Teacher Leadership in the Context of Chinese Education

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Teacher Leadership in the Context of Chinese Education

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Abstract

In response to addressing the increasing requirements to enhance the competencies of students and teachers, as well as the quality of schools in the global environment, the need for fostering teacher leadership has been proposed by many scholars and practitioners. School context is regarded as an important influence on the successful development of teacher leadership. While many studies related to teacher leadership have been reported in Western countries, a limited number of studies have been reported within the Chinese educational context. We also observed that among the limited studies, there was a lack of empirical research on how schools provide opportunities for teachers to exhibit teacher leadership attributes within the Chinese context. Therefore, to make up for the lack of empirical research in the context of Chinese education, this study investigated opportunities for teacher leadership development in Chinese schools.

We adopted a mixed methods methodology to analyze the quantitative data from 234 surveys by snowball sampling and analyze the qualitative data from 15 Chinese senior and junior high school teachers’ interviews. The qualitative findings supported and supplemented the quantitative results, thereby substantiating how the opportunities provided by schools to develop and enhance teachers’ skills and competencies, as well as how teachers exhibited their teacher leadership attributes within the school context.

Based on the results of statistical analysis and interview transcript analysis, this study demonstrated how the attributes of perception, influencing, cooperation and knowledge and skills were exhibited in the opportunities provided by schools: developmental focus to improve instructional knowledge and skills; recognition to influence teachers’ perception; autonomy to manipulate teaching in the classroom;
collegiality to function in the teacher community; participation to be involved in important school-level action; open communication to dialogue for integral development; and positive environment to engage in teaching and learning. Support from the school environment is key to teacher leadership development. The findings enriched empirical research in the Chinese school context, thereby meeting the requirements for the theory and practice for the development of teacher leadership, and facilitating schools to implement supportive platforms for teachers to develop the skills and competencies associated with teacher leadership.
Acknowledgement

In the collaborative learning mode, there are four co-authors in our group. The co-authors are listed in alphabetical order according to our last names as follows: Ying Dong, Xiaoying Wang, Qian Yang, and Chudi Zhou. Throughout the process of completing our dissertation, the four co-authors received numerous guidance, assistance, and encouragement from a variety of sources.

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Chapter 1

Introduction

The four co-authors of this study have earned Master’s degrees from Shenyang Normal University. Many of our classmates have entered public schools in China and started their teaching careers, with teaching experience ranging from 4 to 10 years. Although working in different fields of education, we have been exchanging ideas about teaching, students, and education in northeast China. As soon as our former classmates entered the teaching field, they devoted themselves to educational practice, teaching research, as well as professional development because of the examination orientation in the Chinese educational system. Under the pressure from the examination of the socio-historical context of Chinese education, teachers by default become responsible for the interests of schools, parents, and students. In this situation, teachers, as the driving force of educational development, play a significant role in the whole teaching process. However, in the hierarchical structure of schools, teachers have limited power in making decisions outside classrooms, additionally, they rarely have the opportunity to participate in decision-making (Lai et al., 2017). They are viewed as followers, rather than leaders. Under pressures and hierarchy in schools, many teachers feel tired of teaching practice as they gradually have lost motivation and enthusiasm for education (Harris & Muijs, 2005; Katzenmeyer & Moller, 2009). This is the beginning of our teacher leadership research. We hope to help Chinese teachers recognize their core position in education, which we believe is to cultivate teacher leadership and improve teacher professional literacy. We view this as an important next step in the professional development of teachers in China.
Educational Background of Researchers

This research was conducted and completed by four researchers. It was the shared interest in teacher leadership and similar educational background that enabled us to collaborate on this important research endeavor. We inspired and supported each other on the way to research achievement, hoping that our research could promote the development of Chinese teacher leadership. The following paragraphs are the personal education background of each researcher. The researcher’s last name appears in alphabetical order.

**Dong** received her education Master’s degree from Shenyang Normal University. She focused on curriculum design, teaching method, pedagogy for vocational students or undergraduate students who major in Tourism management. Dong found some obvious gaps between the designed curriculum and the tourism industry, which meant the designed curriculum content fell behind industry demands. In addition, Dong considered that the reason for curriculum lagging behind the demands of industry might be teachers, who do not have leader positions, and who lack authority and opportunities to join into curriculum design, as well as the isolation between teachers and industry. After inquiring in depth, Dong discovered that even though some teachers in the college of tourism management were not leaders, they went outside the college to engage in collaborative teaching in other colleges or cooperation in the tourism industry, gaining experiences which contributed to their professional development, and impacted on colleagues and students’ achievement. Dong assumed the teachers in the college of tourism of management would like to participate in college operation, curriculum design and contribute to students’ learning with the insights they accrued in professional knowledge, but they lacked the supportive factors. Giving teachers opportunities to collaborate, empowering teachers’
formal or informal authorities, and promoting teachers participating in college construction are effective for universities’ success and students’ learning. The implication to Dong was that there might be professional barriers and organizational barriers for teachers to extend the obligation outside the classroom, meanwhile cultivating teacher leadership and supporting the day-to-day functioning of teacher leadership functioning might be an effective approach.

Wang lived in a small village in Inner Mongolia Autonomous Region, China, before high school. Education in her hometown is lagging in comparison with other cities. For example, she only started to know and learn English when she was in junior high school. Later, she went to a big city far away from home and chose English as a major during undergraduate study. At that time, her future career plan was to return to her hometown and become a teacher to help more children from backward rural areas like herself. Wang was very interested in pedagogy and physical education during undergraduate study and chose physical education as a graduate major. During the postgraduate research, she had the opportunity to get in touch with a lot of knowledge related to pedagogy, then chose pedagogy when she came to the United States to study for a doctorate.

Wang chose the direction of teacher leadership as a doctoral research project for the following reasons. In the beginning, she saw more than one teacher working together in a classroom and became very interested in teachers’ professional development and teaching skills. She observed four local K-12 schools, where teachers collaborated to design and co-teach in class. Through talking with their administrators, she learned the teachers were respected and recognized for the professional roles they took and the contributions they made. In communication with teachers, they were willing to take the initiative to make educational improvements
for students, practice innovation, and create the school's vision and its future. As classroom teachers, they also have the opportunity to learn more about school decisions. At that time, Wang was impressed by the power of teacher leadership.

Then, fortunately, a professor in the project group was doing a research project, and she successfully applied to follow the professor as a volunteer to do the research together. The experience was very important to her, as it was a key to the investigation during the doctoral study. In doing the project, Wang realized how teachers organize and cooperate with teachers from the whole community to discuss problems and share their own experiences and opinions. Many K-12 classroom teachers, school administrators, and teacher leaders were present in many of the program’s workshops. The collegial relationships have been built through teachers’ discussions, strategies, and sharing materials, including a sense of community with trust. What shocked her most was the organizer, who was just a teacher with no leadership position.

Wang’s initial goal had played a large role in her choice to value and pursue teacher leadership. After a more comprehensive understanding of the specific characteristics of teacher leadership through a literature review, she knew that teacher leadership had been well developed in western countries. These situations have inspired her to explore more about the attributes of teacher leadership in the context of Chinese education. From observing the classroom in the local K-12 school and her project research experience, Wang has developed a strong interest in teacher leadership about all teachers who had leadership positions and without leadership positions.

Yang majored in Foreign Linguistics and Applied Linguistics with a Master’s degree before coming to the USA and joining the doctoral program. During her
graduate study, she worked as a teacher of English reading, simultaneously in two foreign language institutions. In most foreign language institutions in China, listening, speaking, reading and writing are taught separately by different teachers. It was through these two part-time working experiences that Yang had access to different school environments, was on the threshold of the educational field and initiated her teaching journey. In the first school, she had a certain number of chances to teach and practice, getting the guidance of experienced teachers. Although Yang made progress in teaching skills and professional knowledge, the strict teaching plan and hierarchical structure in the school system made her a qualified follower being restricted to a limited space. However, the second school offered her autonomy to adjust the teaching plan, valued her perspectives and encouraged her in positive communication with colleagues and administrators. In this school, Yang realized that she was an active leader in the classroom and a leading participant in collaboration, and that school context played an important role in her positive development. These two learning and teaching experiences inspired her initial thoughts that teachers, as participants in pedagogical practice, should exert their leadership to their teaching activities and to the collaboration and communication with colleagues. When Yang came to the USA for her doctoral study, she was immersed in a collaborative teaching and learning environment. Teachers cooperated with each other in classrooms, and presented open attitudes towards diverse viewpoints. In addition, their abilities to convey knowledge, communicate and collaborate with colleagues, and make reasonable adjustments made them leaders. Given her educational background and working experiences, Yang showed an interest in teacher leadership and regarded this topic as her research orientation.
Zhou majored in English at the undergraduate level. Then she continued her graduate study for a Master’s degree at Shenyang Normal University, focusing on the research field of English teaching. Before completing the Master’s degree, her academic background related to English and education brought her the opportunity to be an English intern teacher in a senior high school. Through this internship experience, she was offered a lot of opportunities to come into contact with various excellent teachers. Simultaneously, Zhou realized how vital the school context was for a novice teacher to grow into a qualified teacher and a leader. In the collaborative and open school environment, she received generous help with learning and practice, which enabled her to perceive that every teacher could be an active participant in the development of students, schools, and the teaching profession. The school provided her with chances to observe classrooms, communicate with experienced teachers and conduct teaching practice under backbone teachers’ instruction (will be discussed in Chapter Two). In addition, what impressed her most was that teachers all communicated, cooperated and shared with each other. Feedback from colleagues could be valued and different voices could be respected in discussions. This intern experience was the start where she regarded teachers as leaders in education. When she came to the USA to pursue her doctorate in education, Zhou experienced different teaching modes in classrooms, deeply realizing that teachers’ collaboration, mutual inspiration, and effective communication could create emerging opportunities for students to make achievements. Among teachers, there was no follower, but a leading and active participant. Therefore, combining the previous internship in Chinese high school with the learning experiences in the USA, Zhou decided to select teacher leadership in Chinese educational context as her research direction.
Why Teacher Leadership Is Important to Chinese Education

Historically, teachers are highly valued in Chinese culture. Under the influence of Confucianism in China, teachers are generally placed in a position of knowledge and ethical authority (Li et al., 2017). Many families attribute their children’s education to teachers, believing that teachers’ qualities and abilities determine the future of their children. However, with the transformation of the overall social environment in China, the traditional educational patterns have been unable to meet the requirements of contemporary parents and society (Xu, 2019). As a response to the transformation of the overall social environment, people have put forward new demands on education. Only when teachers assume the role of new leaders to participate in educational activities can the reform really happen (Du, 2010). When teachers assume this role of leaders, they will actively participate in school development, build positive relationships with colleagues, and assume responsibility for the development of the students (York-Barr & Duke, 2004). Therefore, this study of teacher leadership is of great significance to the development of Chinese education.

In 2011, to meet the new demands of the 21st-century global economy, the Chinese Ministry of Education launched new educational reforms, reinforcing the development of lifelong learners with critical thinking, creativity, innovativeness, and the capacity to solve contemporary problems. Similarly, the United States Department of Education called for global education, so that all students might graduate with global competence (USDOE, 2012). In response, on September 17 of 2018, the Chinese Ministry of Education issued a document to train a group of high-quality, professional and innovative primary and secondary school teachers with deep educational feelings, a solid professional foundation, the courage to innovate in teaching, the ability to educate comprehensively, and the ability to develop lifelong
learning education leaders (Chinese Ministry of Education, 2018). Teachers are certainly a significant force to cultivate global competitive literacy of students, as Darling-Hammond mentioned (2010): “if students are expected to achieve 21st-century learning standards, we can expect no less from their teachers” (p. 207). It is necessary to give equal opportunities to teachers to develop their teaching knowledge and skills, thus building a high-qualified and effective teaching profession, which can allow teachers to serve where they are needed and to meet 21st-century learning needs of students and the needs of school development (Darling-Hammond, 2010). Fullan (1994) asserted that quality development of all teachers should be a precondition of achieving quality learning for all or nearly all students. Teachers conduct daily operations and interactions with vital knowledge, and their perspectives influence decisions from many dimensions (York-Barr & Duke, 2004), such as the teaching process, the students’ learning planning, and even school development. Therefore, teachers should not be passive participants in the teaching process, nor blind followers. Instead, they should exert their own subjective initiative, become the main driving force for the development of education, and regard themselves as the leaders of education.

As the Chinese educational system was comprehensively and deeply reformed after 2011, decentralization has been occurring throughout the country. As the implementers of teaching, teachers should have more power to participate in planning and decision-making, in an effort to influence better teaching practice. Schools, as the place of teaching practice, should facilitate teachers’ autonomy in the teaching process. Teachers in schools are required to undertake a certain responsibility, so that they will be actively involved in the development of teaching and learning. With further reform, China continues to adhere to the improvement of schools and teachers.
Indeed, teacher leadership is widely practiced and advocated in Chinese schools. However, referring to local and international literature, China, as the country with the most extensive education system in the world, still lacks sufficient knowledge on teacher leadership (Jin, 2007; Lou, 2015). Based on this situation, more studies ought to investigate the characteristics of teacher leadership and what can influence the development of teacher leadership in China.

Teacher leadership exists in schools in a variety of formal and informal ways. While teacher leadership has been related to formal leader positions, it is often exhibited by informal leaders and normal teachers without any leadership positions (Harris & Muijs, 2005; Lou, 2015; Zhou & Guo, 2014). This study focused upon teachers with formal leadership positions, ones with informal leadership positions, and those without any leadership positions and the various ways in which they exhibit leadership. In addition, this study aimed to investigate the current status of teacher leadership in Chinese junior-senior high schools, the most significant attributes of teacher leadership embodied by teachers, and the ways that opportunities provided by school context affects the development of teacher leadership.

**Unexpected Difficulties**

In the process of data collection, we encountered unexpected difficulties. In the beginning, we planned to recruit approximately 200 teacher participants from four junior and senior high schools, two from the south of China and the other two from the north. They were expected to complete the survey and up to 45 teachers would have been volunteers to participate in interviews. However, when we began to collect data in the Chinese context, the Xinjiang Cotton event broke out. Suddenly, a large number of Chinese people called for boycotts of US brands, which also influenced our research in the US. In this sensitive period, almost no school principal consented to let
their teachers participate in our research, even though our study was a minimal risk study with non-sensitive questions in both the survey and interview, and we promised to keep participants’ data confidential. Fortunately, it was gratifying that some junior and senior high school teachers we know were interested in the topic and agreed to participate in our research as individuals. In addition, they were glad to distribute the survey to other teachers and colleagues, enabling more teachers to participate in our research. Therefore, in order to make the data collection go on smoothly, we adjusted the collection method in time and adopted the snowball sampling method (Bogdan & Biklen, 1998; Goodman, 1961). In this way, our expected goal of data collection was successfully achieved.

**Contributions to the Study**

Since this was a co-authored study, every researcher has made a contribution to the collaborative research. As soon as we determined the topic of teacher leadership in the Chinese context, we agreed upon the assignments everyone would have to collect and read literature. After several meetings and much communication, discussion, questioning and sharing of feedback, we made decisions on each individual’s tasks based on personal interest and willingness. While Dong and Wang, as one group, focused on the first overarching research question, Zhou and Yang, as the other group, concentrated on the second major research question. We created documents in Google Drive to write Chapter One together, and then began to generate the literature review and method sections according to our own assignments. Dong and Wang wrote the literature about teacher leadership development, and they created the item pool and survey on attributes of Chinese teacher leadership. Zhou and Yang assumed responsibility for the literature about school context influencing teacher
leadership, and they built the item pool and survey on opportunities provided by Chinese school context for teacher leadership.

In the process of data collection and analysis, Zhou and Yang distributed and collected surveys, managed and cleaned the quantitative data, and conducted interviews. At the same time, Wang also sent surveys as a data supplement just in case that Zhou and Yang could not collect the expected amount of data. Dong, as an inspector, surveilled the whole process of the interview and controlled the investigator’ bias so that interviewers could remain objective. In the analysis process, Dong’s group and Zhou’s group separately analyzed the data from two surveys with SPSS and together wrote the findings. In the phase of coding interview transcripts, Zhou and Yang were responsible for coding and creating codebooks, Dong and Wang working as peer debriefing. As a research team, each investigator made significant contributions to this dissertation. During the whole writing process, we worked together and overcame difficulties through collaboration, communication and solidarity.

