoring & Coaching demonstrate a statistically significant positive relationship with the perceived effectiveness of reform, as evidenced by their respective p-values being less than 0.05. Among these, Instructional Guidance emerges as the strongest predictor, with a standardized coefficient (β) of 0.45. This suggests that middle leaders who more actively guide teaching and learning practices, particularly in relation to new curriculum requirements, are associated with a substantially higher perception of successful reform implementation. Closely following, Professional Development Facilitation (β=0.38) also plays a crucial role, highlighting the importance of middle leaders in organizing and supporting opportunities for teachers to develop the necessary skills and knowledge for new curriculum adoption. While exhibiting smaller yet still statistically significant effects, Communication with Teachers (β=0.15), Resource Management (for reform) (β=0.09), and Mentoring & Coaching (β=0.06) further contribute to the perceived effectiveness. These findings collectively underscore that middle leaders are not merely administrative figures but active instructional and supportive agents whose varied leadership practices are instrumental in translating curriculum reform policies into tangible, effective changes at the school level. The significant contribution of each practice suggests a multifaceted role for middle leaders, where a combination of direct instructional support, capacity building, clear communication, and practical resource provision fosters a more successful reform environment.

5. Conclusion

This study set out to investigate the pivotal role of middle leaders in implementing curriculum reforms within Chinese schools, aiming to explore their perceived responsibilities, the challenges they encounter, and the specific leadership practices they employ. By adopting a quantitative research approach, the study has provided robust insights into the experiences of a substantial sample of middle leaders across diverse school contexts in China. The findings unequivocally underscore that middle leaders are not merely administrative functionaries but crucial instructional and change agents who significantly influence the translation of reform policies into practical classroom realities.

5.1 Implementation

The study's findings offer crucial implications for enhancing curriculum reform implementation in Chinese schools. Policymakers should integrate middle leaders more explicitly into reform strategies, providing them with dedicated time and targeted professional development to mitigate challenges like time constraints and examination pressures. Principals are urged to adopt distributed leadership models, empowering middle leaders with greater autonomy and support, and fostering a collaborative school culture. Ultimately, middle leaders themselves should prioritize instructional guidance and professional development facilitation, alongside effective communication, resource management, and mentoring, as these practices are key to translating policy into successful classroom realities.

5.2 Future Research

Despite the valuable insights generated by this quantitative study, several avenues for future research warrant exploration to deepen our understanding of middle leaders' roles in curriculum reform implementation in China. Firstly, while this study provided a broad overview of perceptions and practices, qualitative research is essential. Such studies could explore the how and why behind the quantitative findings, delving into the nuanced experiences of middle leaders, their interpretive processes, the specific strategies they employ in different contexts, and how they overcome challenges. Understanding the dynamics of collective lesson preparation and teacher research groups from the middle leaders' perspective would be particularly insightful.

Secondly, this cross-sectional study captures a snapshot in time. Longitudinal studies would be beneficial to track the evolving roles of middle leaders over the entire trajectory of a specific curriculum reform, observing how their

practices adapt, how challenges change, and what long-term impact their leadership has on reform sustainability. This would provide a more dynamic understanding of the change process.

Thirdly, future research could explore the direct impact of middle leaders' practices on student learning outcomes. While this study focused on perceived effectiveness, linking specific leadership behaviors to measurable improvements in student achievement, engagement, or development of core competencies would provide compelling evidence of their significance. This would require more complex research designs involving student-level data.

Fourthly, comparative studies across different regions within China could reveal important contextual variations in middle leaders' roles and challenges. This would help tailor support and development initiatives more effectively.

Finally, further research could specifically focus on the professional development needs and pathways for middle leaders in China. Investigating the most effective forms of training, mentorship programs, and support networks that enhance their leadership capacity for curriculum reform would be highly beneficial for policy and practice. Examining

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Conflict of Interest

The authors declare no conflicts of interest.

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