

Exploring the Connections between Middle Leadership and Staff Learning in Chinese Rural Schools

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Abstract: *With the widespread use of distributed leadership, middle leaders have taken over some of the formal authority of headmasters and educational leaders to work to improve school instructional outcomes, focusing on the establishment and development of professional learning communities (PLCs) for teachers. In the Chinese context, middle leaders developed from teachers guide and support teachers' professional learning through teacher learning organizations and provide policy and resource support for teacher community development. In rural schools in China, however, both school leaders and middle leaders face difficulties in the shortage of teachers and material resources. This paper will explore the link between middle leaders and teachers and analyze the dilemmas facing teacher professional learning in rural China, the situation and roles of schools and middle leaders, and possible ways to overcome these challenges.*

Keywords: *Middle leader, rural school, professional learning community*

1. Introduction

1.1. Background of Chinese Middle Leadership and Teacher Learning

Shanghai, as a Chinese city that has ranked first in PISA for three times, can represent the highest level of educational outcomes in China^{[18][23]}. Due to its efficient economic development level and modernization process, Shanghai has the policy support and economic and cultural foundation that give priority to practical reform and can invest more high-quality and abundant resources in teacher training, school reform and development. However, due to different geographical and economic development conditions, regional differences and disparities in China's education level are quite obvious^[17]. This gap is directly reflected in the students' transcripts, and also implies that the distribution of teacher resources is uneven, and school leaders have different levels of investment in teacher training.

In fact, after learning and borrowing the TRG model from the Soviet Union in the 1950s, almost all schools in China have recognized and used this method to support teacher learning. It is seen as the root of the teaching research system in which teacher learning and professional development activities in China are gradually normalized and become daily practices closely linked to teaching work.

At the same time, China's education department has also established a teacher evaluation system, and teachers with excellent teaching skills are called backbone teachers. These teachers enjoy preferential treatment in terms of salary level and position level, and also need to assume the responsibility of guiding and helping other teachers^[25]. Although principals have important responsibilities in guiding school culture and investing in teacher development, the role of middle leaders should not be ignored. In TRG, middle leaders, such as backbone teachers, play the role of parents and provide support for new teachers, which is considered to be conducive to the capacity building of ordinary teachers. Due to the centrality of the Chinese education system and the top-down hierarchy of the school structure, one of the main responsibilities of the middle leaders in the school is to communicate with the senior education leaders and the teacher group. They communicate decisions and goals downward, and clarify basic situations and recommendations upward. Middle leaders in Chinese schools are usually responsible for the following school organizations: Trade Union, Women's Federation, Office for Teaching Affairs, Office for Teaching Research, Grade Groups and Teaching Research Groups^[24].

In China, where TRG is dominant, educationally developed regions such as Shanghai have the same

teacher professional learning community and similar middle leadership model as other regions, and the gap in educational outcomes cannot be ignored.

1.2. Rationale

Successful educational leadership should incorporate richer roles and voices^[13]. In recent years, with the reform of school education, middle leadership has been paid more and more attention, which has a positive impact on school development and teacher learning^[8]. However, in fact, many research on teacher professional learning still focus on the perspective of principals and senior leaders, ignoring the important role played by middle leaders in the process of directly organizing, leading and participating in teacher professional learning. In addition, although there are many studies on middle leaders' influence on educational outcomes and school development in the Chinese context, these studies and data information are usually difficult to be understood and referenced by international researchers due to language limitations^[24]. At the same time, many literatures only focus on the study of a certain subject, such as middle leaders or teachers, while ignoring the connection between the two^[25].

Due to the huge differences in the level of economic development and resource allocation between different regions in China, the problems faced by school education practice may be different. In some rural areas, education funding and financial support are insufficient, and the government and schools are unable to provide long-term professional learning and development opportunities, resulting in a large loss of outstanding teacher leaders and teachers^[14]. The contrast between rural areas and developed cities shows that even under the same PLC model, different resource inputs and leadership may lead to different results^[29]. As front-line participants and influencing factors of teaching outcomes, how teachers and teacher leaders achieve effective professional development and educational leadership with limited resources needs to be considered and studied in order to promote rural education development.