**Background of the Study**

This section outlines the research context of teacher leadership and China’s educational reforms. Leadership has been a critical factor for school improvement (Harris & Muijs, 2005). Conducting leadership in schools requires the joint efforts of all school stakeholders (Murphy, 2005). Lambert (1998) recognizes leadership in schools as a co-constructed leadership form aiming at school change and improvement. Leadership for school improvement is participatory and collaborative. Hopkins and colleagues (1994) note that a collaborative environment that encourages inclusion, supports professional development, serves mutual support for work, and assists in problem-solving is the feature of successful schools. Besides principals and
administrators, both novice teachers and experienced teachers are supposed to be members of school leadership and collaborate effectively for school improvement (Fullan, 1994; Lambert, 1998; Muijs et al., 2013; Wasley, 1991).

Since the 1980s, many international researchers have studied the transformation of teachers to leadership for school improvement (Leithwood & Jantzi, 2000; Rosenholz, 1989; Sickler, 1988). Ovando (1996) suggests that teachers’ participation in leadership contributed to schools effectively operating and making advances. Transforming teachers to leadership makes the school environment collaborative and interaction collegial, thereby actively improving teachers’ self-efficacy and morale (MacBeath, 1998), which enhances student learning and advances the vision of the school. It is worth noting that teacher leadership development requires schools to decrease the organizational barrier and professional barrier. In organizations, functioning teacher leadership means teachers have appropriate status in the organization and it gives teachers the formal authority to lead (Bole, 1992). Schools need to convert the hierarchical and top-down structure into a form of democratic governance (Katzenmeyer & Moller, 2001). The professional barrier of teacher leadership is caused by the isolation between teachers and impedes teachers’ engagement in teacher leadership activities (Lieberman et al., 2000; Troen & Boles, 1992). Schools creating a professional learning community can solve the professional barrier (Harris & Muijs, 2005).

The international studies of teacher leadership profoundly impact on Chinese researchers. In 2005, Xu and Li (2005) highlighted that teacher leadership development empowered teachers’ authorities, constructing collaborative communities, and professional development, since then researchers have been devoted to teacher leadership research in China. Researchers suppose that teacher
leadership development must pay attention to the collaborative and participatory environment construction, development opportunity creation, professional expertise sharing, and weakening hierarchy structure barriers (Lv, 2010; Nie, 2016; Shi, 2015; Wu & Zhu, 2015). These arguments are consistent with and inherited from a series of educational reforms in China that have arisen to transform teachers’ authority and obligations for student learning and school improvement.

From 1949, when the People’s Republic of China was established, to 1985, China’s education system was characterized by centralized power, that is, the national government unified educational policies and plans. It was followed by implementing from top to bottom through a hierarchical structure. Under this centralized system, the top layer of the education system decided the national curriculum and the other distribution of resources (Zhao, 2007). The duty of teachers was to follow the school leader’s guidance and national standards, while the school leaders strictly obeyed the instructions of the higher-level education authorities. As Miao (2018) asserts, a primary feature of modern school operation in China is a pyramid and hierarchical structure. In order to standardize the education system and order, the Central Committee of the Communist Party of China promulgated two documents in 1963, “The Interim Regulations for Full-Time Secondary Schools (Provisional)” [quanrizhi zhongxue zanxing gongzuo tiaoli (zanxing)] (Central Committee, 1963a) and “The Interim Regulations for Full-Time Primary Schools (Provisional)” [quanrizhi xiaoxue zanxing gongzuo tiaoli (zanxing)] (Central Committee, 1963b). These two documents stipulate teachers’ duty as devoted to teaching students the national uniform curriculum and do not guide teachers to participate in activities outside classroom instruction. Such a uniform operation mode ignores the needs of students in China’s
different regions, and fewer teachers’ autonomy hinders the development of Chinese schools (Miao, 2018; Wang & Lv, 2019).

Since 1985, China’s education authority power has been gradually decentralized and distributed, implementing three levels of authority at the national, local, and school. To keep on the same path with globalization in the 21st century, the Chinese Ministry of Education distributed “The Guidelines of Compulsory Education Curriculum Reform” [jichu jiaoyu kecheng gaige gangyao (shixing)] (Minister of Education, 2001) in the year 2001, which was called the “New Curriculum Reform” or “The Curriculum Reform of 2001” by the public. To commensurate with the development of the world and society, this reform innovatively proposes to cultivate students with “lofty ideals, integrity, knowledge and a strong sense of discipline”, ensuring that students improve in terms of their “moral, intellectual and fitness level as well as in their appreciation of aesthetics” (Yang & Shi, 2018, p. 20-21). The innovative changes overarch the education philosophy, goals, approaches, management, and assessment. Li (2012) argued that the curriculum Reform of 2001 was a systematic reform starting from curriculum and extending to the entire field of education and society, apart from the adjustment of curriculum content. At the national and societal level, it is generally believed that “The Curriculum Reform of 2001” has benefited students’ long-term development of good quality for a changing world (Feng, 2006).

This reform is applied to China’s primary and junior middle schools and transforms teacher’s roles from knowledge conveyors to explorers of instructing students’ learning; from traditional lecturers to students’ assistants; from single-subject teachers to multi-disciplinary-subject teachers; from traditional lecturers to modern teaching methods users; and from focusing on all students to focusing on the
balance between group and individuals (Zhang & Yang, 2003). In addition, it requests
the interaction between teachers and students and teachers’ reflection on their
teaching behavior (Li, 2010). Meanwhile, it supports teachers to participate in setting
up the school-based curriculum based on the needs of students, schools, and locality
under the premise of implementing the national curriculum and the guidance and
supervision of higher authorities (Liu, 2006; Zhan & Xiong, 2009). These changes
empower teachers and school leaders with a certain degree of autonomy and creation
in education activities, thereby excluding simply following orders as the executors of
national policies and guidelines.

Initiating teachers to be both curriculum designers and implementers is a good
start to decrease the organizational barrier and professional barrier and promote
democratization in the education system. Developing teacher leadership theory
corresponds to the trend of reducing bureaucracy and centralization, and keeps in the
same direction with China’s education reforms.

**Statement of Problem and Purpose**

The literature tends to offer a positive picture of the implementation of teacher
leadership and the inevitability of its successful consequences, with some evidence for
positive effects on school improvement, collegial collaboration, teacher development,
student achievement (Frost & Durrant, 2003; York-Barr & Duke, 2004), but most
studies remain theoretical. With this situation, the need is great for empirical research
not only on teacher leadership (Pang & Miao, 2017; Wang et al., 2019; Wenner &
Campbell, 2017; York-Barr & Duke, 2004), but also on how to provide opportunities
in school for promoting and developing teacher leadership (Wang et al., 2014). In
addition, most studies on teacher leadership focused on western countries, ignoring
other educational systems and contexts, which left questions about generalizability (Muijs & Harris, 2003).

In China, the research on teacher leadership started later than western countries and lacked the research background and knowledge of teacher leadership. Existing research mostly focuses on principals and formal teacher leaders in schools, but ignores informal teacher leaders and non-positioned teachers. Harris (2003) believed that teacher leaders not only included formal positions, but also included informal roles of leaders in the school. Lambert (2003) insisted that “all teachers have the right, capability and responsibility to be leaders”, and emphasized an environment that evoked teacher leadership from all school contexts (p. 422). Wang and Zhu (2020) argued that it was necessary to value the research on teacher leadership development of all normal teachers, how to cultivate teacher leaders, and what influenced the development of teacher leadership. They also pointed out the limitation of the research on teacher leadership in the Chinese context and lack of widely accepted definitions (Wang & Zhu, 2020). In addition, Wang and colleagues (2019) revealed that most research on leadership surrounded external assessment, measurement and analysis rather than exploring the influences schools’ quality and context had on teachers’ professional development and the development of their leadership. Therefore, this study used mixed-method design to conduct research on teacher leadership and improve the current research status, which involved the limited knowledge within the Chinese context about: a) the attributes of teacher leadership, and b) how opportunities provided by school context influenced teachers to exert teacher leadership in China.

This study explored the current status of teacher leadership in Chinese junior-senior high schools and constructed attributes of Chinese teacher leadership, thereby
enriching the research on Chinese teacher leadership. In addition, this study addressed the problem of the asynchrony between teacher leadership practice and knowledge in Chinese context. Finally, we explored the influence of school context on the development of teacher leadership, so that the school would provide more opportunities and better context for the development of teacher leadership.

**Research Questions**

Our research was guided by the following questions:

1. What are the attributes of teacher leadership that teachers have within Chinese junior and senior high schools? In what ways do teachers exhibit these attributes of teacher leadership?

2. How do schools provide opportunities for teachers to develop teacher leadership within the Chinese junior and senior high schools’ context? What evidence exists to demonstrate schools’ success in providing such opportunities? What skills and competencies have teachers acquired?

**Significance of the Study**

We emphasized the importance of teacher leadership for all teachers, which is distinguished from previous studies in China that focused on principals and formal teacher leaders. Moreover, the goal for this study was to make a significant contribution to the knowledge of teacher leadership in junior-senior high schools. These teachers may undertake more pressures compared with teachers in other levels in China, because of the exam-oriented focus in Chinese education. In addition, differing from most research that pays more attention on western countries, this study focused upon the Chinese context to address teacher leadership. Finally, while most studies on teacher leadership in China remain in a condition of summarizing previous
studies, this research was an empirical study, which may have significant implications for the future research.
Chapter 2

Literature Review

In the past decades, an important component of school improvement, teacher leadership, has attracted much attention. Barth (2001) has argued that “the most reliable, useful, proximate, and professional help resides under the roof of the schoolhouse with the teaching staff itself” (p. 445). In this view, teachers have developed as the driving force for the improvement and development of schools. Murphy (2005) proposed that teachers widely recognized the role of leaders by describing how the new view of teacher leadership breaks down previous views of leadership built around formal administrative roles because teachers had made great contributions to the improvement and development of schools. In terms of leadership, teacher leaders have always been in the primary position to influence the improvement and development of schools.

In Chinese education, teacher leadership was developed during the educational reforms in the 1980s and early 1990s (Mangin, 2007). Now, the impetus for educational change and improvement is recognized as the role of a teacher leader (Neumerski, 2012), in which teachers collaborate with principals to lead (Little, 1990). This is important to lead teacher study groups and encourage other teachers. Teacher leadership is a process of social influence in which a group can influence others or groups (Yukl, 2012). There are still some questions about how teacher leadership is practiced in junior and senior high schools.

The Conceptualization of Teacher Leadership: Origin and Development

The origin of teacher leadership was divided into three historical stages (Silva et al., 2000). Each development was driven by the events of a particular period. In the
stage of exploring conceptualization, the concept of teacher leadership was gradually clarified and developed.

In the middle to the late 1980s, the first wave emerged to facilitate a school system, the role of teacher leadership was assumed to be organized for department heads, headteachers, and master teachers, “which provided teachers with leadership opportunities, but was focused on the effectiveness and efficiency of the system, rather than on instructional leadership” (Silva et al., 2000, p. 780). Frymier (1987) described that under this concept, teacher leadership had certain limitations. Teacher specialization began to be valued and improved to promote teacher leadership development.

In the 1990s, the concept of teacher leadership was accepted. The second stage of teacher leadership emerged, which was characterized by recognizing limitations and the importance of teachers as teaching leaders. The second wave saw the emergence of positions related to teaching expertise (Hart, 1995). Some scholars stated that teacher leaders could support new teachers and contribute to school teaching through their expertise (Little, 1990; Smylie & Denny, 1990). This stage of teacher leadership development witnessed the pedagogical transition of the role and function of teacher leadership.

However, these roles were largely outside the established school system, which promoted the emergence of the third wave by the late 1990s. The third wave involved teachers being more closely involved in school restructuring. For example, teachers were invited into school leadership teams and encouraged to share responsibility for the development of school capacity and lead change efforts throughout the school (Hart, 1995; Silva et al., 2000). In the third wave, teachers
without formal leadership positions appeared and were integrated in teacher leadership theory.

Supovitz (2018) stated that researchers in the field were also working to refine the nature of teacher leadership to support teacher leadership in fulfilling its role and translating its implementation into productive and continuous educational improvement. With the conceptualization of the three waves, researchers have attempted to identify dimensions of teacher leadership. In the Chinese education context, it is time to find ways to overcome time and space constraints to promote and develop teacher leadership from practice to academic research, which plays an important role in school improvement.

**Current Models and Measurements of Teacher Leadership**

This section mainly focuses on the measurements and models of teacher leadership from the previous literature. There are many ways to measure leadership, but most of them are not designed to measure leadership demonstrated by teachers. For example, the Teacher Leadership School Survey, developed by Katzenmeyer and Moller (2001), has been applied to some studies (e.g., Aliakbari & Sadegh, 2014). The questionnaire was used to assess the teacher leadership of the whole school, which through an informant’s school as a unit (Katzenmeyer & Moller, 2001). This study will draw experience from the existing measurements and models for finding out the framework of teacher leadership suitable for Chinese education.

A variety of measurements and models has been explored focused on teacher leadership. For example, Smylie (1992) analyzed whether teachers are willing to participate in decision-making. This study showed the relationship of teachers and principals had the greatest impact on various decision-making areas (Smylie, 1992). A practical measurement about teacher leadership proposed that the pyramidal model
transfers from an informal to a formal role at four levels (Riel & Becker, 2008). More recently, the framework of teacher leadership has gained certain academic attention and was based on the Teacher Leadership Inventory (TLI), which was designed to investigate teacher leadership, including both formal and informal leadership activities from teachers’ perceptions (Angelle & DeHart, 2010).

Similarly, the current models about teacher leadership in the literature are limited. An earlier model developed by Smylie (1992) addressed a specific area about teacher leadership with the following four factors: “the principal-teacher working relationship; norms influencing working relationships among teachers; teachers’ perceived capacity to contribute to decisions; and teachers’ sense of responsibility and accountability in work with students” (pp. 179-180). Riel and Becker (2008) developed a model of teacher leadership practices, used on general teacher leadership, which includes four levels: “learning from one’s teaching; collaborating and sharing responsibility for student success; participating in geographically diverse communities of practice; and making personal contributions to the teaching profession” (pp. 400-402). The model of teacher leadership with Teacher Leadership Instrument (TLI) explored by Angelle and DeHart (2010) consisted of four factors: “Sharing Expertise; Sharing Leadership; Supra-Practitioner; and Principal Selection” (p. 108).

The measurement and the applicable models existing in the current literature still have some gaps in teacher leadership (Leithwood & Jantzi, 1999; Riel & Becker, 2008), most of which failed to report reliability and effectiveness. While based on the previous measurements and models of teacher leadership, we focus on the Chinese education background to explore the practice of teacher leadership in junior-senior high schools, which could apply to the diverse culture. Meanwhile, this study attempts
to measure leadership attributes of all teachers, and includes important influences of teacher leadership practices.

**The Roles of Teacher Leadership**

The literature review showed the concept of teacher leadership was developed from the Western context. In addition, from the research background of teacher leadership, the cultural differences between China and the west lead to certain differences in context and structure between Chinese and western schools. Among the theoretical frameworks and measurement methods reviewed in the literature, the theoretical framework of teacher leadership proposed in this research will mainly focus on the attributes and characteristics of teacher leadership of all teachers.

Promoting teachers’ professional learning was a teacher leadership role provided by some scholars (e.g., Miao, 2018; Smylie & Denny, 1990; Wang, 2013; York-Barr & Duke, 2004). Some researchers also stated that the enhancement of teaching as a profession was the performance of teacher leadership roles (Bird & Little, 1985; Lieberman et al., 1988), in which mentoring, guidance, and continuing professional development of teachers were considered essential (Sherrill, 1999). Developing the Teachers’ professional learning is of great significance for improving teachers’ knowledge and teaching practices.

