

Group-based Educational Assistance: Models, Effectiveness, and Prospects — A Literature Analysis Based on Domestic Publications from 2018-2025*

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ABSTRACT

Group-based educational assistance is an effective means of promoting educational equity, yet a systematic synthesis of its knowledge framework within the academic field remains insufficient. This study, through literature analysis, selected 94 high-quality papers from databases such as CNKI and FPD, focusing on themes including educational assistance, collective teaching support, and paired assistance. These were analyzed following the “Models–Effectiveness–Challenges” framework. The research reveals that: Firstly, the core concept of “group-based” educational assistance has become relatively clear, with a consensus gradually forming. Secondly, assistance forms can be categorized into diverse types based on factors like organizing entities, team structure and function, and technology application, demonstrating flexibility, precision, and creativity in practice. Thirdly, the outcomes of assistance are prominent, playing a positive role in enhancing the educational level of recipient areas and promoting teachers' professional growth. Fourthly, challenges related to sustainability, adaptability, and evaluation systems have been exposed. Finally, this paper suggests that future research should strengthen theoretical framework construction, delve deeper into the analysis of long-term mechanisms, introduce international comparative perspectives, and innovate assistance methods leveraging new technologies.

KEYWORDS: Group-based Educational Assistance; Paired Assistance; Educational Equity;

1. INTRODUCTION

1.1 Research Background and Significance

1.1.1 Research Background

From the perspective of practical needs, traditional single-teacher support models suffer from limitations such as dispersed efforts and transient effects, making them increasingly inadequate for meeting the requirements of regional educational balanced development in the new era. Consequently, “group-based” educational assistance

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emerged as a systematic and holistic intervention model. In practice, “group-based” educational assistance began in 2016 with 17 provinces paired for Tibet assistance, including Beijing, Shanghai, Jiangsu, and Tianjin, along with affiliated primary and secondary schools of universities directly under the Ministry of Education, selecting teachers to support 20 primary and secondary schools in Tibet in a “group-based” model. After 2022, this assistance model expanded to 160 counties in 10 western provinces, becoming a primary form of educational assistance in the new era. From a policy perspective, the direct policy origin of “group-based” educational assistance is the “Implementation Plan for Group-based Educational Talent Assistance for Tibet” formulated by the Ministry of Education and others in December 2015, which gave birth to this model. In the new era, driven by both rural revitalization and educational equity, the “Work Plan for Group-based Educational Talent Assistance in Key National Rural Revitalization Assistance Counties” was jointly issued by eight central departments including the Central Organization Department and the Ministry of Education in 2022. Thus, “group-based” educational assistance expanded from aiding Tibet and Xinjiang to intensively supporting 160 key national rural revitalization assistance counties in 10 western provinces. It aims to improve local education quality, block the intergenerational transmission of poverty, promote the balanced distribution of high-quality educational resources, provide talent support for rural development, and consolidate the foundation of rural revitalization through the “group-based” model.

1.1.2 Research Significance

Firstly, by systematically reviewing the development trajectory and core findings in the field of domestic educational assistance research, it provides important academic reference for constructing a theoretical system of educational assistance with Chinese characteristics and enriching research in the sociology of education. Secondly, based on summarizing practical cases of educational assistance from various regions, it identifies the characteristics of assistance models across different regions and developmental stages. This offers a scientific basis for government departments to formulate more precise and effective educational assistance policies, and also provides actionable guidance for recipient areas to optimize the implementation of educational assistance plans.

This, in turn, aims to improve the practical effectiveness of educational assistance work and advance the goal of educational equity.

1.2 Definition of Core Concepts

1.2.1 Concept Definition

The concept of “group-based” educational assistance originated from the talent assistance program for Tibet. It was defined as “a means to select high-quality educational talents from inland areas to assist Tibet, with the aim of driving and training local teachers, strengthening the construction of the teaching force in Tibet, improving the educational teaching management level of Tibetan schools, and achieving the connotative development of education in Tibet as a whole”^[1]. As the practice of “group-based” educational assistance advanced and understanding deepened, its connotation continuously enriched and clarified. Some scholars positioned it within the macro context of East-West collaboration, elevating it to a model: “a model where the paired and collaborating eastern regions, based on the assistance needs of the recipient areas, group-select teaching support teams and training guidance teams. Led by the implanted leadership of selected outstanding principals, they provide assistance according to needs, specifically targeting one impoverished county or one underperforming school for implementation of management input, demonstration leadership, and training guidance, conducting 'reshaping' and 'implanting' assistance”^[2]. Integrating other scholars' research findings and practical

investigations of “group-based” educational assistance, this study defines “group-based” assistance as a model where multiple educators from different disciplines, levels, and with diverse expertise form a structured team to carry out periodic, systematic, and multi-dimensional precise assistance for schools in underdeveloped areas collectively.

1.2.2 Concept Differentiation

“Group-based” educational assistance differs from, yet is interrelated with, single-teacher support and educational paired assistance. “Group-based” educational assistance involves precise support conducted through team collaboration, emphasizing the systematic nature of “management input+professional empowerment+long-term cultivation.” Its core features include team-based selection, comprehensive embedding, and long-term mechanisms. “Single-teacher support” primarily involves short-term assistance by individual teachers, focusing on the execution of teaching tasks, and lacks systematic planning. Its characteristics are decentralized implementation, short-term orientation, and predominantly one-way input. Educational paired assistance is a regional collaboration policy under national macro-regulation, emphasizing long-term paired assistance between economically developed and less developed regions. Its features include multi-sector collaboration, resource-oriented focus, and strong policy stability. From the perspective of historical evolution, paired assistance provided the policy framework for “group-based” assistance. “Group-based” educational assistance gradually emerged as a specialized field of support within this framework, becoming distinct from economic collaboration. Single-teacher support was the primary form of early educational assistance and can be seen as the initial stage of “group-based” educational assistance. Overall, “group-based” assistance integrates the advantages of both, continuing the national policy orientation while addressing the inefficiencies of traditional teacher support through team-based and precise design.