1.3. Research Aim

The paper aims to explore the relationship between middle leaders and teacher learners in schools of rural China. The discussion will focus primarily on the building and development of professional learning communities, observing the connections between leaders and learners.

1.4. Research Questions

This paper has three research questions. The first question is “What are the roles of teachers as middle leaders and learners?”, which will explore how different roles of teachers relate to and influence each other. The second question is “What are challenges for schools and middle leaders in rural China to promote PLC?”. It will discuss the difficulties and obstacles faced by the development of PLC in the context of rural China. “How can middle leaders and TRG help developing staff learning in schools of rural China?” is the last question and it aims to analyse ways to promote the effective practice of PLC in rural China.

1.5. Structure

There are three main chapters in the remainder of this paper. The first part is literature review, where concepts such as middle leader and PLC will be defined, and characters of middle leaders and teacher learners will be explained. Various views of different researchers will be introduced and analysed in this section. The following chapter is the discussion of the three research questions, from which the main idea of this paper will be explained. Last but not least, the chapter of conclusion is combined with summary, limitation and recommendations for further study.

2. Literature Review

In this section, the concepts of middle leadership will first be discussed, and PLC as a common activity area between middle leaders and teachers will also be introduced and defined. Subsequently, this section will focus on exploring the situation of middle leaders and teacher learners in PLC practice in rural areas of China.

2.1. Definitions of Middle Leadership and PLC

The middle leaders of schools are paid more and more attention because of their promoting significance to the development of schools and teachers. Compared with school leaders who promote school reform through direction guidance and power sharing, middle leaders are in a more micro position^[13]. In this position, middle leaders, with some of the power shared by senior leaders, usually have close contact with other employees in higher and lower positions to ensure the smooth running of the school as an organization^{[3][12]}. Branson concluded that an important role of middle leaders is to be the negotiator between professional teacher practice and high-level educational decision-making and faces challenges from two directions^[3].

For teachers, as the main source of middle leaders, they regard middle leaders as Allies and agents with common interests, through which they can reflect teaching practice and some suggestions to principals and senior leaders^[12]. At the same time, because of their possible status as teacher leaders, middle leaders need to assume responsibility for the professional development of the teacher community and the learning outcomes of students. Therefore, in their research, Hammersley-Fletcher and Kirkham argued that middle leaders are assigned three role responsibilities, namely, collaborator, expert and authority figure^[10]. As collaborators, middle leaders should communicate information and advice honestly and objectively, which helps to foster trust among employees. As experts in the field of teaching and leaders who have received professional leadership training, they need to properly use their professional knowledge and skills to provide support and assistance to different groups. Finally, as the person who is given the authority to lead, they are expected to be able to exert sufficient influence over the staff (teachers)^[3].

If middle leadership is understood as "relational leadership" according to the above theories, it seems that the research will be biased towards the challenge of discourse and power relations^[1]. In this paper, the definition of middle leaders as teachers with formal responsibilities can avoid the deviation of research direction, and it is easy to compare and explore the relationship between middle leaders and teachers. A number of studies in Australia and Singapore hold that middle leaders should assume formal leadership and teaching responsibilities at the same time, which is conducive to promoting teacher professional development and school reform^[16]. The characteristic of formal leadership responsibility helps distinguish middle leadership from teacher leadership^[4].