Teacher leadership played a role in promoting curriculum development, which many researchers supported (e.g., Keung, 2009; Wang, 2013; York-Barr & Duke, 2004). Teacher leadership roles were identified as curriculum developers, leaders of school improvement teams, who always have a strong connection to the classroom (Harris & Muijs, 2003). The important point to draw from the literature was that teacher leaders were first and foremost expert teachers who spent most of their time in the classroom but took on different leadership roles at other times, following the
principles of formative leadership (Ash & Persall, 2000). Although in Chinese education, curriculum development was further from the Western education context, the role can also promote the development of the school towards a professional learning community (Katzenmeyer & Moller, 2001) and empower teachers to be more involved in decision-making within the school (Gehrke, 1991). Therefore, promoting curriculum development should be included in our framework to explore teacher leadership attributes.

Various studies about management instruction as a teacher leadership role were discussed, which improved the teaching program to provide a positive community atmosphere (Barth, 1999; Muijs & Harris, 2006; York-Barr & Duke, 2004; Zepeda, 2011). Promoting teacher communication was also a role of teacher leadership (Kelley, 2011; Wang, 2013; York-Barr & Duke, 2004), which also was defined as a bridge and an informal way to communicate between principals and teachers (Miao, 2018).

Harris (2002) proposed that teacher leadership played a mediating role, in which teacher leaders were an important source of expertise and information, and they were able to make full use of additional resources and expertise and seek external assistance when necessary. In Chinese education, the role of teacher leadership was more prominent (Miao, 2018). For example, Wang (2013) stated that Chinese teacher leaders played an important role in resolving conflicts between principals and teachers.

Promoting teacher collaboration was also a role of teacher leadership. For example, Harris and Muijs (2003) defined that teacher leaders involved their colleagues collaboratively. Other researchers identified that contributing to establishing a collaborative culture in the school was an important role of teacher
leadership (Lieberman et al., 2000). As Little (2002) pointed out that teacher leadership was also developing collaborative relationships with colleagues to enable new ideas and leadership to spread and impact the school.

In conclusion, through the literature review in combination with our Chinese education background, the six roles of the teacher leadership framework were preliminarily formed. We explore the attributes of teacher leadership in the Chinese context based on the teacher leadership roles of promoting teacher professionalism, curriculum development, management, communication, mediation, and collaboration. Our study also focuses on teacher leadership attributes of all teachers, including teachers with formal or informal positions and teachers without positions, which influences and promotes school development.

**Definitions of Teacher Leadership**

In the literature, there are many varied definitions of teacher leadership. The common characteristics that all scholars agree on is that teacher leadership takes students’ learning achievement and teachers’ professional development as the goal. While various researchers have different foci when defining teacher leadership, such as describing the functions and roles of teacher leadership (Gehrke, 1991; Harris, 2002), or defining the surrounding of teacher leaders such as inside or beyond classrooms (Katzenmeyer & Moller, 2001). In addition, the first priority is that teacher leadership is for educational instruction, rather than bureaucratic structure, which is consistent with the historical development stages of teacher leadership. Defining teacher leadership is indispensable for various research contexts because the conception and definition are fundamental for further studies and practice. Wenner and Campbell (2017) argue that if defining teacher leadership goes against the consistency between research and local action, and stating teacher leadership by citing
the literature on teacher leadership in general view may “lead mismatch between research and practice” (p. 34). Therefore, this study will associate theories with practical situations in China for defining teacher leadership. Some definitions are defined by various scholars from the same lens, and some are based on different lenses. This section will discuss different types of definitions with typical evidence, and give the definition of teacher leadership for this study.

**Definitions of Teacher Leadership in the Literature**

The definitions of teacher leadership that we found in the literature could either be general or specific. Scholars defined teacher leadership by clarifying abilities, duties, or goals in general ways. For instance, Wasley (1991) defines teacher leadership as a generic and school-wide “ability to engage colleagues in experimentation and examination of more powerful instructional practices in the service of more engaged student learning” (p. 170). This definition is innovative and distinct from the traditional leadership approaches, which are mainly focused on classroom-wide and isolate teachers from reaching out school-wide (Harris & Muijs, 2002). In Wasley’s (1991) definition, we consider teacher leadership as a collaborative ability that benefits from collaboration while contributing to the effectiveness of the organization. Fullan (1994) argues that teacher leadership involves “inter-related domains of commitment and knowledge, including commitments of moral purpose and continuous learning and knowledge of teaching and learning, educational contexts, collegiality, and the change process” (p. 246). These two definitions present the abilities or skills that teacher leaders should have as an initial overview of teacher leadership and fit for every situation, which could be the foundation for understanding.
Other scholars narrow the concept of teacher leadership to some detailed focus. For instance, Katzenmeyer and Moller (2001) defines teacher leaders as teachers who lead inside and beyond four walls of a classroom and contribute to the community of teacher learners and teacher leaders, which contributes to educational practice. This definition specifically identifies the working scope of teacher leadership as both inside and outside the classroom. Gehrke (1991) identified the teachers’ expected roles in inclusive leadership areas, which listed by Devaney (1987), as a framework of recognizing teacher leadership skills: continuing to teach and improve one’s own teaching; “organizing and leading reviews of school practice; providing curriculum development knowledge; participating in school-level decision making; leading in-service education and assisting other teachers, and participating in the performance evaluation of teachers” (p. 3). Gehrke (1991) focuses on stating the roles of teacher leadership in specific teaching and leading areas. These two definitions delineate the roles of teacher leadership in various areas or surroundings, which could be helpful for peers to grasp some certain features of teacher leadership, and further explore the concept of teacher leadership.

Either the general definitions or the specific definitions all point to teacher leadership as an effective approach to enhance student achievement. Meanwhile, the static attributes, such as role, duty and skill are identified in definitions. From the origin and development of teacher leadership, we know that the origin of teacher leadership theory is for school improvement in practice. Thus, based on the practical lens, teacher leadership can be a dynamic working process.

**Defining Teacher Leadership in This Study**

Since York-Barr and Duke (2004) conducted an extensive literature review that spanned the years of 1980 to 2004, their research outcomes have been widely
cited. Their definition of teacher leadership is adopted by the Teacher Leadership Exploratory Consortium (2011) for establishing the Teacher Leadership Model Standards. They define teacher leadership as the “process(es) by which teachers, individually or collectively, influence their colleagues, principals, and other members of school communities to improve teaching and learning practices with the aim of increased student learning and achievement” (pp. 287-288). Inspired by York-Barr and Duke’s (2004) definition, in this study, we identify teacher leadership as a dynamic working pathway for achieving educational instruction advancement. The main nature of teacher leadership is to orient teachers’ quality development and students’ learning achievement, but less focusing on the construction of bureaucracy and administration in schools. As a leading mechanism, teacher leadership serves the students’ achievement through the influence and collaboration between colleagues. Meanwhile, teacher leadership should be served by both formal teacher leaders and informal teacher leaders as well as the teachers without any positions. The classification of who should take responsibility for teacher leadership duties will be discussed in a later section.

**Situation of Research on Chinese Teacher Leadership**

The studies of Chinese teacher leadership started in 2005 in China, which is over twenty years later than the international ones. For researchers who focus on Chinese teacher leadership, it is important to quote the classic theories or findings, which were derived from international literature into Chinese education researching, and they do refer to international studies and theories (e.g., Chen & Long, 2012; Du, 2010; Liu & Liu, 2007b; Liu & Luo, 2013; Wu, 2008; Yuan & Peng, 2011; Zhong & Xu, 2011; Zhou, 2009). For instance, Liu and Luo (2013) quote a theory of teacher leadership from a research study in the UK, which is about teachers’ ability to
influence colleagues’ beliefs, actions, and values (Harris, 2003), as evidence to support their statement that exerting individuals’ impact could enhance teacher leadership effectiveness. When introducing different types of definitions of teacher leadership, Tong (2016) quotes the definition of teacher leadership from Katzenmeyer and Moller (2001), which is that teacher leaders ought to lead both within and outside the classroom, as a supportive example in the literature review part. When asserting the role of colleague relationships impacting on teacher leadership, Chen and Long (2009) cite Zinn’s (1997) qualitative study as supportive evidence, which interviewed nine middle school teachers and found that the relationship between teacher leaders and colleagues plays a role in the effectiveness of teacher leadership, to present the importance of collegiality for teacher leadership.

On the one hand, the theoretical research on teacher leadership in China is good at citing classic literature as powerful references, which makes researchers and readers effectively understand teacher leadership theories. On the other hand, it lacks the further differentiating and analysis of the cited theories based on the actual situations in China. Miao (2018) points out that, when scholars quote international ideas of teacher leadership, they should analyze the researchers’ ideas within the specific contexts in detail, rather than blindly transfer into the Chinese educational context. If there is no differentiating and analyzing based on specific background, it may not be considered applicable by readers. While, the international literature cited in the study of Chinese teacher leadership is not recent enough. The teacher leadership literature from Barth (2001), Harris (2005), Murphy (2005), Katzenmeyer and Moller (2001), and York-Barr and Duke (2004), are often cited by different Chinese researchers, however, the development of Chinese teacher leadership research
requests updated ideas and scholars should follow up on latest literature and perspectives.

Applying the theories into practice is attractive for education stakeholders. To inquire about the practice of teacher leadership in schools in China, some Chinese scholars created measuring instruments for evaluating the practical situation of teacher leadership in China (Bing, 2017; Chen, 2018). Bing (2017) reviews the body of literature on teacher leadership and decodes the concept of teacher leadership, finally constructing a five-dimension notion of teacher leadership, including foresightedness, influence, decision-making, managing, and charm. Based on this five-dimension notion, a measurement is constructed for inquiring. She finally finds that teachers in China’s middle schools have the ability to play the role of teacher leadership but are required to be improved. The findings implicate that teachers’ self-identification as being leaders, and the supportive school culture for teacher leadership are necessary to develop teacher leadership. Chen (2018) constructs a model with three dimensions for measuring the practical situation of teacher leadership in China’s middle school, embracing the cognition of teacher leadership, the efficacy of implementing teacher leadership, principals leading style’s impacts on teacher leadership effectiveness. With this model, she sets up a survey to inquire about the strengths and the weaknesses of teacher leadership in practice and further conducts interviews to find out the reasons for this situation. The findings show teachers’ cognition of teacher leadership is lacking, even though teacher leadership praxis happens on the entire school operation process. The detailed performances are that teachers are not clear about the duties of teacher leadership or who should play the role of teacher leadership. In addition, it also implies that the teacher leadership effectiveness is closely related to the principal’s leadership style, and the efficacy of
teacher leadership is the result of the interaction among the principal’s support, colleagues’ collaboration, organizational structure, and school culture. Bing’s (2017) and Chen’s (2018) studies analyze the practical situation of Chinese teacher leadership in detail that are significant for peers to understand and explore Chinese teacher leadership in practice. The evaluating measurements in their studies are valuable for academic research. However, the processes of developing measurement instruments are not described in their studies, which might be vague and not reliable for readers. For the in-depth advancement of academic research on Chinese teacher leadership, detailed descriptions of the research process are essential.

**Classification of Teacher Leaders**

Formal teacher leaders referring to those who have formal positions in schools must effectively exert certain leadership obligations, such as the department chair is to examine the operations and manage the department, grade level coordinators are to organize, implement, supervise and evaluate the school programs in the grade level. Meanwhile, Hunzicker (2018) asserts that both formal position holders and the ones who have no positions in leadership should serve teacher leadership responsibilities. This study recognizes the teachers who have no positions in leadership, nor honor titles, have the potential of teacher leadership. In addition, there are some teachers who do not have formal positions but honorary titles or awards, such as backbone teachers in the US schools. In Chinese culture, it is honorary for some Chinese teachers to be leaders in schools or being awarded some honorary titles (Miao, 2018). Furthermore, teachers’ honor and personal influence informally lead the other colleagues (Whitaker, 1995) which will be discussed in the following. For a clear understanding of teacher leadership, identifying and classifying who should play the role of teacher leadership is essential. Digging from the Chinese research literature,
we conclude two ways for classifying Chinese teacher leaders based on Miao (2018) and Lou (2015): the positions of teacher leaders, and the objects of teacher leaders’ leading. These two ways of classification will be explained in the following subsections.

**Classified by Teacher Leader’s Position**

Classified by teacher leaders’ positions in the schools’ bureaucratic systems, school teachers consist of formal teacher leaders, informal teacher leaders, and teachers without any leadership positions. Formal teacher leaders are teachers who have formal leadership positions in the school’s operation structure, such as department chair, subject leaders. Teacher leaders take formal duties and authority in leadership, contributing to students’ learning and the school’s organizational structure (Miao, 2018). Teachers in one subject research group usually teach the same course or in the same field, and the leaders leading the subject research group are subject leaders. Subject leaders take the subject duties and aim to promote teachers’ sustainable development in the profession, with the final goal of students’ learning achievement.

“In a school, there are always a few teachers who have the respect of every other teacher. This respect may begin because of reputation or stated concern for students, but often blossoms into an interpersonal admiration” (Whitaker, 1995, p. 356). Informal teacher leaders are teachers who have individual impact on students and colleagues or who have honorary titles. In Chinese middle schools, except for electing and identifying informal teacher leaders through daily observation or democratic voting, awarding honorary titles is a common way. Some teachers who have outstanding expertise, remarkable contributions, or excellent teaching capacity are awarded honorary titles, and these honorary titles are informal positions in the
structure’s leadership. Titles such as “backbone teacher” that is proposed by the Chinese Ministry of Education (1962), and “outstanding teacher” (Minister of Education, 2014), are awarded to teachers who perform outstandingly in class instruction and students’ learning achievement, have high pedagogical ethics and the other advantages. These honorary titles are informal teacher leadership positions teaching students in the classroom and positively influencing their colleagues on professional development outside the classroom (Katzenmeyer & Moller, 2001). Informal teacher leadership positions request building relationships and sharing expertise with colleagues in various ways, such as sharing instructional materials and teaching methods, and inviting colleagues to visit their class. In school change or school operation, informal teacher leaders support official commands and have colleagues following.

**Classified by the Leading Objects of Teacher Leaders**

Lou (2015) classifies teacher leaders with leading objects, including classroom teacher leaders, school teacher leaders, and community teacher leaders. She defined classroom teacher leaders as the teachers who lead students inside the classroom. In this way, every classroom teacher is a classroom leader. School leaders lead the classroom teachers around the school level. Community leaders lead the community members, including parents and other members related to students’ learning, they lead the education over the society, instead of being confined to school. There are similar classifications in international studies, such as O’Hair and Reitzug (1997), as well as Brooks and colleagues (2004).

**Teacher Leader Classifications in This Study**

In this study, we classified the teachers who should exert teacher leadership into three categories: formal teacher leaders who have formal leader positions in
schools, informal teacher leaders who do not have formal leader positions but have honorary titles in educational fields, and the teachers without any position nor honor titles.

There are a variety of opportunities for teacher leadership, but generally falling into two strategies. One is to focus on endowing teachers to traditional and formal leading roles and functions at the school level, such as mentor teacher or master teacher. The other is to emphasize community-based approaches that teacher leadership is leadership action and behaviors involving all individuals instead of just leading and administrative roles (Murphy, 2005). The latter one extends the meanings and forms of teacher leadership, believing that all teachers, rather than a certain role or a certain group in schools, have the ability and opportunity to apply teacher leadership (Katzenmeyer & Moller, 2009; Murphy, 2007; Odell, 1997; O’Hair & Reitzug, 1997), because every teacher has capacities to be a leader (Danielson, 2006; Lambert, 2003). Teacher leadership reflects teachers’ roles and functions through establishing relationships, removing barriers, and assembling resources to strive for improving students’ learning and achievements throughout schools (York-Barr & Duke, 2004). In turn, the development of teacher leadership is of great significance to organizational change and development (Fullan, 2001), and it is also an important factor to improve students’ life chances (Crowther et al., 2009). For teachers’ development, teacher leadership is not just concerned with individual development, but also collegial development (Lieberman et al., 2000). Therefore, teacher leadership capacities are significant and necessary for teachers to support the development of profession, colleagues, schools and students. In order to enhance the teacher leadership capacities, scholars have conducted a series of studies and launched a variety of activities and programs throughout the whole world. Opportunities for
teachers to improve their leadership in the school environment has been what scholars are concerned about. Although some studies have managed to show the evidence of the impact of teacher leadership, it is still necessary for researchers to investigate how factors in school contexts provide supportive opportunities for the development of teacher leadership and what unfavourable conditions can be removed in the process of being teacher leaders (Murphy, 2007; Murphy & Louis, 2018).