Table 1: Differentiation of Core Concepts

Dimension	Group-based Assistance	Single-Teacher Support	Educational Paired Assistance
Composition	Management Team+Teaching Team	Individual Teacher	Government/Institution-led Regional Collaboration
Method	Long-term (beyond 3 years)	Short-term	Long-term, Policy-fixed, but dispersed execution in education
Systematic			
Goal Level	Management Restructuring→Teacher Capacity Building→System Optimization	Teaching Task Execution	Multi-sector Collaboration
Resource Input	Human Resources+Funds+Systems	Primarily Human Resources, Teaching Skill Input	Primarily Funds+Policy, Hardware Construction Priority

1.3 Scope and Methods of Literature Review

1.3.1 Search Scope

This study used CNKI and FPD as the primary literature retrieval platforms, setting core subject terms such as “educational assistance” and “group-based assistance”, limiting the time frame to 2018–2025. During screening,

priority was given to high-quality academic papers included in Peking University Core Journals, CSSCI source journals, and the AMI evaluation system. Through rigorous search and screening, 94 relevant research documents were ultimately obtained. These documents cover multiple dimensions such as educational assistance policies, implementation paths, and effectiveness evaluation, providing theoretical and empirical support for the research. In terms of publication quantity, research on this topic generally shows a rising-then-stable trend, with the number of core journal publications peaking in 2021, and remaining around 13 articles per year in other years. Regarding disciplinary fields, the top five disciplines by proportion are: Educational Theory and Management (29.32%), Agricultural Economics (12.78%), Secondary Education (11.28%), Higher Education (11.28%), and Vocational Education (6.77%). In terms of funding sources, many originated from the National Social Science Fund (20 projects), Ministry of Education Humanities and Social Sciences Research Projects (11 projects), National Education Science Planning Projects (9 projects), etc., with provincial fund projects being relatively evenly distributed. The research levels primarily focus on applied research and development research, with both proportions being roughly equivalent.

1.3.2 Search Methods

During literature retrieval, resources such as academic databases, specialized education journals, and dissertation databases were comprehensively utilized. Using “group-based educational assistance” as the core keyword, combined with auxiliary keywords like “model”, “effectiveness”, and “challenge”, a broad search was conducted. Sources were expanded by tracing citations and references. Literature screening focused on domestic academic publications concerning the practice of “group-based” educational assistance, with research content covering models, effectiveness, or challenges. Duplicate studies, non-academic literature, and literature with low relevance to the theme were excluded. The literature analysis framework followed the “Models–Effectiveness–Challenges” logic. In the models section, the organizational forms, resource integration methods, and operational mechanisms of “group-based” educational assistance in different regions and recipient objects were analyzed. Regarding effectiveness, outcomes were summarized from dimensions such as student development, teacher growth, school improvement, and regional educational equity. In the challenges section, issues related to policy implementation, resource allocation, cultural integration, and the construction of long-term mechanisms were explored.

2. THEORETICAL FOUNDATIONS AND PRACTICAL DRIVERS OF GROUP-BASED EDUCATIONAL ASSISTANCE

2.1 Theoretical Foundations

2.1.1 Educational Equity Theory

The core concept of educational equity theory is “equality of educational opportunity”. American scholar James S. Coleman proposed four criteria for “equality of educational opportunity”: equality of access to the educational system, equality of participation within the educational process, equality of educational results, and equality of the effect of education on life chances^[3]. These criteria remain important reference indicators for evaluating educational equity today. Coleman found that family socioeconomic status had a greater influence on educational quality than differences in material resources between schools, although this conclusion differs somewhat from the findings of some Chinese scholars^[4]. Furthermore, research by both Chinese and foreign scholars indicates that the influence weight of teacher professional quality on educational quality is higher than that of hardware facility investment^[5].

Swedish scholar Torsten Husén constructed a three-tiered, progressive theory of educational equity: equality of starting point guarantees equal access and rights to education; equality of process provides non-differentiated resources and fair processes; equality of outcome achieves substantive equality in academic achievement and individual potential development through differentiated support. The value of “group-based” educational assistance aligns with this: ensuring equal educational rights, allowing students in backward areas fair access to schooling; promoting process equity by delivering resources to narrow the gap; improving education quality by introducing external forces; and realizing outcome equality and individual development by providing customized support to maximize student potential.

2.1.2 Knowledge Transfer Theory

Gabriel Szulanski described the knowledge transfer process as involving four stages of transfer from a source unit to a recipient unit: the initiation stage, where the source identifies knowledge that can meet the recipient's needs; the implementation stage, where both parties establish transfer channels and adjust the form of knowledge; the ramp-up stage, where the recipient unit contextually reconfigures the knowledge; and the integration stage, where the knowledge is institutionalized and integrated into the recipient's system. He viewed “knowledge transfer” as a process of rebuilding the context, not merely an act of information transmission, emphasizing that the recipient begins actively adjusting the form of knowledge already during the implementation stage”^[6].

The practice of “group-based” educational assistance is consistent with the connotation of knowledge transfer theory. In the initiation stage, the assistance team precisely identifies the needs of the recipient school, clarifying transferable high-quality resources and practical models. In the implementation stage, both parties establish communication channels, the assistance team enters the recipient school, jointly organizes teaching activities, adjusts the presentation of resources, and simplifies complex theories. In the ramp-up stage, the recipient school, considering its teaching environment and student characteristics, contextually reconfigures the knowledge to fit its own context. In the integration stage, the adapted resources and practical models are institutionalized and integrated into the teaching management system. Furthermore, cultivating a trust mechanism is crucial: the recipient school participates in formulating the assistance plan, enhancing mutual understanding; leaders from both sides establish trust, fostering trust among members, promoting effective resource transfer, and ensuring the effectiveness of assistance.