Middle leaders are supporters, leaders and participants in the professional learning and development of teachers in schools. School as a learning organization, its participants can be students, teachers and even leaders. The teacher-dominated learning community is considered to have a direct impact on the development of school teaching outcomes. Such communities are called professional learning communities (PLCs)^[20]. Bolam et al. summarized five characteristics of PLCs. These are unified values and norms, a clear focus on student learning, teachers' mutual feedback or reflection, practical teaching to reinforce learning outcomes, and teacher collaboration^[2]. They conclude that the collective and ultimate purpose of PLC is to facilitate student learning. In addition, inclusion, trust, and partnership make up the remaining three attributes of the PLC, which Watson believes are contradictory and difficult to achieve^{[25][27]}. However, Stoll proposes that the core of the PLC concept is Community, which enables PLC organizations to give humanistic care to teachers, students and leaders, and provide support and help for the participants' career development and long-term learning^[20]. It can be seen that PLC is an organization that carries out activities based on teaching and learning. In this Learning organization, Senge's five "Learning Disciplines" seem to be equally applicable. Just as the first feature "unified values and norms" mentioned above, Senge's theory also believes that shared vision is an important guarantee for the normal operation and development of PLC. In addition, in response to mutual feedback, Senge also expounded the long-term effects of the mental models of reflection on learning, practice and development. The most important point in Senge's theory, system thinking, enables participants to have a more holistic and clear cognition of the organization, and encourages teacher-learners to make continuous progress in the process of practice^[22].

2.2. Connections Between Middle Leadership and Teacher Learning

As one of the manifestations of the distributed leadership model, middle leaders accept the transfer of the principal's power, but also assume part of the principal's responsibility^[5]. Due to the lack of sufficient time and professional knowledge, principals cannot match the efficiency of middle leaders in teaching leadership and practice. Therefore, middle leadership is an important influence factor on school teaching and learning level, which can be seen from the level of participation of middle leaders

in teacher professional development and classroom practice^[14]. Some studies have pointed out that, compared with principals, middle leaders are more closely connected with teachers, and they can obtain real and time-effective teaching practice information and results from teachers. Meanwhile, teachers can also obtain professional guidance and help from middle leaders for teaching and learning^{[19][26]}.

2.2.1. Characters of Middle Leaders in China

Middle leaders come from the teacher group, that is, the grass-roots positions in the education system. In China's hierarchical educational organization structure, such bottom-up crossing through assessment and selection is generally strict and authoritative, ensuring that the elected middle leaders have sufficient professional skills and leadership ability^[24]. In Chen's study, candidates for middle leaders in schools must meet some basic conditions, such as age, educational background, and work experience as backbone teachers and class teachers^[7]. The elected middle leaders serve as role models for the professional competence of the teacher community and are considered to be the motivators and guides for promoting teacher learning. In recent years, the job descriptions and requirements for middle leaders have become more complex, and in addition to their educational role in the learning community, middle leaders can also hold other positions in the school system. In Chinese schools, middle leadership positions generally include women's federations, teaching affairs offices, grade groups, teaching research groups, etc.^[24]. It should be noted that in addition to the systematic work related to staff well-being, the middle leaders mainly focus on the front-line teaching field, which not only pays attention to the overall teaching reform and development of the school, but also attaches importance to the work and learning of teachers. Therefore, Tang concluded that in China, theoretical analysis and research on middle leaders generally take teaching leadership as the theme and emphasize the cultivation of their teaching leadership^[24].

According to Zhang et al., teaching leadership of middle leaders affects teacher development and provides guidance for curriculum and teaching reform^[29]. With their rich practical experience and professional knowledge, they guide young teachers to carry out teaching practice and professional learning.