The Context of School that Influence Teacher Leadership

School is an important place where every educational activity takes place. Wasley (1991) recognized that teacher leadership happened in the school context where teachers worked and lived, and she looked to the organization as the stage upon which the work was accomplished. Therefore, the context of the school is essential to teachers’ successful leadership, despite individual teachers’ dispositions, beliefs and skills influencing their ability to lead (Katzenmeyer & Moller, 2009). School culture, school structure and interpersonal relationships in school are factors that construct the whole context, which could support and hinder the development of teacher leaders. The opportunities for teachers to exert leadership are provided by schools, and in turn, these opportunities reflect the whole developmental environment of teacher leadership. The opportunities exist in conditions and teacher leadership happens in school context. Therefore, these three conditions are significant in the development of teacher leadership (Lieberman & Miller, 2004; Wasley, 1991; York-Barr & Duke, 2004). These conditions could be interrelated, instead of existing separately, which jointly influence the development of teacher leadership (Smylie & Denney, 1990; York-Barr & Duke, 2004).
Culture in Schools

Hart (1994) concluded that the school was a place for teachers to carry out all instructional practice, to shape new work designs and to construct individual roles of teachers, which means that the research of teacher leadership could not be separated from each unique school context. In addition, Wenner and Campbell (2017) argued that the research on teacher leadership should be connected with “school-level factors”, because “schools are nested and constituted in unique contexts” for the development of teacher leadership (p. 164). School culture as one of three condition factors in school context could not be ignored. It is commonly considered as having a significant impact on the success of school improvement (Deal & Peterson, 1998; Fullan, 2001; Griffin, 1995; Talbert & McLaughlin, 1994). In addition, the culture of each school has a direct impact on the willingness of its teachers to assume active leadership roles (Katzenmeyer & Moller, 2009). Similarly, Talbert and McLaughlin (1994) found that schools’ culture and local contexts helped dominate the teachers’ professionalism, commitment, and relationships with others. Therefore, it is necessary to create applicable and appropriate conditions in school culture for a successful recognition and promotion of teacher leaders (Bishop et al., 1997; Harris, 2005).

While school culture and climate could encourage teacher leadership, it also powerfully and often negatively affects development of teacher leadership in schools (Little, 1990; Smylie et al., 2002; Snell & Swanson, 2000; Wilson, 1993). According to Hart (1994), who did research about two middle schools from the same district, the principals’ functions played a crucial role in shaping school culture and values, which could influence opportunities for teachers to promote teacher leadership. She pointed out that faculty were given more opportunities to exchange ideas and construct the role of teacher leaders according to communicative and positive principles (Hart,
1994). However, in schools without principals’ attendance and regular communication, teacher leaders were left to take their responsibility for their own successes and failures. Therefore, principals are significant to school culture, which will influence the development of teacher leadership.

Furthermore, a school’s basic stance on the value of leadership will eventually affect teachers’ participation and engagement in leading acts in the school community (Barth, 2001). Therefore, the school’s attitudes toward the significance of teacher leadership and its dispositions valuing and expecting teachers’ commitment to leadership, will determine how teacher leadership develops (Barth, 2001; Lieberman, 1992). Especially the formal leaders’ values, such as principals and administrators’ values were rooted in schools (Keedy, 1999), which could not be ignored. Otherwise, it is impossible for teacher leadership to emerge in schools (Keedy, 1999; Keedy & Finch, 1994; Murphy & Datnow, 2003). The school culture with values about beliefs, shared interests, shared expectations, and shared purpose would foster teacher leadership (Hart, 1994; Little, 1988; Wasley, 1991). They are also “organizational commitment to empowering teachers for leadership opportunities” (Fessler & Ungaretti, 1994, p. 218).

Moreover, “a school culture that celebrates teacher leadership” (Harrison & Lembeck, 1996, p. 111) is also an important element in supportive factors, in other words, acknowledging teacher leadership is an indispensable element in a supportive culture. “Recognition of leadership and credit for leadership among teachers is a key factor influencing teacher involvement and leadership” (Kahrs, 1996, p. 33). In LeBlanc and Shelton’s study (1997), all of the participants mentioned recognition for their efforts as teacher leaders, which they regarded as respect, gratitude, and
commendation. Therefore, a school culture with respect and recognition has an impact on teachers’ participation in leadership.

**Relationship in Schools**

“Leadership permeates organizations rather than residing in particular people or formal positions of authority” (Smylie et al., 2002, p. 166). In schools, via various aspects of respective work, teachers, administrators, and other faculty members with formal positions all have potential for leadership in their relationships with colleagues, students, and parents (Smylie et al., 2002). Therefore, leadership practice could involve a wide range of organizational participants. A leader could be anyone, despite having no formal leadership position or administrative responsibilities, who inspires others to act in a certain way, and who could be an influential leader in a school (Smylie & Mayrowetz, 2009).

Teacher leaders’ relationships with their teaching colleagues will have a fundamental impact on their teacher leadership in the aspects of professional development, performance, and effectiveness (Smylie & Denny, 1990; York-Barr & Duke, 2004). Building relationships with colleagues and principals was recognized as an element of the effectiveness of teacher leaders (LeBlanc & Shelton, 1997; Silva et al., 2000). Similarly, Harris and Muijs (2005) stated “the process of establishing ways of working among teachers that positively impact upon teaching and learning is of paramount importance” (p. 50).

Although administrative leadership is critical to school improvement, schools are so complex that principals cannot offer all of the leadership required to enhance and maintain improvement over time (Keedy & Finch, 1994). Several years later, Barth (2001) argues that “all teachers have leadership potential”, and “teachers become more active learners in an environment where they are leaders” (p. 445).
Principals strengthen their own capabilities when teachers lead, and schools’ benefit from smarter decisions. This is why extensive teacher leadership in the school context is so vital to all members in the school and for the school’s future development. In other words, it is important for all teachers to get involved. For teachers, leadership provides the opportunity to interact with colleagues and administrators without usual classroom routines, to learn more about the big picture of their schools and education, and to exert creativity and innovation via collaborative and organizational work (Barth, 2001; Smylie & Brownlee-Conyers, 1992; Troen & Boles, 1994). Therefore, the key enabling conditions—support, recognition, and positive feedback from administrators and colleagues—will be necessary for the implementation of effective teacher leadership (Snoek & Volman, 2014).

**Structures in Schools**

Multiple perspectives claim that structure has an impact on teacher leadership. Lieberman (1992) believes work structure is required by teacher leaders. In this kind of structure, teachers who are considered as leaders must be able to conduct experiments, discuss their learning content, and reorganize resources in order to enhance student learning (Lieberman, 1992). To support teacher leadership, an innovative leadership structure must be established (Katzenmeyer & Moller, 2001). In addition, Yarger and Lee (1994) refer to the need for teacher leadership to restructure the school workplace in a coherent manner, and they argued that reorganization helps create a positive atmosphere where teachers are motivated to cooperate and make decisions (Yarger & Lee, 1994). Furthermore, Coyle (1997) points out the development of real teacher leadership can only be facilitated if we break down the existing hierarchy and frame a structure whereby teachers can collaborate with
colleagues and lead in the classroom which is the core of the school. Without such a structure, achieving teacher leadership is incredibly challenging (Copland, 2003).

Promoting the structure of teachers’ daily learning and cooperation, focusing on valuable teaching practice, is more likely to lead to the prosperity of teachers’ leadership. Innovative structures that help deepen opportunities for the development of teacher leadership can provide a richer information network and a stronger communication tool (Hart, 1994). While structure provides excellent opportunities for teacher leadership, what happens within the structure ultimately decides whether the positive potential is fulfilled.

Therefore, these three factors in school context are regarded as significant for teachers to be authentic leaders (Lieberman & Miller, 2004; Wasley, 1991; York-Barr & Duke, 2004). A supportive environment that provides teachers with opportunities for collegial collaboration often leads to increasing teacher efficacy and improving student achievement (Kraft & Papay, 2014). Many scholars believe that teacher leadership exists in informal and natural dynamic processes, and it should be placed in the organizations, additionally, teacher leadership emerges from the school context and the opportunities it provides (Fairman & Mackenzie, 2015; Spillane et al., 2001; Sun et al., 2013).

**Opportunities Provided by Schools for Teacher Leadership**

Although many studies on teacher leadership have been conducted, teacher leadership in the field of theory remains relatively underdeveloped (Wenner & Campbell, 2017). It is still necessary to understand the supportive factors for teacher leadership (Kleine et al., 2018). Studies frequently manifest that “creating leadership roles without providing opportunities to learn how to enact these roles … leads to failure and despair” (Lieberman & Miller, 1999, p. 91). Although opportunities have
attracted many researchers’ attention, in China, how to provide opportunities in school for promoting and developing teacher leadership still puzzles many researchers (Wang et al., 2014). Therefore, what opportunities schools could provide for teachers and how these opportunities influence the development of teacher leadership are worth researching in this study. In the following section, opportunities provided by schools will be categorized into seven dimensions, which will be used as subscales in a survey to measure school context for teacher leadership opportunities (Katzenmeyer & Moller, 2009).

**Opportunity in Developmental Focus.** Developmental Focus means teachers are given the necessary support, instruction, and mentoring, and they are encouraged to assist others in their learning (Katzenmeyer & Moller, 2009). The environment with assistance would provide an opportunity for development of teacher leadership. Teachers, as the direct participants of classroom knowledge and constructors of the culture of schools, “understand the support they need to do their jobs well” (Paulu & Winters, 1998, p. 7).

Therefore, it is necessary for teachers to be given real support for their work, for teacher leadership to become a reality (Lieberman & Miller, 2004; Wasley, 1991). According to Talbert and McLaughlin (1994), teachers who felt supported by their colleagues tended to succeed in their teaching and experience professional growth in their daily work.

**Opportunity in Recognition.** With reciprocal respect and care, teachers are recognized and valued for the roles they play and the contributions they make (Katzenmeyer & Moller, 2009). When it comes to teachers’ distinctive contributions to educational progress, their expert knowledge of teaching and learning would be highly valued (Hart, 1995). Teachers had to promote their skills to gain acceptance
from teachers and principals, which will provide opportunities to build trust and solidarity, make an evaluation of schools, exert resources, manage tasks, and help others in developing skill and confidence (Lieberman et al., 1988; Lieberman & Miller, 2004).

In a healthy school culture, all teachers “respect, acknowledge, and celebrate one another’s expertise and contributions to the organization, the profession, and the achievement of shared goals” (Killion et al., 2016, p. 13). In addition, Gabriel (2005) regarded teachers as critical to students’ academic performance, emphasizing that teachers can have the greatest influence on student achievement only if they recognize their own personal leadership competence.

**Opportunity in Autonomy.** Whether schools endow teachers with opportunities to “take initiative in making improvements and innovations”, and whether schools find resources to support teachers, both reflect whether the school provides opportunities for teachers to develop their autonomy (Katzenmeyer & Moller, 2009, p. 85). Killion and her colleagues (2016) give a definition to autonomy, which is “the prerogative to have control over one’s work” (p. 13). They indicate that administrators empower teachers to “identify, generate, and implement solutions” to issues and accomplish work autonomously and innovatively (p. 13).

In addition, Sentovich’s study indicates teachers presented greater satisfaction once they are provided with sufficient resources and autonomy in their own classes (Sentovich, 2004). She believes teachers take the responsibility of the classroom, curriculum, and instructional duties when autonomy exists. Moreover, teachers are encouraged to develop various pedagogical strategies and build suitable techniques to meet the demand of their students, which improves the opportunity of autonomy in the classroom. Similarly, as LaCoe points out, teachers reported having the greatest
amount of autonomy in the classroom, especially in the field of teaching techniques (LaCoe, 2006). Teachers are direct participants of education whose knowledge involving daily operations and interactions with students is significant, and therefore their perspectives can guide the decision making (York-Barr & Duke, 2004). The school provides a place for teachers to autonomously watch the action, critique the performance, and reflect on what needs to be done next, making teachers have a greater sense of empowerment and feel like a positive participant (Barth, 2001).

**Opportunity in Collegiality.** Collegiality within educators is seen as a critical component of a successful and efficient organization. Teachers’ collegiality is a major indicator of their engagement and professionalism. To decrease isolation and improve professional standards, educators are required to demonstrate strong and positive collegial partnerships in the educational environment. Education researchers and scientists believe that improving school personnel’s capacity to work together as a professional collegial community can lead to effective outcomes and significant school achievement (Barth, 2006; DuFour, 2004; Little et al., 2003). Collegiality in schools, according to many researchers, fosters such a cultural climate by enabling teachers to share their professional expertise and engage in professional research (Hausman & Goldring, 2001; Scribner et al., 1999).

Although the value of strong interpersonal relationships has been recognized, it is still an uncommon practice among educators (Bruffee, 1999; Heider, 2005). The establishment of a collegial community is considered a necessary condition for a successful and effective organization because its members meet on a regular basis to exchange ideas and expertise, as well as to develop a shared understanding of the organization’s goals and strategies for accomplishing them (Katzenmeyer & Moller, 2009; Leonard & Leonard, 2003). Teachers require opportunities to cooperate with
one another in order to provide the biggest possible service to students, make their profession more valuable, and reform school education through maintaining school vitality as well as relevance.

**Opportunity in Participation.** Teachers’ high participation promotes the development of schools and students (Harris & Muijs, 2005). Participation is to ensure that various perspectives are taken into account to provide information and make more effective decisions for management. In the field of education, teachers’ views can be a good source of information for decision-making (York-Barr & Duke, 2004). Teachers’ participation helps them to develop leadership competence, stand up against bureaucratic school education systems, and is tied to school democratization initiatives (Cheng, 2008; Goleman, 2002; Gronn, 2000).

Barth (2001) points out that rather than passively accepting what the school has done to them, teachers can help shape their schools, and therefore their future as educators, by participating in decision-making as leaders. Moreover, Barth (2001) adds that the better the morale of teachers participating in decision-making, the greater their engagement and commitment to achieving school objectives. In other words, each teacher in a school context is a component of the overall institution. When a large number of individuals take the lead, the school is considered to be developing in a good direction.

**Opportunity in Open Communication.** Teachers exchange information on the school’s proper operation in an open manner and are well-informed about what is happening in the workplace, which is easy for teachers to share their opinions and feelings (Katzenmeyer & Moller, 2009). Ishaya and Macaulay (1999) mentioned that the primary features of high-performance teams are regular communication, pre-classified information, clear tasks, continuous interaction, dedication, honoring
promises, and solidarity among members. Regarding leadership as a social process, communication is essential to understand how work within an organization contributes to results and how individual leaders use communication as a tool.

Therefore, communication is not only the dissemination of information, but also the interaction between participants. It can produce different results depending on how it is communicated, under what circumstances, and with which participants. The quality of communication depends not only on principals and teachers, but also on the actual situation and its preconditions.

**Opportunity in Positive Environment.** Working environment is one of the determinants of teachers’ job satisfaction. It also has a great influence on teachers’ performance. In any industry, working conditions can affect employee satisfaction and performance. Employee performance is positively impacted by a good working environment, whereas employee performance is negatively impacted by an improper work atmosphere. In a similar vein, the teaching environment has an impact on the performance of teachers. It represents a critical influence on teacher performance (Crawford et al., 2008). Classroom environment is also included, because it has a major effect on the satisfaction of teachers (Lee et al., 1991).