2.1.3 Ecosystem Theory

Urie Bronfenbrenner's ecological systems theory posits that individual development is embedded within a series of interconnected environmental systems. Utilizing this theory to analyze the practice of “group-based” educational assistance allows for a systematic dissection of how assistance actions influence and reshape the educational ecology of recipient schools at multiple levels, thereby deepening the understanding of its mechanisms and comprehensive effectiveness. At the microsystem level, introducing the assistance team optimizes the educational system, improving classroom interactions and teaching models. At the mesosystem level, the assistance team acts as a connector, fostering synergistic education. At the macrosystem level, the assistance team, based on national strategies, implants new educational development goals and values. At the exosystem level, it catalyzes new assistance policies, bringing external support and forming a joint force for development. At the chronosystem level, through long-term assistance, it promotes dynamic changes in the educational ecosystem of the recipient area.

Ecological systems theory provides a holistic, systematic analytical perspective for “group-based” educational assistance. It indicates that effective assistance is a systematic project requiring simultaneous strengthening of the microsystem (classroom teaching), mesosystem (connections between school and external organizations), exosystem (external policy and resource support), and macrosystem (national macro-strategy). Simultaneously, the theory emphasizes that assistance effects are dynamic and cumulative processes(chronosystem), requiring evaluators to possess patience and a developmental perspective.

2.2 Practical Drivers

2.2.1 Shift in Assistance Philosophy: From 'Infusion' to 'Capacity Building'

The rise of the "group-based" educational assistance model stems from reflection on the limitations of traditional aid, achieving a deep shift "from 'infusion' to 'capacity building' in support"^[7]. The traditional “lone-teacher” support model represented a temporary input of external resources, with short-lived effects and susceptibility to a “poor fit” with local conditions. In contrast, “group-based” assistance emphasizes team collaboration, systematic intervention, and ecological restructuring. By selecting and dispatching management, teaching, and research teams, it aims to achieve “knowledge transfer, mutual help, and guidance” and localization. The goal is to establish a “non-departing” teaching force and management mechanism in the recipient area, promoting a leap from “being rescued” to “self-rescue”, aligning with the strategic requirement for educational assistance to shift from poverty alleviation to achieving high-quality balance.

2.2.2 Intrinsic Requirement to Enhance Assistance Efficiency and Sustainability

The “group-based” model avoids the drawbacks of traditional decentralized aid, aiming to improve assistance efficiency and sustainability. Traditional single-teacher support suffered from dispersed resources, scattered benefits, and transient effects. “Group-based” assistance, through resource concentration, systematic intervention, and institutional construction, forms a synergy integrating management, teaching, and research, creating a combined force. The team intervenes in school governance, the teaching research system, and the cultural system, institutionalizing and localizing advanced concepts, fostering a self-iterating teaching force and management mechanism, ensuring sustainability after the withdrawal of external support.

2.2.3 Practical Need to Address Complex Educational Problems in Underdeveloped

Areas “Group-based” assistance originates from the recognition of the complexity of educational challenges, which traditional single-faceted models cannot solve. The problems of underperforming schools involve inefficient management, teacher shortages, cultural desolation, and broken home-school-community connections, forming a “low-quality equilibrium” ecology. “Group-based” assistance, in a "group army" manner, coordinately intervenes in classrooms, internal school organizations, and external systems, deconstructing the problematic ecology and cultivating a benign educational ecology, serving as a core strategy for addressing systemic issues.

3. MAIN MODELS AND PRACTICAL PATHWAYS OF GROUP-BASED EDUCATIONAL ASSISTANCE

3.1 Categorized by Organizing Entity

3.1.1 Government-led Model

The government-led “group-based” assistance model is a direct manifestation of state administrative power in the education sector. Relying on the political and administrative system, it implements large-scale educational aid through top-level design, etc. This model is embedded in two national strategies: first, “East-West Collaboration” organizing high-quality schools in the east to support underperforming schools in the west;

second, “Intra-provincial Paired Assistance” where developed areas within a province assist backward areas, addressing regional educational disparities. Its operational mechanism reflects mandatory institutional change and resource coordination, stemming from superior policy directives and assessment pressures. It can rapidly mobilize resources, such as principals and key teachers, to form assistance teams, often linked to incentive mechanisms, and adopts term rotations to ensure stability. Its advantages are strong mobilization capacity, wide coverage, and sufficient resources, enabling the rapid establishment of a new educational order. The challenge is the potential over-reliance on administrative directives, neglecting educational principles, leading to administrative logic overriding educational logic, and insufficient endogenous motivation in recipient schools.

3.1.2 University-led Model

The university-led “group-based” assistance model represents a deepening of the social service function of higher education institutions. It leverages universities' advantages in knowledge production, theoretical innovation, and talent aggregation. This model has two forms: first, internal assistance to university-affiliated schools or basic education groups, where the main university sends expert teams to enhance the quality of affiliated primary and secondary schools, creating basic education benchmarks and, in turn, feeding back into the university's teacher education research; second, comprehensive support for basic education in designated assistance counties, using “educational assistance” to block the intergenerational transmission of poverty and assist rural revitalization. Its core competitiveness lies in professionalism and academic leadership. The team encompasses teaching experts, scholars in curriculum and instruction theory, and outstanding graduate students, achieving the integration of “research, training, and teaching”. Operationally, it employs diagnostic assessment to precisely identify problems and conduct deep-level interventions. For example, utilizing the University-Government-School collaborative innovation model to introduce cutting-edge ideas and outcomes, treating the assistance site as a research “testing ground”. Advantages include precise intervention, strong professionalism, and a focus on sustainable development. Limitations lie in the assistance being constrained by the university's resources and willingness, and potential disconnection between university proposals and local needs if communication is poor.