Middle leadership whose main purpose is teaching leadership usually requires a close relationship between the leader and the teacher group. While retaining their teacher status, middle leaders often have interpersonal relationships that contradict their job responsibilities because they are given formal authority by the principal to surpass and manage other teachers^[29]. As leaders, they need to rigorously monitor teacher practice and learning processes and outcomes in order to improve teaching standards and provide senior leaders with information that helps them make good decisions. For teachers under supervision, middle leaders in this case no longer seem to be Allies with whom they have a common interest in participating in educational decisions as representatives of the teacher community. Therefore, the diverse work contents and objectives of middle leaders make their work practices challenging. They need to balance demands and aspirations from above and below and align these with the core objective of promoting school outcomes. In order for middle leaders to be able to perform this complex role, the school's resource investment and support for their professional development is essential. According to Jiang's analysis of the development status of teaching and research group leaders in primary schools in China, schools can provide professional development resources focusing on short-term training and additional subsidies for such middle leaders and enhance the actual power of middle leaders by improving the school system and operation mode^[12]. In addition, China's education system is uniformly led by special education departments. As the importance of middle leaders is gradually recognized, government education departments also provide financial and policy support for the training of these professional leaders^[30]. But because middle leaders still focus on teaching leadership, much of the training provided for them is still the same as for teaching leaders such as backbone teachers.

2.2.2. Professional Learning Community for Teacher Learners in Rural China

In the Introduction part, this paper mentions the difference of education level between different regions in China. In fact, this educational inequality has attracted the attention of researchers and policy makers. Liu and Hallinger believe that the reason for the gap in education level is the uneven distribution of resources, which will affect school infrastructure construction, cultural construction and the quality of teaching practice^[16]. In terms of policy formulation and reform, the government is actively mobilizing material and human resources, improving the pay of rural teachers, and encouraging college graduates to teach in rural areas.

In an article by Liu and Hallinger, they argue that policy is considered less influential than school leaders for educational development^[16]. Their research shows that urban school leaders attach importance to teacher professional learning, while rural leaders have lower influence and emphasis on

teaching leadership^[9]. As an important role in promoting the development of school education, teachers should be paid more attention to in rural schools.

In recent years, in the research field with the development of rural teachers as the theme, there have been a lot of discussions on the social status, professional learning and work benefits of rural teachers^[13]. For example, Li and Cui's investigation on the professional development of rural teachers in mountainous areas of southwest China shows that due to their remote location, rural teachers in these places lack communication with the outside world and have few opportunities and plans to improve their teaching ability and professional development^[14]. In addition, although some village teachers come here voluntarily to support education, they also face difficulties in interpersonal communication with local students and teachers, and it is difficult to achieve educational leadership and practical guidance. Sun and Lin conducted a survey and interview in Zhejiang, Hebei and other regions with large populations, and the results showed that rural teachers in these regions bear greater economic pressure and heavy teaching tasks^[20]. Although better teaching leadership and professional development opportunities are available due to regional policies and other reasons, these teachers don't have enough time and money to learn and practice.

The same problem afflicts rural teachers in deeply impoverished areas of Sichuan province. School leaders in these areas believe that a large number of education and training course resources are provided to rural schools according to the policy requirements, without taking into account the actual teaching situation in rural areas, which will only increase the work pressure of teachers and make some teachers start to resist professional learning and training^[13]. Although it is undeniable that successful PLC construction can play an important role in promoting the development of teachers and schools, there are different difficulties in the planning of professional learning and development of rural teachers in practice.

3. Discussion

This section is divided into three parts, respectively discussing the two identities of teachers in PLC, the difficulties of PLC development faced by rural school and middle leaders, and the measures to overcome these difficulties.

3.1. What Are the Roles of Teachers as Middle Leaders and Learners?

In this section, the analysis and discussion will be framed in terms of the two roles that teachers take on in PLC construction and activities, exploring the middle leader and the learner and the links between the two. In the context of this paper, the main responsibility and purpose of the middle leader is to develop teacher leadership.

In this section, the analysis and discussion will be developed in terms of the two roles that teachers take on in PLC construction and activities, exploring the middle leader and the learner and the links between the two. In the context of this paper, the main responsibility and purpose of the middle leader is to develop teacher leadership. According to Hammersley-Fletcher and Kirkham's theory, middle leaders have the following three identities: authority figure, collaborator and expert leader^[10].