In 2011, Teacher Leadership Exploratory Consortium illustrates that in order to create a “pipeline” for future teacher leaders, positive environments should be provided in school contexts that motivate teachers to engage in leadership roles, especially for teachers without formal leadership positions (p. 30). The teacher leader is knowledgeable about learning concepts and how to foster a positive environment of collaborative responsibility in the school context. It is beneficial for teachers to develop their teacher leadership by creating “an environment of collegiality, trust, and
respect” that focuses on constant improvement in education (Teacher Leadership Exploratory Consortium, 2011, p. 41).

**Barriers to Teacher Leadership**

Teacher leadership functioned significantly in schooling, but its development also encountered barriers that hindered teachers from joining into administration. Figuring out these barriers helps develop teacher leadership, such as structural barriers, personal barriers, and relational barriers (Almanthari et al., 2020; Campion, 2018; Vongkulluksn et al., 2018). With these barriers, we can learn about teacher leadership’s development and find effective ways to improve teacher leadership.

Harris and Muijs (2005) explained the isolated school’s structure caused by teachers in different groups, making teachers work more individually than collaboratively with colleagues. Teachers should focus on teaching, students’ learning, and professional development as Cooper (1988) said that teachers’ energy was the barrier to develop teacher leadership. Katzenmeyer and Moller (2001) also explained that “in many school cultures, teacher leaders face barriers that are too difficult to handle regardless of the competence, hard work, or persistence of the teacher leader” (pp.125-126).

The relationship between principals and teacher leaders promoted teacher leadership more effectively. For example, Little (2002) found that power is an important factor affecting teacher leadership development. Harris (2003) and York-Barr and Duke (2004) stated whether the top administrators cede power to teacher leaders, which brought challenges for the role development of teacher leadership. The relationship of trust and cooperation also faced significant challenges between administrators and teachers (Katzenmeyer & Moller, 2001; Lieberman & Miller, 2005).
The following studies provide several barriers to developing teacher leadership (Coyle, 1997; Harris & Muijs, 2005; Smylie & Denny, 1990; Wesley, 1991). In Chinese education, relationship barriers are also probably the most common and the most difficult to overcome. A survey of 756 teachers in secondary schools in China, which Hu and Gu (2012) conducted, showed that Chinese teachers had limited influence on decision-making about school affairs. The great challenge of relationships existed among teachers, principals, and leaders in China.

**Effects of Teacher Leadership**

The empirical evidence suggested that the effects of teacher leadership were relatively rich. The impact of teacher leadership was universal, such as effects on leaders, effects on colleagues, effects on students (Fang, 2021; Sebastian et al., 2017; Wenner & Campbell, 2017). Teacher leadership also influenced teachers themselves, student learning, and school improvement (Berry et al., 2010).

With the effects on leaders, Barth (2001) believed that leadership and decision-making processes provided teachers with the best learning opportunities. The leadership role offers more access to the practices and more opportunities to observe and interact with other teachers (Ovando, 1996; Smylie, 1994). In other words, leaders played an important role in promoting educational reform. As Pang and Miao (2017) stated, “It is highly recognized that teacher leaders are ones who are expected to be the key players to bring about successful educational transformation in terms of innovative ideas and practices” (p. 95).

Wasley (1991) explored a case study about three teacher leaders who exposed the strain, opposition, and offense in connections with colleagues. These teacher leaders were influenced outside the department and satisfied with the influence of the department head on school policy and teacher practice. Ryan (1999) said that teacher
leadership had a high perceived impact on the performance of colleagues’ teaching. Fang (2021) also believed teacher leadership, which improved colleagues’ sense of superiority and pride, strengthened colleagues’ sense of belonging and willingness to promote school development in China.

The current review identified a group of correlational studies (e.g., Sebastian et al., 2017; Supovitz et al., 2010) about the indirect effects of teacher leadership and student. Barth (2001) discussed the importance of teacher leadership for students as “in schools with excellent performance... Decision-making and leadership are markedly more democratic... the more students believe in, practice, and maintain our form of democratic governance” (p. 444).

To sum up, teacher leadership had effects in diverse educational contexts, including leaders, colleagues, and students. In Chinese education, improving teacher leadership took a crucial role in smoothly enhancing the student’s achievements and school development. Therefore, it was urgent to develop teacher leadership to achieve educational reform in the Chinese education context (Pang & Miao, 2017).

Summary of the Chapter

It can be concluded that the status and role of teacher leaders should not be ignored. Teacher leaders have the attribute of independent action. They created learning together with all teachers, which tried to provide for better teaching practice. Teacher leadership was a collection of practices that, as guidance, served for leaders to accomplish the achievements or “to get extraordinary things done” (Kouzes & Posner, 1995, p. 9).

The lack of a clear definition and framework of teacher leadership hinders its development. Schools as important places where every educational activity takes place, provide opportunities to develop teacher leadership. These opportunities exist
in school contexts, which includes school culture, school structure and interpersonal relationships. At the same time, the empirical research on teacher leadership in Chinese schools is still in the primary stage, and the relevant literature is also very limited.
Chapter 3

Methodology

The focus of this chapter is to delineate the research design and the research method. This chapter begins with the research purpose and research questions that are reported in Chapter One. In order to answer the research questions, this study adopted a mixed research method, including both quantitative and qualitative methods. Hereby, two measuring instruments of teacher leadership were developed for quantitative data collection, and interviews of participants were conducted to collect qualitative data for further research. Peer debriefing and expert reviews were adopted for ensuring the trustworthiness of these two measuring instruments. Finally, the process of data collection and analyses are described in detail.

Research Questions

The purpose of this study was to contribute to the improvement of Chinese teacher leadership in China and hereby enrich the research in academia. With this orientation, understanding and grasping the practical situation of teacher leadership in China was imperative. This research was designed to inquire about the practical situation of teacher leadership within the context of Chinese junior and senior high schools, starting from two aspects: the attributes of teacher leadership that teachers have, and the opportunities for developing teacher leadership that schools provide. Based on the findings of the research questions, we discussed the ways of improving China’s teacher leadership. The research questions were as follows:

1. What are the attributes of teacher leadership that teachers have within Chinese junior and senior high schools? In what ways do teachers exhibit these attributes of teacher leadership?
2. How do schools provide opportunities for teachers to develop teacher leadership within the Chinese junior and senior high schools’ context? What evidence exists to demonstrate schools’ success in providing such opportunities? What skills and competencies have teachers acquired?

These two research questions focused upon different aspects of Chinese teacher leadership in praxis, but they are interconnected. Appropriate opportunities for exerting teacher leadership can make up for the shortcomings of the current situation, and the status quo of teacher leadership attributes that are possessed by teachers can serve as a reference for the strategies of providing opportunities. The findings of these two research questions jointly contribute to the understanding and the development of teacher leadership in practice.

**Instrument Development**

Beyond the largely theorized status of research on teacher leadership, it is necessary to conduct empirical studies to inquire about the situation of teacher leadership (Kleine et al., 2018; Wenner & Campbell, 2017). Without schools providing opportunities to develop teacher leadership, it is impossible for teachers to enact leadership roles (Lieberman & Miller, 1999; Wang et al., 2014). Based on our research questions, we focused on the status of teacher leadership development in China, and how opportunities provided by schools influenced the development of teacher leadership.

This section aims to present the processes of instrument development for our study. The two instruments discussed in this section were developed to measure the attributes of teacher leadership that teachers have and the opportunities afforded to teachers to practice teacher leadership in the context of Chinese junior and senior high school.
Situation of Chinese Teacher Leadership Attributes Survey

The first instrument is the Situation of Chinese Teacher Leadership Attributes Survey (SCTLAS). Through the review of the literature, seven items were filtered as the core attributes for Chinese teacher leadership (see Appendix A). We also reviewed existing models of teacher leadership to identify additional attributes of Chinese teacher leadership that teachers ought to possess. Based on the literature review and referring to existing measurement models of teacher leadership, we gathered the core items as an item pool (see Appendix B). By analyzing this item pool, we constructed a preliminary attribute-dimensional framework for Situation of Chinese Teacher Leadership Attributes Survey (SCTLAS), the dimensions of SCTLAS are explained as follows. The preliminary SCTLAS embrace 4 dimensions and 19 items.

Dimension 1: In Chinese junior or senior high schools, the teachers’ perspectives should match teacher leadership requirements.

Performance:

· The aim of teachers is to increase students’ learning and students’ achievement.

· The focus of teachers’ work is on their own professional quality and students’ achievement.

· The scope of work is school level, rather than limited to classroom level.

Dimension 2: In Chinese junior or senior high schools, teachers should influence colleagues with their teacher leadership.

Performance:

· The means of teachers participating in professional development is sharing expertise with the teaching community.
· The duty of teachers participating in teacher development is to positively influence colleagues.

Dimension 3: In Chinese junior or senior high schools, teachers should collaborate with colleagues.

Performance:
· Teachers work individually but not alone. Teachers make their own judgments concerning their classroom, and that they are allowed to do this in a private manner with minimal external intrusion.
· Teachers cooperate in equal status with colleagues. Teachers foster good relationships with the other teachers in the school, equality, autonomy, and privacy, teachers share an equal professional status.
· Teachers should assist colleagues who need help voluntarily, share risk and responsibility.

Dimension 4: Within the context of Chinese junior or senior high schools, professional knowledge and skills are essential for teachers’ ability to exhibit teacher leadership.

Performance:
· Teachers know well and also can apply pedagogical knowledge, such as instructional strategies (Crowther, 2002), differentiation strategies (Sherrill, 1999; Yarger & Lee, 1994), curriculum development, and using assessment data to make decisions.
· Teachers know well and also can apply systems knowledge (Crowther, 2002; Katzenmeyer & Moller, 2001), such as resources management, sustaining school improvement, and understanding of the range of stakeholder interest.
Teachers have the skill of communicating (Danielson, 2006; Yarger & Lee, 1994; York-Barr & Duke, 2004), they have an ability to synthesize information, intercommunicate (Garmston & Wellman, 1999), and give productive feedback after communicating (Yarger & Lee, 1994; York-Barr & Duke, 2004).

Teachers possess the interpersonal skills, they have an ability to build strong collaborative relationships (York-Barr & Duke, 2004).

**Opportunity for Teacher Leadership in School Context Survey**

The second instrument is the Opportunity for Teacher Leadership in School Context Survey (OTLSCS, see Appendix E). It is important for teacher leadership development that schools provide opportunities and supportive conditions (Danielson, 2006; Harris & Muijs, 2005; Jin, 2007; Katzenmeyer & Moller, 2009; Lambert, 2003; Lou, 2015; Wang & Zepeda, 2013; York-Barr & Duke, 2004). Danielson (2006) emphasized that a school with supportive conditions could provide opportunities for teachers to take risks, to engage in making decisions, to collaborate and to develop their professional skills. Harris and Muijs (2005) pointed out that building a “professional learning community” would provide opportunities for teacher leadership development (p. 47). For the opportunities for teachers to participate in leading activities, Lambert (2003) mentioned that schools should provide every teacher with opportunities to get involvement, to share vision, to learn to make conversation, to participate in discussions relevant to school matters, and to facilitate skill. In China, Lou (2015) pointed out that stimulating shared vision, converting the traditional roles of principals, building professional community and creating leading culture, could provide a supportive environment and opportunities for teachers to be leaders. Wang and Zepeda (2013) emphasized that a healthy school culture including “positive learning attitude, a wide range of collaboration and trust” could improve the
development of teacher leadership (p. 68). Within the Chinese educational context, referring to the literature and drawing from the instruments about school surveys in Katzenmeyer and Moller’s study in 2009 and Lambert’s study in 2003, the dimensions and items of the preliminary OTLSCS measuring teacher leadership opportunity provided by schools, were generated. This study refers to seven dimensions of Katzenmeyer and Moller (2009), as the subscales, which are the comprehensive reflection of the above opinions. Finally, the preliminary OTLSCS includes 7 dimensions and 42 items.

Dimension 1: Developmental Focus—School environment provides opportunities for teachers to gain new knowledge and skills. Teachers are encouraged to assist others to learn and develop. Teachers are provided with needed assistance and guidance (Katzenmeyer & Moller, 2009).

Dimension 2: Recognition—Teachers are valued for the roles they take and the contributions they make. Mutual recognition, respect and caring exist among teachers (Katzenmeyer & Moller, 2009).

Dimension 3: Autonomy—Teachers are encouraged to make improvements and innovations for students’ development. Barriers are removed and resources are provided to support teachers’ innovative, creative and experimental spirits (Katzenmeyer & Moller, 2009).

Dimension 4: Collegiality—Teachers collaborate on instructional and student-related matters, including discussing strategies, sharing materials, providing advice or observing in other teachers’ classrooms (Katzenmeyer & Moller, 2009).

Dimension 5: Participation—Teachers actively participate in decision-making and promoting ideas on important issues. Teachers also participate in selecting leaders in the school (Katzenmeyer & Moller, 2009).
Dimension 6: Open Communication—Teachers and administrators share and receive opinions, feelings and information relevant to the effective development of students and the school in open, honest ways. Teachers feel informed about what is happening in the school. Teachers do not worry about making mistakes and are not blamed when things go wrong (Katzenmeyer & Moller, 2009).

Dimension 7: Positive Environment—Teachers are generally satisfied with their working environment and regard the school as having effective administrative leadership. Teachers and administrators effectively work in partnership in the interests of students (Katzenmeyer & Moller, 2009).

Content Validity of the Instruments

In the last phase, two instruments, SCTLAS (see Appendix D) and OTLSCS (see Appendix E) had been set up to measure the attributes of Chinese teacher leadership and the opportunities provided for the teacher leadership development in the context of Chinese junior and senior high school. A valid instrument has a positive influence on the research and helps investigators measure what they intend to measure (Davis, 1992; Johnson & Christensen, 2012). Regarding the subjectivity of the development process of these two preliminary instruments, we did the content validity with peer debriefing and expert reviews.

After we developed preliminary surveys, peer debriefing was adopted to inspect the items, definitions and dimensions of each survey. As co-authors, we gathered to discuss the content and to examine if the items matched with the definitions and dimensions. The result of this round of review showed that all peers agreed that the dimension framework and the items of the two measuring instruments adequately represented the research questions and some recommendations for revisions were prompted. The suggestions from all peers were taken into
consideration. Based on the results of this round, two items in SCTLAS were deleted and seven items were removed from the OTLSCS, and the other dimensions and items remained. In order to increase the content validation, we also sent these two surveys with retaining items to two expert reviewers (see Appendix G and Appendix H).