3.1.3 Social Force-led Model

The social force-led “group-based” assistance model is initiated and implemented by public welfare foundations, education groups, enterprises, and non-governmental organizations, serving as an important supplement outside the state education public service system. This model often relies on specific public welfare projects, such as large foundations' “Rural Education Revitalization Plans” or education groups' “Public Welfare Teaching Support Projects”, recruiting and forming volunteer teacher teams to provide educational services in specific areas for periods ranging from several months to years. Compared to government and universities, social forces in “group-based” educational assistance often delve deeply into specific fields. They are more flexible in project design, resource allocation, and execution processes, enabling rapid response to the demands of recipient schools. Their advantages are that the assistance work is close to reality, carries warmth, and can fill policy blind spots. Their challenges are, first, sustainability issues, where project cycles and funding instability affect the continuity of assistance; second, coordination issues, easily leading to project disconnection and information silos; third, standardization issues, requiring the establishment of access standards, training systems, and supervision mechanisms to ensure service stability and professionalism.

Overall, the three major entities of government, universities, and social forces in “group-based” educational assistance play irreplaceable roles, forming a functionally complementary pattern of “leading–empowering–supplementing”. The government-led model is the primary form of assistance, ensuring the scale and order of actions; the university-led model provides update power, enhancing the depth and scientific nature of assistance through the process of participation–research–reflection; the social force-led model broadens the pathways of assistance, increasing its breadth and vitality. The future should focus on strengthening coordination mechanisms among multiple entities, building a multi-stakeholder collaborative assistance ecosystem of “government guidance, university support, and social participation”, to enhance the overall effectiveness of “group-based” assistance.

3.2 Categorized by Team Composition and Function

3.2.1 Comprehensive “Management+Teaching” Team

The comprehensive “Management+Teaching” team is dedicated to the systematic restructuring of the school ecology. It is the most thorough and comprehensive model in “group-based” assistance, focusing on the “whole-school, systematic” intervention and transformation of the recipient school. It is suitable for underperforming or newly established schools facing multiple challenges, where problems stem from overall weaknesses in school leadership, management effectiveness, and other areas. The team composition follows a “structural biomimicry” principle, simulating the core management and backbone teaching layers of high-quality schools. It covers principals with advanced concepts and management experience, mid-level administrators responsible for various domains, and key subject teachers, forming a complete team structure that can be directly embedded into the governance structure of the recipient school to exercise management functions. Functionally, this model pursues coordinated intervention in the school's micro-, meso-, and macro-systems.

The management layer reshapes plans, optimizes structures, and establishes incentive mechanisms; the teaching layer leads subject development and rebuilds the teaching research system. The goal is to break the “low-quality equilibrium” and achieve systematic ecological restructuring. In practice, this model shows significant effectiveness but also faces substantial challenges. Success depends on team leadership, authorization from education administrative departments, and deep cooperation with local teachers.

3.2.2 “Subject-focused” Task Force Team

The “Subject-focused” task force team adopts a precise assistance strategy of “doing something, and not doing other things”. This model focuses on recipient schools with a generally acceptable foundation but obvious shortcomings in specific subjects or subject groups. Its core task is to concentrate superior forces to achieve rapid breakthroughs in key areas, thereby boosting the confidence of teachers and students and driving the overall development of the school. Team members are mainly renowned teachers, skilled instructors, and competition coaches in specific subjects from the supporting side. Although the team size might be small, it possesses first-class professional strength in the target subject area, with work focused on the teaching frontline. Its functional positioning is a precise chain of “diagnosis–implantation–enhancement”. It first conducts an in-depth diagnosis of the current situation and problems in the target subject, then, through “implanted” teaching, “demonstrative” teaching research, and “customized” resource development, delivers advanced concepts, methods, and resources to the teaching frontline, improving teaching quality and student achievement. The advantages are clear objectives, quick results, and easy evaluation, enabling rapid resolution of “pain points”. The limitation is that if not integrated with the construction of the school's teaching research system, the

assistance effect may be confined to the period of the team's residence, potentially leading to a decline in subject teaching level after withdrawal, exhibiting a “U-shaped curve” effect.

3.2.3 “Teaching-Research” Leadership Team

The “Teaching-Research” leadership team shifts the intervention focus from direct “teaching” to empowering teachers on “how to teach”, achieving an upgrade from “giving a fish” to “teaching how to fish”. This model is suitable for schools where teachers have a certain teaching foundation but face bottlenecks in professional development and have a weak teaching research atmosphere. It aims to activate the endogenous motivation of the teaching force and build a sustainable ecosystem for professional growth. The team primarily consists of expert-type teachers such as teaching researchers and special-grade teachers, who possess profound theoretical knowledge and rich guidance experience. They intervene as “trainers”, “catalysts”, and “designers”, conducting high-frequency “immersive” teaching research guidance to guide teachers transition from “experience-based” to “reflective” and “research-oriented” teaching. Key outputs include establishing school-based teaching research systems, cultivating local backbone teaching research teams, and forming a positive teaching research culture. This model directly addresses the core of education quality improvement—teachers' professional capacity – with profound and lasting impact. However, the effectiveness takes a long time to manifest and requires high levels of expertise in guidance art and teacher willingness to learn.