As an extension of the authority of headmasters and senior leaders, the emergence of the middle leader signifies the acceptance and application of the distributed leadership model^[6]. In order to achieve successful educational leadership, school leaders expect middle leaders to be able to use their professional pedagogical knowledge and leadership skills to build effective, free, open, and inclusive professional learning communities oriented towards improving the educational outcomes of the school. At the same time, middle leaders need to gather information from instructional practices, such as curriculum scheduling and instructional outcomes, in order to provide advice and support when participating in high-level school decision-making.

As representatives of the teacher community, middle leaders need to act as liaisons between the teacher community and educational leaders. They inform teachers of leaders' decisions and new policies, explain and analyse these decisions, and rationalise and implement them as a means of promoting educational development and reform. On the other hand, they need to pay attention to collecting the problems and suggestions identified by teachers in practice and participate in the high-level educational decision-making process as teachers' representatives, which is conducive to the leaders' understanding of teaching and learning, and the rational release of decisions to help daily teaching and teacher development.

As leaders in the construction and operation of PLCs, middle leaders' professional knowledge, rich experience and leadership skills can be utilised in guiding teachers' professional learning and development. In a professional learning community, the person in charge, i.e. the middle leader, arranges and participates in various learning activities aimed at enhancing teachers' professional competence, such as lesson planning discussions, subject seminars and professional skills training. All these require middle leaders to have good interpersonal communication skills, team organisation skills and professional teaching skills.

In summary, middle leaders, especially successful ones, are professionals who are able to manage a large number of different interpersonal relationships and work tasks with ease. They need to interface with theory makers and practitioners in the education system to motivate and support teachers' professional learning and development within the area of PLCs, which ultimately contributes to the development of teaching and learning outcomes in schools.

In contrast, teachers in general are involved in PLC activities as learners. For the purpose of satisfying self-efficacy and facilitating student learning, teachers gather in the same area to share and ask each other for professional teaching skills and practices. For teachers, the creation of PLCs and the activities within them have made collaboration among colleagues increasingly common, and Hord notes that teachers discussing pedagogical developments and practices in collaborative environments such as PLCs are conducive to more effective student learning outcomes^[11]. In addition, for the teachers themselves, PLCs can provide them with authoritative professional learning resources, such as the sharing of experiences of outstanding teachers and professional training courses, which may be beneficial to their career advancement and future planning.

3.2. What are the Challenges for Schools and Middle Leaders in Rural China to Promote PLC?

The main teacher professional learning and development communities commonly used in Chinese schools are Teaching and Research Groups (TRGs) and Grade Groups (GGs), and in practice, their main activities are discussing curriculum schedules, preparing lessons, holding open lectures, and short-term training. The leaders of these learning communities are usually teachers with honourable titles such as Outstanding Teachers and Backbone Teachers, who are usually able to represent the best teaching abilities of their schools, districts, cities or even provinces. PLCs in China emphasize the sharing of practice methods and outcomes, as well as mutual feedback on teaching and learning. In TRGs, Grade Groups, key teachers or middle leaders provide learners with examples of their teaching, for example, by inviting teacher-learners to sit in on their classroom teaching or to borrow their lesson planning notes. In addition, schools and the government provide financial and policy support to PLCs to ensure the development of teaching and learning outcomes.

However, in parts of rural China where human and material resources are scarce, teachers' professional learning has so far been difficult to have effective support and implement. The previous section refers to a number of surveys conducted by researchers on rural teachers in mountainous areas in the southwest and densely populated areas in the east, which encompassed research questions on rural teachers' professional development, training, and job entitlements^{[15][21][31]}. The results show that most rural teachers lack effective teaching training and opportunities for professional exchange and development, and have heavy workloads, poor economic standards, and low self-efficacy. The PLC model, which is commonly used in urban schools, seems to have difficulties in practice in rural schools.

Through the analysis of the reasons for the challenging development of PLC in rural areas, it is found that it can be discussed from the two perspectives of school leaders (principals) and middle leaders.