Using Davis’ (1992) content validity method, we selected one principal of a senior high school and one junior high school teacher with over 20 years of experience to be a review panel. In order to make the expert reviewers provide a comprehensive and appropriate review, we offered them the necessary information on the two instruments, including the philosophical and theoretical background of the instruments (Davis, 1992; Waltz et al., 1991). The review panel was asked to check if each item matched with the definition and the dimension, and to use item-rating scales (four-point content relevance scale) to calculate the interrater agreement on the 17-item instrument and the 35-item instrument (Davis, 1992). Then, “the content validity of the items can be estimated”, when the two reviewers’ agreement reached an acceptable level (≥ 0.7) (p. 196). After the calculation, the agreement scores of the instruments were both 0.94 (See Figure 3.1 and Figure 3.2). Based on these results, it was ascertained that the content of the two instruments were valid. Combining the expert reviews, we retained those 16 items in SCTLAS and 33 items in OTLSCS which were rated as 3 or 4. For the items without agreement, not being scored as 3 or 4 by both experts, we had discussions with these two experts, exchanged ideas, made modifications and finally we decided to rephrase the sentence expression. Thereby our final instruments (SCTLAS and OTLSCS) were settled, consisting of 17 items for SCTLAS and 35 items for OTLSCS (See Table 3.1 and Table 3.2).
Figure 3.1

*Score of SCTLAS*

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Interrater Agreement = (0−16)/17=0.94

Figure 3.2

*Score of OTLSCS*

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</tbody>
</table>

Interrater Agreement = (0+33)/35=0.94

Table 3.1

*Situation of Chinese Teacher Leadership Attribute Survey (SCTLAS)*

<table>
<thead>
<tr>
<th>Scales</th>
<th>ID</th>
<th>Question No. &amp; Item Code</th>
<th>Item Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perception</td>
<td>2</td>
<td>Q10.PE2</td>
<td>Teachers are able to focus on their teaching quality including teachers’ professionalization and students’ learning rather than managerial or administrative roles.</td>
</tr>
</tbody>
</table>

Teachers have always been working for students’ learning and students’ achievement.
<table>
<thead>
<tr>
<th></th>
<th>Q11.PE3</th>
<th>Teachers have the ability to work at the school level, such as decision making, problem solving, mentor colleagues, redesign school, instead of regular classroom teaching.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Q12.IN1</td>
<td>Teachers are willing to share expertise with colleagues and participating communities.</td>
</tr>
<tr>
<td>2</td>
<td>Q13.IN2</td>
<td>Teachers are able to help and influence colleagues.</td>
</tr>
<tr>
<td></td>
<td>Q14.CO1</td>
<td>Teachers are able to complete teaching task individually.</td>
</tr>
<tr>
<td>2</td>
<td>Q15.CO2</td>
<td>Teachers agree to foster good relationships with colleagues in the school, in equality, autonomy, and privacy.</td>
</tr>
<tr>
<td>3</td>
<td>Q16.CO3</td>
<td>Teachers agree to share an equal professional status with colleagues.</td>
</tr>
<tr>
<td>4</td>
<td>Q17.CO4</td>
<td>Teachers are willing to assist colleagues who need help voluntarily</td>
</tr>
<tr>
<td>5</td>
<td>Q18.CO5</td>
<td>Teachers are willing to share risk and responsibilities with participating community</td>
</tr>
<tr>
<td></td>
<td>Q19.KS1</td>
<td>Teachers have pedagogical knowledge, such as instructional strategies, differentiation strategies, curriculum development, using assessment data to make decisions.</td>
</tr>
<tr>
<td>2</td>
<td>Q20.KS2</td>
<td>Teachers have the capabilities of applying pedagogical knowledge such as instructional strategies, differentiation strategies, curriculum development, using assessment data to make decisions.</td>
</tr>
<tr>
<td>3</td>
<td>Q21.KS3</td>
<td>Teachers know school system knowledge, such as resources management, sustaining school improvement, understanding of the range of stakeholder interest.</td>
</tr>
<tr>
<td>4</td>
<td>Q22.KS4</td>
<td>Teachers are able to synthesize information.</td>
</tr>
<tr>
<td>5</td>
<td>Q23.KS5</td>
<td>Teachers are able to listen and express clearly.</td>
</tr>
<tr>
<td>6</td>
<td>Q24.KS6</td>
<td>Teachers are able to give productive feedback after communicating.</td>
</tr>
<tr>
<td>7</td>
<td>Q25.KS7</td>
<td>Teachers have an ability to build strong collaborative relationships.</td>
</tr>
</tbody>
</table>
Table 3.2

*Opportunity for Teacher Leadership in School Context Survey (OTLSCS)*

<table>
<thead>
<tr>
<th>Scales</th>
<th>ID</th>
<th>Question No. &amp; Item Code</th>
<th>Item Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developmental Focus</td>
<td>1</td>
<td>Q26.DF1</td>
<td>At my school, administrators and experienced teachers try to help new teachers get process.</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Q27.DF2</td>
<td>If the teachers need assistance and guidance, my school will provide what we need.</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Q28.DF3</td>
<td>At my school, teachers support each other personally and professionally.</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Q29.DF4</td>
<td>At my school, teachers devote themselves to gaining new knowledge and skills.</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Q30.DF5</td>
<td>Teachers share the new gained ideas and strategies with each other.</td>
</tr>
<tr>
<td>Recognition</td>
<td>1</td>
<td>Q31.R1</td>
<td>At my school, administrators have confidence in my professional skills and competence.</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Q32.R2</td>
<td>My professional skills and competence are recognized by other teachers.</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Q33.R3</td>
<td>I feel valued and respected for my ideas and opinions.</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Q34.R4</td>
<td>At my school, we celebrate each other’s development and successes.</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Q35.R5</td>
<td>At my school, administrators have confidence in teachers’ abilities to deal with the problems relevant to teaching practice.</td>
</tr>
<tr>
<td>Autonomy</td>
<td>1</td>
<td>Q36.A1</td>
<td>As a teacher, I am free to make adjustments based on the demands of my students.</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Q37.A2</td>
<td>We could bend the rules if it is necessary for students’ learning.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td><strong>Teachers are encouraged to take initiative to make improvements for students.</strong></td>
<td><strong>Teachers can be innovative, creative and experimental at my school.</strong></td>
<td><strong>Administrators and other teachers are supportive of the changes in my instructional strategies, by removing barriers and providing resources.</strong></td>
<td><strong>At my school, teachers discuss strategies, share materials and give advice.</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Encountering students’ academic and behavior problems, teachers and administrators work together to discuss, analyze and solve these problems.</strong></td>
<td><strong>At my school, I am supported by other teachers to deal with challenges in my classes.</strong></td>
<td><strong>Teachers have a say in the development of school and students.</strong></td>
</tr>
<tr>
<td><strong>At my school, administrators seek my opinions and ideas.</strong></td>
<td><strong>Teachers and administrators make conversations and try to reach consensus before making important decisions.</strong></td>
<td><strong>At my school, teachers discuss strategies, share materials and give advice.</strong></td>
<td><strong>At my school, teachers observe other teachers’ classes.</strong></td>
</tr>
<tr>
<td><strong>At my school, I am supported by other teachers to deal with challenges in my classes.</strong></td>
<td><strong>Teachers have a say in the development of school and students.</strong></td>
<td><strong>At my school, teachers and administrators jointly decide how time is used and how the school is organized.</strong></td>
<td><strong>At my school, teachers participate in mentoring or evaluating new faculty and/or staff.</strong></td>
</tr>
</tbody>
</table>
Open Communication

1. Q51.OC1 Because teachers and administrators share ideas about our work, I stay aware of what is happening.

2. Q52.OC2 At my school everybody talks about their feelings, opinions and concerns, in free, open and honest ways.

3. Q53.OC3 Teachers and administrators openly accept diversity of opinion.

4. Q54.OC4 At my school, when things go wrong, we are not blamed and try not to blame, but find ways to do better the next time.

5. Q55.OC5 Faculty meeting time is used for discussions and problem solving.

Positive Environment

1. Q56.POE1 At my school, teachers are regarded as professionals, respected by administrators, parents and students.

2. Q57.POE2 Teachers at my school look forward to coming to work every day.

3. Q58.POE3 Teachers are satisfied with the working environment.

4. Q59.POE4 At my school, teachers and administrators work in partnership and as a team.

5. Q60.POE5 Teachers are positive to respond to our students’ needs.

Population and Sample

The population of this research is the teachers of Chinese Junior and Senior high schools. All teacher leaders with formal positions and informal positions and teachers without any leadership positions are our target population. Teacher leaders with formal and informal positions include department chair, subject leaders, backbone teachers, outstanding teachers and class masters. Considering the actual situation in China, with a large population and wide range of areas, we had planned to adopt a two-stage cluster sampling in this study (Creswell, 2012; Johnson &
Christensen, 2012). In the first stage, four schools (clusters) would have been randomly selected from junior and senior high schools in China, two schools from the south of China and another two schools from the north of China. In the second stage, we had planned to use stratified random sampling to recruit 200 teachers for the survey. However, as mentioned in section 1.3, there were unexpected difficulties when we recruited schools. The event initiated by some western countries against Xinjiang cotton of China made the relationship between China and the US tense. Therefore, most schools refused to give us permissions to recruit participants in their schools and we only got permissions from two schools.

Therefore, given the difficulties of recruitment, we immediately adjusted the method to access volunteer teachers from junior and senior high schools so that the data could be collected smoothly. Finally, the snowball sampling method was used in this research (Bogdan & Biklen, 1998; Goodman, 1961). The sample was built as a rolling snowball, making “existing study subjects recruit future subjects from among their acquaintances” to gather adequate data (Sharma, 2017, p. 752). We invited teachers we knew who dispersed in different cities in the south and north of China to participate in this research and then let them help us to recruit more teachers from their acquaintances working in junior and senior high schools. At last, there were 268 teachers from over 30 cities of China participating in this research, which exceeded the number we had planned and expected and made us obtain enough data. In addition, 15 teachers as volunteers consented to participate in the interviews.

Data Collection

We conducted concurrent triangulation design, which enabled quantitative and qualitative data collected concurrently (Creswell, 2009). In total, 268 teachers were
recruited to complete a five-point Likert scale with 52 items and 15 volunteers from these 268 teachers were recruited to complete the interview.

**Quantitative phase**

We distributed the survey titled Teacher Leadership in the Context of Chinese Education Survey to participants. Teacher Leadership in the Context of Chinese Education Survey consisted of two parts. Part A is the first instrument—Situation of Chinese Teacher Leadership Attribute Survey (see Appendix D), which tests the current status of the development of teacher leadership attributes in China. Part B is the second instrument of Opportunity for Teacher Leadership in School Context Survey (see Appendix E), which measures the opportunities provided by schools for teacher leadership development. The survey with Part A and Part B is a five-point Likert scale, including 52 items (17 items for four dimensions in SCTLAS, see Appendix D, and 35 items for seven dimensions in OTLSCS, see Appendix E).

We first sent formal invitations and electronic surveys with the recruitment letter (Appendix J) and consent letter (Appendix I) to 22 Chinese junior and senior high schools we knew, who were scattered in 10 cities respectively in the north and south of China. Every participant could select the form of the survey they preferred--survey in Word document sending by email and WeChat or filling in Sojump (Chinese online survey). There were 19 teachers who consented to join the research (both survey and interview) and agreed to distribute surveys to their colleagues and teacher friends. In this way, the surveys were conveyed among teachers like rolling snowballs from one to another. Finally, a sample of 268 teachers from over 30 cities in China was formed. It took us about two months to distribute the survey and collect the survey results.
Data Preparation

After the survey was collected, we input data into the Microsoft Excel (2010) and IBM SPSS (26). We gave every survey a code number and examined the contents of the survey so that there were no significant values missing. Then all values in surveys were entered into Excel. Because the survey came from two different forms--Word document and Sojump online survey, in order to avoid mistakes when we input data, two investigators worked together and inspected the process all the time. During this process, we gave the pseudonym to each participant. Coming to demographic variables, we gave them a numeric code (e.g., male=1, female=2; with formal and informal positions=1, without any positions=2; 1-5 years of working=1, 6-10 years of working=2, 11-15 years of working=3, 16-20 years of working=4, over 20 years of working=5). For the questions, we gave them item code as shown in Table 3.1 and 3.2, and then scores of questions were typed into Excel. After correcting and cleaning the data, the data from 234 teachers were retained and then were all transferred from Excel to SPSS.

Qualitative phase

In the qualitative phase of our study, interviews were conducted to collect data. Twenty-four volunteers from 268 survey respondents were recruited to participate in the qualitative interview. Taking a deeper look at the research, we finally interviewed 15 volunteers (including 10 teachers we knew). The 15 volunteers were purposefully selected based on their demographic information and their academic disciplines. We tried to keep the diversity of the interviewees according to gender, position title, years of teaching experience and the discipline. Eight main questions attached in Appendix F were asked in the interviews, which were developed from the literature. These questions reflected how these teachers were experiencing
these opportunities in school context and how these opportunities influenced them to become teacher leaders. We interviewed these teachers through WeChat and VooV Meeting. Each interview lasted about half an hour, which was flexible to allow us to explore questions in depth. The whole interview process was conducted privately with no interruptions. Every participant was assured that their personal information would not appear in the reporting of their responses and we would keep the data confidential. After getting permission, we recorded the interview content, which helped us concentrate on the teacher’s responses. Every participant answered the same questions. After interviews, we transcribed video and audio recordings on the website of IFLYREC (www.iflyrec.com). Our qualitative analysis was based on these 15 interview transcripts. The whole interview process was conducted concurrently with the qualitative data collection.

**Data Analysis**

Data analysis consisted of two phases—quantitative analysis and qualitative analysis. In the quantitative phase, we used descriptive statistical analysis to sort and analyze data. In qualitative analysis, we adopted triangulation investigators to code the interview transcripts with two cycles.

**Quantitative phase**

We exported the survey results into Microsoft Excel. Then, we used SPSS to analyze the data. Descriptive statistical analysis was adapted to examine the data collected from the responders. With descriptive statistical analysis, we respectively analyzed the overall situation of Situation of Chinese Teacher Leadership Attribute Survey (SCTLAS, see Appendix D) and Opportunity for Teacher Leadership in School Context Survey (OTLSCS, see Appendix E). According to descriptive statistical analysis of demographic variables, the items and dimensions in these two
surveys, a clearer situation of Chinese teacher leadership and of opportunities for teacher leadership in school context was presented.

**Qualitative phase**

In this phase, investigators read the transcripts and highlighted key statements from interviews. Firstly, two investigators conducted open coding individually. “Initial Coding” was used in this cycle through which researchers deeply examined the data and found the similarities and differences among them (Saldana, 2021, p. 148; Strauss & Corbin, 1988). Then we gathered to discuss and examine the codes with each other to modify and retain the initial codes. In the second cycle, “Axial coding” was adopted to reorganize the data to see which codes were dominant and which were less important (Boeije, 2010; Saldana, 2021, p. 308). “Synonyms are crossed out, redundant codes are removed and the best representative codes are selected” (Boeije, 2010, p. 109). The qualitative data reflected how these teachers were experiencing these opportunities in school context and how these opportunities influenced them to become teacher leaders.

Through quantitative and qualitative analysis, we could have comprehensive understandings and concepts of teacher leadership in China. The research design helped us to answer the research questions:

1. What are the attributes of teacher leadership that teachers have within Chinese junior and senior high schools? In what ways do teachers exhibit these attributes of teacher leadership?

2. How do schools provide opportunities for teachers to develop teacher leadership within the Chinese junior and senior high schools’ context? What evidence exists to demonstrate schools’ success in providing such opportunities? What skills and competencies have teachers acquired?
Reliability

Reliability is another important element when measuring with instruments. Reliability could be used to judge the “consistency or stability” of the measurement score (Johnson & Christensen, 2012, p. 137), which is necessary because it is the precondition of validity (Nunnally & Bernstein, 1994). There are several approaches to measuring reliability such as test-retest, equivalent forms, internal consistency and interscorer (Johnson & Christensen, 2012). The popular measure of internal consistency reliability is Cronbach’s alpha and the widely accepted rule of alpha value should be at equal or more than .70 (Johnson & Christensen, 2012; Nunnally, 1978; Peterson, 1994).