Overall, the three assistance models follow a progression from whole-school transformation to subject-specific tackling, and then to core empowerment. In practice, these models can be dynamically combined and alternated, matching the appropriate assistance team to the recipient school's needs, adapting to the school's developmental stage and requirements. In the initial stage, recipient schools rely on the assistance team to reshape management and teaching systems; in the mid-term, they address subject shortcomings; and in the long term, they depend on the enhanced teaching research capacity of their teachers.

3.3 Categorized by Use of Technological Media

3.3.1 Offline Entity Team

The offline entity team, as the traditional and fundamental form of “group-based” assistance, involves team members residing at the recipient school, working and living alongside local teachers and students. This enables face-to-face, deep-level intervention, aiming to comprehensively reshape the educational ecology of the recipient school and rapidly improve its foundational operations. Through physical presence, team members achieve all-around “immersive” assistance. Its advantage lies in constructing highly close social interaction and informal learning fields. The assistance team can instantly capture subtle problems in the school's daily operations, conducting whole-process, seamless observation, demonstration, and guidance from morning readings to parent-teacher meetings. This “shoulder-to-shoulder” working method allows advanced educational concepts to influence and change teacher culture and student ethos through personal example and verbal and nonverbal communication. The disadvantage is the high demand on the supporting side's human, material, and time resources, and the limited scale of benefit, as high-quality resource radiation is often confined to a few assisted schools.

3.3.2 “Online + Offline” Hybrid Team

The “Online + Offline” hybrid team is an important innovation in “group-based” assistance in the digital era, constructing a three-dimensional support system characterized by “light on-site presence at the front, strong cloud-based support at the rear”. It involves a small number of core members stationed at the recipient school,

relying on the support unit's backend team to provide regular professional support via internet platforms. The operational mechanism of this model combines "point" breakthroughs with "area" radiation. Offline, the stationed core members are responsible for on-site diagnosis and coordination, acting as the "connector" for online and offline activities. Online, the backend team utilizes digital tools for precise empowerment, mainly through forms such as dual-teacher classrooms, remote collaborative teaching research, digital resource libraries, and asynchronous guidance. Its prominent advantages are extensibility, flexibility, and sustainability. It alleviates the pressure of dispatching high-quality teachers, amplifies the scale benefits of assistance, transforms short-term assistance into long-term accompanying support, avoids the interruption of outcomes, and builds an "online think tank that never leaves" for the recipient school. The disadvantages are the high requirements for the recipient area's information infrastructure and the digital literacy of teachers and students. Furthermore, activities need to be carefully designed to ensure the depth and effectiveness of online interaction, preventing the disconnect between online and offline efforts.

In summary, offline entity "group-based" assistance and hybrid "group-based" assistance form a continuum of assistance spaces. The former excels in depth and is the foundation of assistance; the latter wins in breadth and is a key path for resource inclusive. The future trend is the deep integration of both: using online platforms to consolidate and expand the outcomes of offline stationed assistance, while simultaneously activating and enhancing the cohesion and creativity of the online community through regular, in-depth offline interactions, thereby constructing a new educational assistance ecology that integrates virtual and real spaces and continuously evolves.

3.4 Analysis of Practical Pathways

The effectiveness of "group-based" educational assistance depends not only on macro-level model design but also on scientific and systematic practical pathways during implementation. Scholars generally agree that a complete and efficient assistance cycle typically includes four key stages: "Diagnostic Investigation–Team Formation–Project Implementation–Assessment and Evaluation", forming a sequentially connected, dynamically feedback governance system.

3.4.1 Diagnostic Investigation: Precisely Anchoring

Needs Precise needs diagnosis is the primary prerequisite for the success of "group-based" assistance, aiming to avoid blind intervention and achieve a shift from "supply-oriented" to "demand-oriented" approaches. Current practice has formed a multi-dimensional scientific diagnosis system: First, immersive observation, where the assistance team first resides in the school, gaining first-hand intuitive understanding through attending classes, participating in teaching research, and observing daily campus life. Second, data analysis, systematically collecting and analyzing quantitative and qualitative data such as academic performance and teacher structure to identify weak link. Third, multi-stakeholder interviews, conducting structured or semi-structured interviews with principals, teachers, students, and parents to comprehensively understand the demands of all parties. Finally, a diagnostic report is formed, precisely anchoring the real problems and true needs of the recipient school in core areas such as school governance and curriculum teaching, laying an empirical foundation for subsequent work.

3.4.2 Team Formation: Precise Resource Configuration

After clarifying the needs, team formation directly determines the quality and suitability of the assistance resources provided. This stage emphasizes “dispatching based on demand, forming teams precisely”. Regarding member selection, dual criteria are established: first, solid professional competence, selecting renowned principals, special-grade teachers, etc., to ensure they can play a leading and demonstrative role in their respective fields; second, a strong spirit of dedication and good cross-cultural adaptability to cope with the challenges of assistance. Regarding structural composition, it is strictly based on the “profile” from the diagnostic report. If the school faces systematic difficulties, a comprehensive “Management + Teaching” team is formed; if problems are concentrated in a specific subject area, a “Subject-focused” task force is dispatched; if the core contradiction lies in the lack of motivation for teacher professional development, a “Teaching-Research” leadership team primarily composed of teaching researchers and training experts is formed. This “demand-driven” formation logic ensures a high degree of match between the core capabilities of the assistance team and the key needs of the recipient school.

3.4.3 Project Implementation: Multi-dimensional Intervention and Empowerment

“Group-based” educational assistance aims to achieve systematic empowerment by comprehensively intervening in various subsystems of the recipient school's teaching and management. Common intervention areas include: School governance innovation, assisting in formulating development plans, restructuring organizational frameworks and management processes, and enhancing management efficiency. Curriculum system and teaching reform, introducing advanced curriculum concepts, developing school-based courses, promoting classroom teaching model changes, and supporting the construction of high-quality teaching resource libraries. Teacher professional development, conducting “apprenticeship-style” pairing and “accompanying” growth training to build a high-quality teaching force. Campus culture reshaping, refining the school spirit, designing characteristic cultural activities, and fostering a positive educational atmosphere. The content of “group-based” educational assistance has ultimately shifted from simple teaching support to the deep integration of teaching support, training, and management^[8]. These areas mutually support and advance in practice.