First, due to the lack of funding and staff resources, principals often choose to focus their work on activities that seek external resource support in order to maintain the normal operation of the school. The current situation of the continuous loss of rural teachers makes principals pay more attention to the working and living treatment of teachers, hoping to retain teachers by increasing salaries and providing more resources to prevent the imbalance of teachers. At the same time, the material gap between urban and rural areas is obvious, and disadvantaged rural schools can hardly attract elite teachers and professional leaders, which makes principals lose the basic conditions for practicing distributed leadership. The research of Walker and Qian shows that principals of rural schools have difficulty in understanding and practicing these theories and policies when facing teaching and curriculum reform^[28]. In addition, even if theories such as educational leadership and middle leadership are or have been used in everyday educational practices, the effectiveness of these practices will be greatly reduced

without professional guidance and learning. They found that rural principals had less access to high-quality professional leadership training than urban principals.

Second, from the perspective of middle leaders, the resource and cultural environment in rural areas is not conducive to the development of PLC and TRG models. Some teachers with professional higher education may voluntarily travel to rural areas to participate in support education activities. However, due to talent development policies, such teacher leaders often stay in the same district for no more than three or five years, unable to build a stable professional learning and development community for their school. In addition, many rural schools are short of teachers, and teachers may teach multiple subjects at the same time, so it is difficult for middle leaders to coordinate teachers' professional learning needs with practical communication and development needs. The final factor that plagues middle leaders in rural areas is similar to the dilemma faced by principals, namely the lack of regular, high-quality professional leadership training opportunities. Leadership of professional learning communities for teachers like TRG requires middle leaders to have sufficient professional teaching and leadership skills, without which their work will be difficult to carry on.

3.3. How Can Middle Leaders and TRG Help Staff Learning in Schools of Rural China?

Schools in rural areas of China have long suffered from an unbalanced and inadequate distribution of teacher resources. The number of teachers with teaching qualifications is too small, and many teachers are required to take on multiple subjects, which not only shortens the time teachers have to study the curriculum and prepare lessons, but also increases their workload and leads to lower teaching efficiency. The root cause of this undesirable cycle lies in the shortage of teachers, and to solve this problem, middle leaders can make reasonable curriculum planning and division of labour arrangements for teachers of different subjects. Under examination and learning outcome oriented instructional leadership, important subjects and subjects requiring high professional skills, such as languages, mathematics and physics, should enable teachers of the subject to focus on teaching one subject. In contrast, subjects like Physical Education and Music, which are not involved in the assessment of major teaching outcomes, can be assigned fewer teachers to teach multiple classes or grades. This will help reduce the workload of teachers of major subjects, balance the workload of teachers of different subjects, and achieve improved teaching results more efficiently.

In addition, middle leaders, as representatives of the teacher community, have a responsibility to gather information about the difficulties teachers face in practice and their suggestions and aspirations for professional learning and development activities. These suggestions and information on practice can give headmasters and senior education leaders the right direction for their work and decision-making choices. For example, many teachers felt that the large amount of training and professional learning resources provided by the government and school leaders had made their workload heavy and ineffective, and suggested that some of the activities with repetitive themes and low quality could be rationalised. Middle leaders relayed this suggestion to the headteacher and suggested that teachers could be organised into batches according to their learning needs, and that regular training on different topics could be arranged for teachers to attend on an as-needed basis. The implementation of this measure is made possible by the repeated and in-depth involvement of middle leaders in the entire learning community of teachers, which can effectively enhance the efficiency of teachers' work and learning development.

Even in the face of insufficient professional resources and inefficient communication and feedback among teachers, professional learning communities have a significant impact on the learning and development of rural teachers. Organizations such as TRGs have the essence of a learning organization, where participants share the common goal of promoting student learning and development. In this kind of environment of collaborative efforts to reach the same goal, teachers are able to gain enough collective efficacy and self-efficacy to be motivated and have the determination and enthusiasm to practice together to overcome difficulties. In addition, in TRG, even if there is a lack of teachers of the same discipline communicating with each other, teachers of different disciplines are able to share universally applicable pedagogical methods and methods of shaping the classroom climate and learning culture.