In this study, Cronbach’s alpha measurements were performed based on the dimensions of SCTLAS and OTLSCS (see Table 3.3). The results show that all dimensions in surveys have good reliability values, ranging from .701 to .928. In addition, the overall alpha value of SCTLAS is .953 and OTLSCS’ alpha value is .979 (see Table 3.4). According to these alpha results, it is concluded that the two instruments have a good reliability.
Table 3.3

Reliability for dimensions of Situation of Chinese Teacher Leadership Attribute Survey and Opportunity for Teacher Leadership in School Context Survey

<table>
<thead>
<tr>
<th>Dimension</th>
<th>N</th>
<th>Cronbach’s α</th>
<th>N of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perception</td>
<td>234</td>
<td>.701</td>
<td>3</td>
</tr>
<tr>
<td>Influencing</td>
<td>234</td>
<td>.903</td>
<td>2</td>
</tr>
<tr>
<td>Cooperation</td>
<td>234</td>
<td>.892</td>
<td>5</td>
</tr>
<tr>
<td>Knowledge and skills</td>
<td>234</td>
<td>.928</td>
<td>7</td>
</tr>
<tr>
<td>Developmental Focus</td>
<td>234</td>
<td>.911</td>
<td>5</td>
</tr>
<tr>
<td>Recognition</td>
<td>234</td>
<td>.919</td>
<td>5</td>
</tr>
<tr>
<td>Autonomy</td>
<td>234</td>
<td>.893</td>
<td>5</td>
</tr>
<tr>
<td>Collegiality</td>
<td>234</td>
<td>.919</td>
<td>5</td>
</tr>
<tr>
<td>Participation</td>
<td>234</td>
<td>.927</td>
<td>5</td>
</tr>
<tr>
<td>Open Communication</td>
<td>234</td>
<td>.931</td>
<td>5</td>
</tr>
<tr>
<td>Positive Environment</td>
<td>234</td>
<td>.904</td>
<td>5</td>
</tr>
</tbody>
</table>

Table 3.4

Reliability for Situation of Chinese Teacher Leadership Attribute Survey and Opportunity for Teacher Leadership in School Context Survey

<table>
<thead>
<tr>
<th>Survey</th>
<th>N</th>
<th>Cronbach’s α</th>
<th>N of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCTLAS</td>
<td>234</td>
<td>.953</td>
<td>17</td>
</tr>
<tr>
<td>OTLSCS</td>
<td>234</td>
<td>.979</td>
<td>35</td>
</tr>
</tbody>
</table>

Validity and Trustworthiness of the Research Design

In order to increase the validity and trustworthiness, investigators managed to adopt several approaches in sample selection, data collection and analysis. Under the situation that cluster sampling failed to be adopted, snowball sampling with diverse
geographies and wide range of demographics certified the sufficiency of data and diversity. In the survey development process, expert reviews also increased the content validity of the instruments. In addition, this research adopted investigator triangulation and peer debriefing to promote the trustworthiness in the qualitative process (Creswell, 2009; Johnson & Christensen, 2012; Lincoln & Guba, 1986). Investigators conducted interviews together and inspected each other to control the personal biases. In the coding process, the “cross-check codes” were used by researchers so that they could compare the results that were coded individually (Creswell, 2009).

Our survey and interview questions were initiated in English. Therefore, it is significant for investigators to present the correct contents in Chinese to the participants, which would determine the success of the research. In order to alleviate errors from the translation of surveys, and interviewing questions and contents, investigators managed to hold the principle of accuracy, striving for adopting accurate and equivalent terms to conduct translation. When it involved issues of linguistic structure and frame between English and Chinese, we tended to use acceptable, understandable and equivalent language to present the survey, interview questions and interview contents. In addition, the whole translation process was under the inspection from two investigators, thus ensuring the accuracy and understandability of contents. Then we adopted “external audit” to send both English and Chinese versions to a principal in a senior high school and a professor in a university, who were both with English educational background, to check the contents of our translation (Johnson & Christensen, 2012, p. 273). Based on their feedback, we made discussions and adjusted translation, thereby making the greatest efforts to keep the translation accurate.
Moreover, this study used quantitative and qualitative methods to supplement each other. The quantitative research presented the status of teacher leadership attributes and opportunities for teacher leadership in Chinese junior and senior high schools. Then, the in-depth interviews helped us understand how teachers experience opportunities in school and how teacher leadership attributes get influenced in school context. This mixed method helped our research build validity by minimizing the weakness of a single quantitative or qualitative method (Johnson & Christensen, 2012).

**Summary of the Chapter**

This chapter is about the methodology, reporting our research design and the results of reliability. The concurrent triangulation design, the mixed methods, was adopted in this research. Quantitative data collection and qualitative data collection proceeded concurrently. In addition, this chapter reports how we created the preliminary instruments, how the content validity of the two instruments was measured to settle the final versions, data collection, data analysis and the reliability results of the instruments.

The instruments have been examined by expert reviewers and the sample built by the data from 234 junior and senior high school teachers from China. These instruments may not be perfect, but they have been modified and adapted by investigators who manage to make the instruments appropriate for the research on teacher leadership in Chinese school context. In the next chapter, the further analysis and findings are presented, which comprehensively answers the research questions and tells the story of teacher leadership in the Chinese school context.
Chapter 4
Quantitative Analysis and Findings

This chapter is divided into three parts to present quantitative research results. The first part shows the demographic information of the 234 respondents after cleaning and analyzing the quantitative data. The second and third part, respectively, describe the findings of the descriptive data for the Situation of Chinese Teacher Leadership Attributes Survey (SCTLAS) and the Opportunity for Teacher Leadership in School Context Survey (OTLSCS).

Background Characteristics of Respondents

When classifying the teachers who should play teacher leadership roles in Chapter Two, three categories were set up: 1) formal teacher leaders who have formal leadership positions in schools, 2) informal teacher leaders who do not have formal leadership positions, but have honorary titles in educational fields, and 3) the teachers without any positions nor honorary titles. When exploring the current situation of Chinese teachers’ positions, we found that in addition to informal teacher leaders who have honorary titles but no formal positions, some teachers have both formal and informal leader positions (e.g., subject leaders have the award of “backbone teachers”). For the research on teacher leadership of all teachers, including formal teacher leaders, informal teacher leaders, and normal teachers, we decided to put the first two categories together as one option when doing the survey. Hereby, there are two options in Survey Question 8 relevant to the position of teachers in Chinese junior and senior high schools: 1) teachers with formal or informal positions (e.g., department chair, subject leaders, backbone teachers, outstanding teachers) are set to numeric code 1, and 2) teachers without any positions are set to numeric code 2. This part is descriptive statistics on the background characteristics of the respondents.
(including gender, teaching years, and position). The tables below present the descriptive statistics of teachers’ gender, position, and number of years of teaching experience.

From the perspective of gender, there are 38 male respondents and 196 female respondents. Table 4.1 shows the frequency and percentage of respondents’ leading positions by gender. Among the 38 male respondents, there are more teachers with formal or informal positions (n=23, %=60.5) than teachers without any positions (n=15, %=39.5). Among the 196 female respondents, there are fewer teachers with formal or informal positions (n=59, %=30.1) than teachers without any positions (n=137, %=69.9).

Table 4.1
Descriptive Statistics of Gender and Position for the Background Characteristics of Respondents

<table>
<thead>
<tr>
<th>Gender</th>
<th>Teachers with formal or informal positions</th>
<th>Teachers without any position</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Male</td>
<td>23</td>
<td>60.5</td>
</tr>
<tr>
<td>Female</td>
<td>59</td>
<td>30.1</td>
</tr>
<tr>
<td>Total</td>
<td>82</td>
<td>35.0</td>
</tr>
</tbody>
</table>

In the survey, Question 7 (Years of Teaching) were set options with three layers, including one to five years, six to ten years, and over ten years. Table 4.2 shows the frequency and percentage of respondents’ teaching experience by gender. From the perspective of gender, there are more male respondents who have worked six to ten years (n=17, %=44.7) than the others who have worked one to five years (n=15, %=39.5) or over ten years (n=6, %=15.8). There are more female respondents who have taught one to five years (n=113, %=57.6) than the others who have taught
six to ten years (n=56, %=28.6) or over ten years (n=27, %=13.8).

**Table 4.2**

*Descriptive Statistics of Gender and Teaching Years for the Background Characteristics of Respondents*

<table>
<thead>
<tr>
<th>Gender</th>
<th>1-5 years</th>
<th>6-10 years</th>
<th>Over 10 years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Male</td>
<td>15</td>
<td>39.5</td>
<td>17</td>
</tr>
<tr>
<td>Female</td>
<td>113</td>
<td>57.6</td>
<td>56</td>
</tr>
<tr>
<td>Total</td>
<td>128</td>
<td>54.7</td>
<td>73</td>
</tr>
</tbody>
</table>

Table 4.3 shows the frequency and percentage of respondents’ positions by years of their teaching experience. Among the 234 respondents, 82 respondents (35.0%) are teachers with formal or informal positions and 152 respondents (65.0%) are teachers without any positions. From the perspective of the teaching experience, there are fewer teachers with formal or informal positions (n=36, %=28.1) than teachers without any positions (n=92, %=71.9) in the range of one to five years. This status is the same in the other two ranges of years.

**Table 4.3**

*Descriptive Statistics of Teaching Years and Position for the Background Characteristics of Respondents*

<table>
<thead>
<tr>
<th>Teaching Years</th>
<th>Teachers with formal or informal positions</th>
<th>Teachers without any position</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>1-5 years</td>
<td>36</td>
<td>28.1</td>
</tr>
<tr>
<td>6-10 years</td>
<td>31</td>
<td>42.5</td>
</tr>
<tr>
<td>over 10 years</td>
<td>15</td>
<td>45.5</td>
</tr>
<tr>
<td>Total</td>
<td>82</td>
<td>35.0</td>
</tr>
</tbody>
</table>
Descriptive Analysis of Chinese Teacher Leadership Attribute Survey

This part presents the descriptive statistics analysis of the Situation of the Chinese Teacher Leadership Attributes Survey (SCTLAS) for answering the research questions: What are the attributes of teacher leadership that teachers have within Chinese junior and senior high schools? In what ways do teachers exhibit these attributes of teacher leadership? There are four dimensions in SCTLAS embracing in total 17 items (score 1, 2, 3, 4, 5 respectively correspond to Absolutely Not Qualified, Barely Qualified, Basically Qualified, Mostly Qualified, Absolutely Qualified), and the respondents’ answers to these 17 items exhibit the qualified levels of their teacher leadership attributes. The tables below present the results of the descriptive statistics for each dimension and each question that are corresponding to the items of dimensions.

Table 4.4 shows the means and standard deviations of the four dimensions of SCTLAS. According to the score from highest to lowest, the order of the four dimensions is cooperation, influencing, knowledge and skill, and perception. The means of all dimensions are above score 4 that is between Mostly Qualified and Absolutely Qualified. In this way, we consider the qualified levels of the four dimensions as Mostly Qualified. In addition, the mean of Perception is the lowest (4.20) among the four dimensions, and the mean of Cooperation is the highest.

Table 4.4

Descriptive Statistics of Each Dimension for SCTLAS

<table>
<thead>
<tr>
<th>Dimension</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perception</td>
<td>234</td>
<td>4.20</td>
<td>0.76</td>
</tr>
<tr>
<td>Influencing</td>
<td>234</td>
<td>4.31</td>
<td>0.78</td>
</tr>
<tr>
<td>Cooperation</td>
<td>234</td>
<td>4.39</td>
<td>0.69</td>
</tr>
<tr>
<td>Knowledge and Skill</td>
<td>234</td>
<td>4.24</td>
<td>0.67</td>
</tr>
</tbody>
</table>
Table 4.5 and 4.6 shows the descriptive statistical analysis for Q9, Q10, Q11 belonging to the dimension, Perception. According to Table 4.5, the mean of Q11 (mean=3.72) is the lowest among the three items of Perception, which is corresponding to “Teachers have the ability to work at the school level, such as decision making, problem-solving, mentor colleagues, redesign school, instead of regular classroom teaching”. When taking the mean of Perception (mean=4.20) as the reference, the mean of Q11 (mean=3.72) is lower than it, which is between score 3 (Basically Qualified) and score 4 (Mostly Qualified). Comparatively, the means of the other two items, Q9 (mean=4.50) and Q10 (mean=4.38), are higher than the mean of Perception, which are between score 4 (Mostly Qualified) and score 5 (Absolutely Qualified). Meanwhile, when taking score 4 (Mostly Qualified) as the reference, the mean of Q11 is below it. Table 4.6 shows the frequency and percentage of the responses that are above the score 3 (including 3) for Q9, Q10, and Q11. There are more respondents who pick Basically Qualified (score=3) for Q11 (n=50, %=21.4) than Q9 (n=21, %=9.0) and Q10 (n=27, %=11.5).
Table 4.5

**Descriptive Statistics of Perception (PE) for SCTLAS**

<table>
<thead>
<tr>
<th>Item of PE</th>
<th>Item Description</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q9.PE1</td>
<td>Teachers have always been working for students’ learning and students’ achievement.</td>
<td>234</td>
<td>4.50</td>
<td>0.81</td>
</tr>
<tr>
<td>Q10.PE2</td>
<td>Teachers are able to focus on their teaching quality including teachers’ professionalization and students’ learning rather than managerial or administrative roles.</td>
<td>234</td>
<td>4.38</td>
<td>0.87</td>
</tr>
<tr>
<td>Q11.PE3</td>
<td>Teachers have the ability to work at the school level, such as decision making, problem solving, mentor colleagues, redesign school, instead of regular classroom teaching.</td>
<td>234</td>
<td>3.72</td>
<td>1.16</td>
</tr>
</tbody>
</table>

Table 4.6

**Descriptive Statistics of Perception (PE) with Responded Score 3, 4, and 5**

<table>
<thead>
<tr>
<th>Item of PE</th>
<th>Score 3</th>
<th>Score 4</th>
<th>Score 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Q9.PE1</td>
<td>21</td>
<td>9.0</td>
<td>57</td>
<td>24.4</td>
</tr>
<tr>
<td>Q10.PE2</td>
<td>27</td>
<td>11.5</td>
<td>68</td>
<td>29.1</td>
</tr>
<tr>
<td>Q11.PE3</td>
<td>50</td>
<td>21.4</td>
<td>72</td>
<td>30.8</td>
</tr>
</tbody>
</table>

Table 4.7 and table 4.8 show the descriptive statistics of the responses to Q12 and Q13, as follows: “Teachers are willing to share expertise with colleagues and participating communities” and “Teachers are able to help and influence colleagues”. The means of Q12 (mean=4.33) and Q13 (mean=4.29) are both close to the mean of the Influencing dimension, (mean=4.31), which are above score 4 (Mostly Qualified) but under the score 5 (Absolutely Qualified). When taking the mean of Influencing as
the reference, the mean of Q12 is higher but Q13 is lower. Table 4.8 presents that, among the 234 respondents, there are fewer respondents who identified *Basically Qualified* (score=3) for Q12 (n=28, % = 12.0) than Q13 (n=32, % = 13.7).

**Table 4.7**

*Descriptive Statistics of Influencing (IN) for Chinese Teacher Leadership Attribute Survey (SCTLAS)*

<table>
<thead>
<tr>
<th>Item of IN</th>
<th>Item Description</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q12.IN1</td>
<td>Teachers are willing to share expertise with colleagues and participating communities.</td>
<td>234</td>
<td>4.33</td>
<td>0.82</td>
</tr>
<tr>
<td>Q13.IN2</td>
<td>Teachers are able to help and influence colleagues.</td>
<td>234</td>
<td>4.29</td>
<td>0.81</td>
</tr>
</tbody>
</table>

**Table 4.8**

*Descriptive Statistics of Influencing (IN) with Responded Score 3, 4, and 5*

<table>
<thead>
<tr>
<th>Item of IN</th>
<th>Score 3</th>
<th>Score 4</th>
<th>Score 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Q12.IN1</td>
<td>28</td>
<td>12.0</td>
<td>83</td>
<td>35.5</td>
</tr>
<tr>
<td>Q13.IN2</td>
<td>32</td>
<td>13.7</td>
<td>87</td>
<td>37.2</td>
</tr>
</tbody>
</table>

Table 4.9 shows the responses to the Q14 to Q18, belonging to the dimension, Cooperation. All the means of these five items are above score 4 (*Mostly Qualified*) but under the score 5 (*Absolutely Qualified*). When taking the mean of Cooperation (mean=4.39) as the reference, the means of Q17 (mean=4.38) and Q18 (mean=4.19) are below the mean of Cooperation, respectively corresponding to “Teachers are willing to assist colleagues who need help voluntarily” and “Teachers are willing to share risk and responsibilities with participating community”. Comparatively, the means of Q14 (mean=4.43), Q15 (mean=4.49), and Q16 (mean=4.44) are higher than the mean of Cooperation (mean=4.39). Table 4.10 shows that among the total of 234
respondents, there are 28 (%=12.0) and 45 (%=19.2) respondents respectively selecting the score 3 (*Basically Qualified*) for Q17 and Q18.