3.4.4 Assessment and Evaluation: Multi-faceted Evaluation for Development

Scientific and reasonable assessment and evaluation are crucial for ensuring the direction of assistance, motivating team behavior, and measuring assistance effectiveness. In the field of educational assistance, a comprehensive process-oriented evaluation system is gradually being established. Evaluation indicators cover multiple links such as input, process, output, and impact, specifically including team engagement, implementation rate of assistance measures, student academic improvement, subsequent impact, assistance radiation effect, and other aspects. Methods combining quantitative and qualitative evaluation are used. Some regions have begun experimenting with introducing third-party evaluation agencies to enhance the credibility and trustworthiness of assessments. During the assistance process, mechanisms like feedback adjustment and mid-term evaluation are mostly established to promptly identify problems and dynamically adjust assistance strategies, ensuring that actions consistently move towards the sustainable goal of “capacity building.”

4. EFFECTIVENESS AND CHALLENGES OF GROUP-BASED EDUCATIONAL ASSISTANCE

4.1 Achieved Effectiveness

Some scholars have found that “compared to merely increasing the number of supporting universities, “team-based” support can more significantly enhance the effectiveness of paired assistance.”^[9] As a systematic

intervention strategy, "team-based" educational assistance has achieved profound and significant results at multiple levels, including the operational standards of recipient schools, the cultivation of professional capacity among teachers in recipient areas, and the personal growth of the assisting teachers themselves.

4.1.1 Systemic Improvement of Recipient School Operational Levels

The most direct and significant effectiveness of "group-based" assistance is the fundamental improvement in the overall outlook of recipient schools, achieving systemic reshaping from hardware to software, and from management to teaching. Regarding student academic achievement, the assistance effect is often immediate. Assistance practice shows that after the assistance team has been stationed for 1–2 semesters, the average academic performance of students in recipient schools, especially in weak subjects, generally improves significantly, showing a trend of “stopping the decline and rebounding” or even “leapfrog improvement”. For example, in 2023, at Yunnan Province Dongchuan District No.1 Middle School, the teaching classes of assistant teacher Qian saw their teaching performance jump to first and second place in the grade level. The students' subject performance rankings were all at the forefront of the grade, with the average scores of the two classes exceeding those of other experimental classes by more than 10 points^[10]. This stems from advanced teaching concepts and methods stimulating students' learning interest and intrinsic motivation.

In terms of school management level, the assistance team inputs modern school governance concepts, assists in establishing sound rules and regulations, optimizes organizational structures, and promotes refined management, changing the previous situation of loose management and low efficiency. Many recipient schools, under assistance, formulated scientific three-year development plans for the first time, established teaching-centered performance appraisal systems, and significantly improved the standardization and specialization level of school operations.

At the curriculum system construction level, the assistance team utilizes its own resource advantages to help recipient schools develop school-based courses with local characteristics, such as Chinese classics, science innovation, and arts, filling the gaps in the school-based implementation of the national curriculum and meeting students' diverse development needs. Simultaneously, introducing club activities, subject competitions, etc., makes campus life richer and more diverse.

At the educational culture level, the assistance team fosters a positive campus material culture, institutional culture, and spiritual culture, reshaping the school's “vitality and spirit”. It improves previously existing issues like professional burnout and a weak learning atmosphere, forming a more rigorous teaching style, diligent study style, and a more cohesive campus cultural atmosphere.

4.1.2 Fundamental Enhancement of Teacher Capacity in Recipient Areas

The core effectiveness of “group-based” educational assistance lies in its “capacity building” function. Through a “master-apprentice” mechanism, it empowers local teachers, creating a “non-departing” high-quality teaching force for the recipient area. Renowned teachers and key teachers within the assistance team form pairs with several local young teachers, sign cultivation responsibility agreements, and provide “targeted” guidance covering all aspects of teaching. In this process, teachers in the recipient area not only imitate and learn specific teaching techniques but also profoundly update their educational philosophies, shifting from traditional models reliant on experience and focused on indoctrination to modern educational views that focus on students and advocate inquiry. Under the demonstration and leadership of the assisting teachers, local teachers gradually

master professional abilities such as learning situation analysis and instructional design. Many recipient schools form regular, high-quality school-based teaching research systems. Local teachers transform from passive “recipients” into active “researchers” and “creators”. Practical investigations show that after 2–3 years of assistance, over 80% of “apprentice” teachers can independently undertake school-level or above open classes, with some outstanding individuals growing into regional subject leaders, achieving a qualitative leap from “infusion” to “capacity building”.

4.1.3 Reflective Growth of Assisting Teachers' Comprehensive Quality

“Group-based” assistance is a process of mutual nourishment and mutual learning through teaching. For the assisting teachers, it is a valuable “tempering” experience in their professional careers, promoting the reflective growth of their comprehensive quality.

Firstly, their understanding of educational equity deepens. Facing the real dilemmas of education in underdeveloped areas firsthand gives them a deep feeling of the imbalance in China's educational development and a deeper sense of responsibility, stimulating educational sentiment and a sense of mission.

Secondly, their ability to solve problems in complex situations improves significantly. Assistance work requires assisting teachers to possess strong adaptability, creativity, and communication and coordination skills, creatively integrating effective methods from high-quality schools with the specific conditions of the recipient school and its students to solve various challenges, thereby honing their diagnostic and decision-making abilities.