4. Reflection and Conclusion

4.1. Limitations

Due to the limited attention paid to middle leadership in rural areas of China, relevant literature, cases and data are limited, which may lead to the lack of universality and practical basis for the conclusions and methods discussed in this paper. In addition, although some of the literature referred to in this paper has investigated and analysed the development of rural teachers in depth and enriched the data and information of research in this field, these articles are usually all in Chinese and are not easy to understand for international researchers. In this paper, the relationship between rural teachers, middle leaders and professional learning communities may not be deeply explored, not only because of the limited cases and data, but also because of the limited time and conditions to obtain rich practical information.

4.2. Conclusion

Overall, this paper discusses the connection between middle leaders and teachers through the common goal of "improving teaching and learning outcomes" and analyses the impact of this relationship on the professional learning development of rural teachers in the Chinese rural context. Firstly, middle leaders and learners, as the two roles or career paths of teachers in PLCs, are both engaged in professional learning activities oriented towards pedagogical development. Middle leaders usually need to have excellent professional teaching skills as a way to provide high-quality guidance and support to PLC participants. As leaders, they also need to have interpersonal communication and planning skills to rationalize the community's day-to-day activities, developmental goals, and to provide effective and rich learning resources and developmental opportunities for the community through communication with teachers, headmasters, and senior leaders. At the same time, middle leaders can be considered as the link and bridge for communication between practitioners and decision makers in the teaching and learning system. Their work can make the decision-making of leaders more in line with the needs of practice and development and can also strengthen the understanding of teachers on decision-making and policy, so as to better integrate it into daily classroom teaching and professional learning activities.

As for teacher learners, professional learning not only helps to improve teaching and learning competencies and contribute to the development of students' and schools' teaching and learning outcomes, but also provides opportunities for experience building and enrichment for their own professional development. In professional learning communities, key and senior teachers act as leaders and are able to rely on their own extensive teaching knowledge and experience to mentor younger teachers. This type of activity is common in Chinese schools and is known as 'old staff leading new staff', where continuity of education is demonstrated.

Opportunities and challenges seem to go hand in hand. For schools in rural China, building teacher professional learning communities, while having a positive effect on school outcomes and reform, is a difficult task in establishing high-quality, stable PLCs in poorly resourced schools. The Chinese government and the Ministry of Education are placing increasing emphasis on rural education, and a great deal of funding and policy is being used to supply rural schools in order to narrow the development gap between urban and rural schools. However, educational development requires more time and takes into account more influencing factors. Stable professional learning communities require adequate levels of learner engagement, solid professional competence of leaders, and abundant, high-quality learning resources and opportunities. Therefore, to develop professional learning for rural teachers, it is important not only to attract good teachers and leaders and reduce the loss of local teachers by increasing salaries and wages, but also to plan learning resources wisely and provide teachers with targeted and effective professional training and learning activities.

4.3. Recommendations

Rural teachers and middle leaders, when faced with problems such as a lack of resources or poor-quality resources, can make suggestions to headmasters and senior leaders through daily records and feedback, so as to promote the development of teachers' professional competence with reasonable and high-quality professional learning resources, thereby improving student learning outcomes. As leaders, both middle leaders and headmasters should pay more attention to teachers' practice teaching and learning, and can provide timely professional guidance and material and spiritual support to groups of

teachers, as well as make feasible decisions conducive to the development and reform of teaching and learning.

Finally, as middle leadership and professional learning communities have received increasing attention from international education researchers, it can be found that, in addition to China, many other developing countries are also facing the difficulties of unequal distribution of educational resources and the inability of middle leadership and professional learning communities to develop efficiently and stably. In-depth research and study of these national and regional cases may help to identify more universal solutions.

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