Finally, during the assistance process, assisting teachers gain a more intuitive and profound understanding of balanced educational development. They re-examine and sort out their own educational philosophies and teaching methods, which are tested, critiqued, and enhanced in this new practical field. It is a process of self-examination and introspection for them. In their future work, their educational perspective becomes broader, and their professional resilience strengthens. Additionally, in the process of helping others, they also achieve self-growth and value reshape.

4.2 Main Challenges Faced Although

“group-based” educational assistance has achieved significant results, it still faces many deep-seated challenges and issues requiring reflection during its implementation. A clear understanding of these challenges is an effective path to enhancing the resilience of assistance and promoting balanced educational development between regions.

4.2.1 Sustainability Challenge: The Dilemma of Easy 'Infusion' vs. Difficult 'Capacity Building'

Whether the effectiveness can be consolidated and evolve autonomously after the assistance team's withdrawal is the ultimate criterion for measuring the success of assistance and is currently the greatest challenge. This manifests in two specific aspects: First, the “rigid dependency” on effectiveness. Some recipient schools develop a path dependency on the team's management, teaching, and decision-making during the assistance period, while the growth of the local management team and teaching force lags. After the external support is withdrawn, school governance and teaching reforms are prone to “regressive changes”, and the new models are difficult to sustain. Second, the breeding of an “enclave” effect. An “enclave” refers to a “high-quality isolated island” created by the assistance team through high-intensity resource input, relatively split from the surrounding

educational environment. During the assistance process, the internally assisted school achieves modernization, but the endogenous strength of the recipient area is insufficiently stimulated. The external intervention fails to transform into endogenous institutional and cultural genes, and the successful experience does not effectively radiate to drive the development of other schools. Its operational logic is out of place with surrounding schools. After the team withdraws, the “enclave” is easily “assimilated” by the surrounding environment due to the loss of external sustenance, making the assistance achievement fleeting.

4.2.2 Cultural Adaptability Challenge: Conflict Between Advanced Concepts and Local Knowledge

“Group-based” assistance is essentially a collision of two different educational cultures. The “advanced educational models” carried by the supporting side, originating from urban and developed areas, may conflict with the “local educational knowledge” of the recipient area, influenced by local socio-cultural traditions, resulting in explicit or implicit clashes in thinking, concepts, work styles, etc. For example, classroom models emphasizing inquiry and discussion might be questioned by local teachers as inefficient, or face the dilemma of students being accustomed to passive reception and thus “unresponsive to elicitation”. Refined management systems might be perceived as inflexible and encounter “soft resistance”. If the assistance team lacks cultural sensitivity and a humble learning attitude, presuming themselves as “saviors” and forcefully promoting “standard answer” type reforms, it can easily cause a “poor fit”, leading to a sense of alienation and frustration among teachers and students in the recipient school.

4.2.3 Team Effectiveness Challenge: Internal Dissipation in Coordinated Operations

The advantage of a “group-based” team lies in its collective strength, but the greatest threat to its effectiveness comes from internal integration and insufficient external support. First, there are challenges in internal team work. Members from different schools and disciplines have differing work habits and educational concepts. Without strong team leadership and a clear common vision, a situation of “each playing their own tune” can easily arise, making it difficult to form a unified strategy and joint force. Second, coordination with the home unit is crucial. The assistance team needs continuous support from their original unit in terms of resources, policy, and emotional backing. If the home unit provides weak support or “dispatches and forgets”, team members can fall into the predicament of “fighting at the front while being disconnected from the rear”, hindering their professional development and dampening work motivation. Finally, incentive and safeguard mechanisms are imperfect. Assistance work is intense and stressful, but matching long-term incentive mechanisms related to professional title evaluation, performance distribution, honors, and recognition are still under exploration, which may affect the participation enthusiasm of excellent teachers and the long-term stability of the team.

4.2.4 Evaluation Mechanism Challenge: Imbalance Between Short-term Explicit Outcomes and Long-term Implicit Impact

Current evaluation indicators for “group-based” educational assistance tend to focus on short-term, easily quantifiable explicit outcomes, such as immediate improvement in student scores, enhanced hardware facilities, and the number of competition awards. Scholar investigations indicate that recipient high schools generally admit that “an important evaluation indicator for assistance performance is whether the college entrance examination rate surpasses that of other high schools in the county.”^[11] While this orientation facilitates assessment, it guides assistance teams to tend to adopt interventions that yield “immediate results”, neglecting long-cycle, hard-to-quantify but profoundly influential implicit outcomes, such as the gradual transformation of school culture, the internalization of teachers' reflective capacity, the long-term development of students'

comprehensive quality, and the renewal of community educational concepts. The lack of evaluation for the “capacity building” function may lead assistance practice to sacrifice the foundation of long-term sustainable development for the pursuit of short-term “achievements.” Constructing a comprehensive evaluation system that scientifically measures the health of the educational ecology, indices of endogenous development, and other long-term, implicit values is an urgent task for promoting the steady and long-term advancement of “group-based” assistance.

In summary, while “group-based” educational assistance has made tremendous achievements, it is entering a “deep water zone” that requires confronting deep-seated contradictions and promoting paradigm upgrading. The future must shift from pursuing scale and speed to focusing more on quality, sustainability, and cultural integration. By strengthening the cultivation of endogenous, promoting culturally adaptive innovation, improving team support systems, and constructing developmental evaluation mechanisms, the ultimate goal is to “create a number of high-quality schools that never leave”^[12], allowing recipient areas to truly benefit in the long term.

5. RESEARCH REVIEW AND FUTURE PROSPECTS

5.1 Overall Evaluation of Existing Research

A systematic review of domestic literature related to “group-based” educational assistance from 2018-2025 shows that research in this field has developed alongside practical exploration. While significant progress has been made, limitations are also quite apparent.

Driven by strong national policies, the practice of “group-based” educational assistance has been fully launched in 160 counties in western China, and the number of related academic research has also increased significantly. Existing research focuses on the operational mechanisms, implementation paths, and short-term effectiveness of assistance models, covering various forms such as government-led East-West collaboration, university-involved targeted support, and social force-participated public welfare projects. These studies have preliminarily constructed an educational assistance framework encompassing different organizing entities and diverse implementation models. Experience summaries based on practice not only provide valuable raw material for subsequent research but also offer important practical references for policymakers and practitioners, laying the preliminary empirical foundation for the knowledge system in this field.

However, existing research has obvious deficiencies that constrain the depth and breadth of academic understanding. First, theoretical depth is insufficient. Overall, research exhibits the characteristic of “practice precedes, theory lags.” Although some studies cite theories like ecosystem theory or collaborative governance theory as analytical frameworks, they often fail to deeply analyze the complex interaction mechanisms and causal relationships within the assistance process. Most importantly, there is a lack of theoretical reflection and model construction based on local practice, resulting in limited explanatory power and generalizability of research findings.

Second, research methods are single. Studies are predominantly qualitative case studies with small sample sizes and limited representativeness. Rigorous large-sample quantitative studies, standardized experimental, or quasi-experimental designs are scarce, leading to a lack of data support and causal inference for judgments regarding the overall effectiveness of “group-based” assistance. The singularity of methodology also makes it difficult to objectively compare and verify the effects of assistance under different models and contexts,

restricting the scientific nature and promotion value of research conclusions.

Third, research perspectives have blind spots. On one hand, existing literature often narrates from the “top-down” perspective of the assistance providers or managers, lacking investigations from the subjective standpoint of the recipients. The true feelings, intrinsic needs, and cultural adaptation processes of teachers, students, and parents in recipient schools—the “bottom-up” perspectives—are often overlooked, their voices rendered silent in the research. On the other hand, the research vision is confined domestically, lacking comparison and reference to similar international educational aid projects. Failing to examine the unique value and common challenges of local practice within a global perspective limits the research's capacity for international dialogue and innovation potential.

5.2 Prospects for Future Research Directions

Based on reflection on existing research findings and new problems in practice, future research on “group-based” educational assistance should deepen and expand in the following five aspects to improve the knowledge system and enhance practical effectiveness.

First, deepen theoretical construction to elucidate the internal mechanisms of action. Future research needs to move beyond summary of experience and construct explanatory theoretical models. Researchers should integrate multi-disciplinary theoretical perspectives to deeply analyze the complex interactive relationships between the assistance team and the ecosystem of the recipient school, focusing on revealing the “black box” of how external high-quality resources trigger internal change within the recipient system. Systematically analyze key mediating and moderating variables to form a causal mechanism framework, providing theoretical guidance for practice.

Second, focus on long-term mechanisms to explore sustainable development paths. To address challenges like “assistance dependency” and the “enclave effect”, research should focus on constructing long-term evaluation mechanisms. Explore the path from the “transplantation” of external models to deep “grafting” with the local context, ultimately cultivating the endogenous development capacity of recipient schools. Research how to transform external interventions into the endogenous development capacity of recipient schools, constructing a development ecology capable of “self-growth.”

Third, introduce new methods and technologies to promote research paradigm innovation. On one hand, introduce methods like social network analysis and quantitative analysis to depict the paths of tacit knowledge flow and team collaboration effectiveness, providing a basis for optimizing team structure. On the other hand, explore the application of artificial intelligence and big data technology to conduct multi-dimensional, dynamic, and intelligent assessment and diagnosis of the academic difficulties faced by recipient schools, teacher professional development needs, and assistance effectiveness.

Fourth, expand research perspectives to enrich academic dialogue dimensions. Future research should achieve two major shifts. First, shift towards cross-cultural adaptation research, using methods like ethnography and in-depth interviews to present the cognition, emotion, and behavioral responses of the recipients, emphasizing subjective experience. Second, shift towards international comparative research, systematically reviewing international educational assistance models, mechanisms, and lessons learned, extract the Chinese experience and universal patterns of “group-based” assistance, and enhance international perspective and dialogue capacity.

Fifth, innovate evaluation systems to guide high-quality development of assistance. Future research should develop comprehensive evaluation indicator systems that balance process and outcome, quantitative and qualitative, and short-term and long-term considerations. Incorporate soft indicators, introduce concepts like value-added evaluation and developmental evaluation, and conduct medium- to long-term effect assessments to guide practice towards focusing on “long-term potential achievements”.

6. CONCLUSION

“Group-based” educational assistance is a major initiative and practical innovation for promoting educational equity and serving rural revitalization. This paper systematically reviewed domestic research literature on “group-based” educational assistance from 2018–2025, summarizing its assistance models from different perspectives. Research indicates that “group-based” educational assistance, through systematic intervention in the educational ecosystem of recipient schools, has achieved significant results, demonstrating outstanding performance in improving student academic achievement, enhancing management efficiency, empowering local teachers, and promoting the self-growth of assisting teachers. It has become an important tool for solving the problem of unbalanced educational development. However, “group-based” educational assistance still faces multiple challenges related to sustainability, cultural adaptability, team effectiveness, and evaluation mechanisms. In the next stage, how to promote “group-based” educational assistance from individual “successful practices” towards “long-term mechanisms” and “large-scale driving” is the core issue. To this end, it calls for collaboration between academia and practice to deepen theoretical foundations, innovate assistance paths, and improve evaluation systems, providing practical samples for achieving sound educational governance.

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