**Table 4.9**

*Descriptive Statistics of Cooperation (CO) for Chinese Teacher Leadership Attribute Survey (SCTLAS)*

<table>
<thead>
<tr>
<th>Item of CO</th>
<th>Item Description</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q14 CO1</td>
<td>Teachers are able to complete teaching task individually.</td>
<td>234</td>
<td>4.43</td>
<td>0.85</td>
</tr>
<tr>
<td>Q15.CO2</td>
<td>Teachers agree to foster good relationships with colleagues in the school, in equality, autonomy, and privacy.</td>
<td>234</td>
<td>4.49</td>
<td>0.81</td>
</tr>
<tr>
<td>Q16.CO3</td>
<td>Teachers agree to share an equal professional status with colleagues.</td>
<td>234</td>
<td>4.44</td>
<td>0.81</td>
</tr>
<tr>
<td>Q17.CO4</td>
<td>Teachers are willing to assist colleagues who need help voluntarily.</td>
<td>234</td>
<td>4.38</td>
<td>0.76</td>
</tr>
<tr>
<td>Q18.CO5</td>
<td>Teachers are willing to share risk and responsibilities with the participating community.</td>
<td>234</td>
<td>4.19</td>
<td>0.86</td>
</tr>
</tbody>
</table>

**Table 4.10**

*Descriptive Statistics of Cooperation (CO) with Responded Score 3, 4, and 5*

<table>
<thead>
<tr>
<th>Item of CO</th>
<th>Score 3</th>
<th>Score 4</th>
<th>Score 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Q14 CO1</td>
<td>17</td>
<td>7.3</td>
<td>72</td>
<td>30.8</td>
</tr>
<tr>
<td>Q15.CO2</td>
<td>18</td>
<td>7.7</td>
<td>61</td>
<td>26.1</td>
</tr>
<tr>
<td>Q16.CO3</td>
<td>26</td>
<td>11.1</td>
<td>64</td>
<td>27.4</td>
</tr>
<tr>
<td>Q17.CO4</td>
<td>28</td>
<td>12.0</td>
<td>82</td>
<td>35.0</td>
</tr>
<tr>
<td>Q18.CO5</td>
<td>45</td>
<td>19.2</td>
<td>82</td>
<td>35.0</td>
</tr>
</tbody>
</table>
Table 4.11 and Table 4.12 show the responses to the Q19 to Q25, belonging to the dimension Knowledge and Skill. According to Table 4.11, when taking the score 4 (Mostly Qualified) as the reference, the mean of Q21 is lower than the score 4 and the means of the other items of Knowledge and Skill are higher than the score 4. The mean of Q21 (mean=3.88) that is between score 3 (Basically Qualified) and score 4 (Mostly Qualified), the means of Q19, Q20, Q22, Q23, Q24 and Q25 (mean=4.31, 4.30, 4.17, 4.44, 4.28, 4.32) are between score 4 (Mostly Qualified) and score 5 (Absolutely Qualified). When taking the mean of Knowledge and Skill as the reference (mean=4.24), the mean of Q21 (mean=3.88) and Q22 (mean=4.17) is below the mean of Knowledge and Skill, respectively corresponding to “Teachers know school system knowledge, such as resources management, sustaining school improvement, understanding of the range of stakeholder interest” and “Teachers are able to synthesize information”. Table 4.12 shows that among the seven items, the top two items with the score 3 (Basically Qualified) are Q21 (n=59, %=25.2) and Q22 (n=33, %=14.1).
### Table 4.11

**Descriptive Statistics of Knowledge and Skill (KS) for SCTLAS**

<table>
<thead>
<tr>
<th>Item of KS</th>
<th>Item Description</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q19.KS1</td>
<td>Teachers have pedagogical knowledge, such as instructional strategies, differentiation strategies, curriculum development, using assessment data to make decisions.</td>
<td>234</td>
<td>4.31</td>
<td>0.77</td>
</tr>
<tr>
<td>Q20.KS2</td>
<td>Teachers have the capabilities of applying pedagogical knowledge such as instructional strategies, differentiation strategies, curriculum development, using assessment data to make decisions.</td>
<td>234</td>
<td>4.30</td>
<td>0.76</td>
</tr>
<tr>
<td>Q21.KS3</td>
<td>Teachers know school system knowledge, such as resources management, sustaining school improvement, understanding of the range of stakeholder interest.</td>
<td>234</td>
<td>3.88</td>
<td>1.01</td>
</tr>
<tr>
<td>Q22.KS4</td>
<td>Teachers are able to synthesize information.</td>
<td>234</td>
<td>4.17</td>
<td>0.83</td>
</tr>
<tr>
<td>Q23.KS5</td>
<td>Teachers are able to listen and express clearly.</td>
<td>234</td>
<td>4.44</td>
<td>0.73</td>
</tr>
<tr>
<td>Q24.KS6</td>
<td>Teachers are able to give productive feedback after communicating.</td>
<td>234</td>
<td>4.28</td>
<td>0.75</td>
</tr>
<tr>
<td>Q25.KS7</td>
<td>Teachers have an ability to build strong collaborative relationships.</td>
<td>234</td>
<td>4.32</td>
<td>0.73</td>
</tr>
</tbody>
</table>
Table 4.12

*Descriptive Statistics of Knowledge and Skill (KS) with Responded Score 3, 4, and 5*

<table>
<thead>
<tr>
<th>Item of KS</th>
<th>Score 3</th>
<th>Score 4</th>
<th>Score 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Q19.KS1</td>
<td>26</td>
<td>11.1</td>
<td>95</td>
<td>40.6</td>
</tr>
<tr>
<td>Q20.KS2</td>
<td>31</td>
<td>13.3</td>
<td>94</td>
<td>40.2</td>
</tr>
<tr>
<td>Q21.KS3</td>
<td>59</td>
<td>25.2</td>
<td>81</td>
<td>34.6</td>
</tr>
<tr>
<td>Q22.KS4</td>
<td>33</td>
<td>14.1</td>
<td>104</td>
<td>44.4</td>
</tr>
<tr>
<td>Q23.KS5</td>
<td>18</td>
<td>7.7</td>
<td>85</td>
<td>36.3</td>
</tr>
<tr>
<td>Q24.KS6</td>
<td>27</td>
<td>11.5</td>
<td>104</td>
<td>44.4</td>
</tr>
<tr>
<td>Q25.KS7</td>
<td>25</td>
<td>10.7</td>
<td>101</td>
<td>43.2</td>
</tr>
</tbody>
</table>

T-test and ANOVA of Chinese Teacher Leadership Attribute Survey (STCLAS)

According to the respondents’ background characteristics, we first explored each of the four dimensions about SCTLAS regarding their gender, and the independent sample t-tests were run. Figure 4.1 presents the means in perception (male=4.10, female=4.22), influencing (male=4.21, female=4.33), cooperation (male=4.23, female=4.42), and knowledge and skills (male=4.06, female=4.28). In the four dimensions, all the means of females were higher than means of males, and all scores were between 4 (*Mostly Qualified*) and 5 (*Absolutely qualified*). The results in Table 4.13 also showed that the level of significance in four dimensions, perception (.369), influencing (.392), cooperation (.131), and knowledge and skills (.073), exceeded the (.05) value. Thus, there is no significant difference in each of the four dimensions about SCTLAS between males and females among the sample respondents.
Table 4.13

*Independent Sample T-test Results of Gender on Each Dimension for STCLAS*

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Male M</th>
<th>Male SD</th>
<th>Female M</th>
<th>Female SD</th>
<th>t-value</th>
<th>Sig.(2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perception</td>
<td>4.10</td>
<td>0.69</td>
<td>4.22</td>
<td>0.77</td>
<td>-0.900</td>
<td>.369</td>
</tr>
<tr>
<td>Influencing</td>
<td>4.21</td>
<td>0.74</td>
<td>4.33</td>
<td>0.79</td>
<td>-0.858</td>
<td>.392</td>
</tr>
<tr>
<td>Cooperation</td>
<td>4.23</td>
<td>0.57</td>
<td>4.42</td>
<td>0.70</td>
<td>-1.517</td>
<td>.131</td>
</tr>
<tr>
<td>Knowledge and Skill</td>
<td>4.06</td>
<td>0.62</td>
<td>4.28</td>
<td>0.68</td>
<td>-1.803</td>
<td>.073</td>
</tr>
</tbody>
</table>

*Note.* * indicates p < .05; ** p < .01, which means that the result of the t-test is statistically significant.

**Figure 4.1**

*The Differences between Male and Female on Each Dimension for STCLAS*

Second, we investigated each dimension of teacher leadership attributes concerning their positions, including teachers with formal or informal positions and teachers without any positions. The t-test results from Table 4.14 and Figure 4.2 showed the means of each dimension between teachers with formal or informal
positions and teachers without positions. The means of each dimension were as following, perception (4.22, 4.18), influencing (4.30, 4.32), cooperation (4.40, 4.38), and knowledge and skills (4.28, 4.22), which were between 4 (*Mostly Qualified*) and 5 (*Absolutely qualified*). In the dimension of perception, cooperation, and knowledge and skills, the means of teachers with formal or informal positions were higher than without positions. Meanwhile, in the dimension of influencing, the mean of teachers with the formal or informal positions was lower than without positions. The results also showed (in Table 4.14) that there were no significant differences at the (.05) level in perception (.706), influencing (.874), cooperation (.812), and knowledge and skills (.543) of SCTLAS between teachers with formal or informal positions and teachers without any positions.

**Table 4.14**

*Independent Sample T-test Results of Position on Each Dimension for STCLAS*

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Teachers with formal or informal positions</th>
<th>Teachers without any position</th>
<th>$t$-value</th>
<th>Sig.(2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perseption</td>
<td>4.22</td>
<td>4.18</td>
<td>0.377</td>
<td>.706</td>
</tr>
<tr>
<td>Influencing</td>
<td>4.30</td>
<td>4.32</td>
<td>-0.159</td>
<td>.874</td>
</tr>
<tr>
<td>Cooperation</td>
<td>4.40</td>
<td>4.38</td>
<td>-0.238</td>
<td>.812</td>
</tr>
<tr>
<td>Knowledge and Skill</td>
<td>4.28</td>
<td>4.22</td>
<td>0.609</td>
<td>.543</td>
</tr>
</tbody>
</table>

*Note. * indicates $p < .05$; ** $p < .01$, which means that the result of the t-test is statistically significant.*
Third, the ANOVA analyses were utilized to examine each dimension about teacher leadership attributes with reference to respondents’ teaching years, including one to five years, six to ten years, and over ten years. The results (in Table 4.15 and Figure 4.3) indicated that the means of each dimension were between 4 (*Mostly Qualified*) and 5 (*Absolutely qualified*). Teachers who worked six to ten years were highest among the three different teaching years in the dimension of perception, influencing, and knowledge and skills. But, in the dimension of cooperation, teachers who worked over ten years were highest among the three different teaching years. The results also showed that there were no significant differences among three different teaching years (one to five years, six to ten years, and over ten years) in each dimension of SCTLAS. In other words, there were no significant differences among three different teaching years in the dimension of perception (*F*=0.827, *p*=.439),
influencing ($F=0.256$, $p=.774$), cooperation ($F=1.122$, $p=.327$), and knowledge and skills ($F=0.079$ $p=.924$).

**Table 4.15**

*ANOVA Results of Teaching years on Each Dimension for STCLAS*

<table>
<thead>
<tr>
<th>Dimension</th>
<th>1-5 years</th>
<th>6-10 years</th>
<th>Over 10 years</th>
<th>F-value</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>$SD$</td>
<td>$M$</td>
<td>$SD$</td>
<td></td>
</tr>
<tr>
<td>Perception</td>
<td>4.22</td>
<td>0.71</td>
<td>4.23</td>
<td>0.81</td>
<td>4.04</td>
</tr>
<tr>
<td>Influencing</td>
<td>4.28</td>
<td>0.73</td>
<td>4.36</td>
<td>0.81</td>
<td>4.30</td>
</tr>
<tr>
<td>Cooperation</td>
<td>4.32</td>
<td>0.62</td>
<td>4.45</td>
<td>0.74</td>
<td>4.48</td>
</tr>
<tr>
<td>Knowledge and Skill</td>
<td>4.25</td>
<td>0.57</td>
<td>4.25</td>
<td>0.76</td>
<td>4.20</td>
</tr>
</tbody>
</table>

*Note.* * indicates $p < .05$; ** $p < .01$, which means that the result of the t-test is statistically significant.

**Figure 4.3**

*The Differences about Different Teaching years on Each Dimension for STCLAS*
Descriptive Analysis of Opportunity for Teacher Leadership in School Context

This section demonstrates the results of descriptive analysis of the quantitative data from Opportunity for Teacher Leadership in School Context Survey which was used to answer the questions: How do schools provide opportunities for teachers to develop teacher leadership within the Chinese junior and senior high schools’ context? What evidence exists to demonstrate schools’ success in providing such opportunities? This survey is composed of 35 items being categorized into seven dimensions--developmental focus, recognition, autonomy, collegiality, participation, open communication, and positive environment. Opportunity for Teacher Leadership in School Context Survey (OTLSCS) is a 1-5 Likert scale from never to always. If the respondents choose “never,” this corresponds to a score of 1, “rarely” is equivalent to 2, “sometimes” is a score of 3, “often” and “always” respectively corresponds to a score of 4 and 5.

The descriptive statistics of seven dimensions are represented in Table 4.16 and the different levels of means could also be shown in the bar chart of Figure 4.4. All the scores present how participants evaluate the opportunities for teacher leadership provided by their school contexts. The lowest score happens to participation, which is 3.86 (0.93). The highest score is found in collegiality, $M=4.26$ (0.67). Developmental focus, recognition, and autonomy have similar scores ranging from 4.21 (0.68) to 4.23 (0.64). In general, given these numbers, participants evaluated the opportunities provided by their schools for them to develop teacher leadership favorably.
Table 4.16

Descriptive Statistics for Seven Dimensions of Opportunity for Teacher Leadership in School Context Survey (OTLSCS)

<table>
<thead>
<tr>
<th>Dimension</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developmental Focus</td>
<td>234</td>
<td>4.21</td>
<td>0.68</td>
<td>0.459</td>
</tr>
<tr>
<td>Recognition</td>
<td>234</td>
<td>4.23</td>
<td>0.65</td>
<td>0.419</td>
</tr>
<tr>
<td>Autonomy</td>
<td>234</td>
<td>4.23</td>
<td>0.64</td>
<td>0.410</td>
</tr>
<tr>
<td>Collegiality</td>
<td>234</td>
<td>4.26</td>
<td>0.67</td>
<td>0.452</td>
</tr>
<tr>
<td>Participation</td>
<td>234</td>
<td>3.86</td>
<td>0.93</td>
<td>0.862</td>
</tr>
<tr>
<td>Open Communication</td>
<td>234</td>
<td>3.92</td>
<td>0.87</td>
<td>0.749</td>
</tr>
<tr>
<td>Positive Environment</td>
<td>234</td>
<td>4.12</td>
<td>0.74</td>
<td>0.549</td>
</tr>
</tbody>
</table>

Figure 4.4

Mean Scores for Seven Dimensions of OTLSCS

In the following, the score of items in each dimension of OTLSCS will be elaborated. Table 4.17 shows that in the first dimension, the item Q30 “teachers share the new gained ideas and strategies with each other” and the item Q27 “if the teachers need assistance and guidance, my school will provide what we need” obtained similar
mean scores which are respectively 4.16 (0.78) and 4.17 (0.82). The other items’ scores range from 4.21 (0.82) to 4.25 (0.75). In addition, as shown in Table 4.18, over 97% of participants responded “sometimes” “often” and “always” when they answered these five questions. Especially, when asked whether “at my school, administrators and experienced teachers try to help new teachers get process” (Q26) and “at my school, teachers devote themselves to gaining new knowledge and skills” (Q29), over 200 participants (around 86%) reported that these situations “often” and “always” happened in their schools. Based on these numbers, it is obvious that participants are provided with relatively frequent opportunities in development focus.

Table 4.17

*Mean Scores for the Five Items of Developmental Focus (DF)*

<table>
<thead>
<tr>
<th>Item of DF</th>
<th>Item Description</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q26.DF1</td>
<td>At my school, administrators and experienced teachers try to help new teachers get process.</td>
<td>234</td>
<td>4.24</td>
<td>0.77</td>
</tr>
<tr>
<td>Q27.DF2</td>
<td>If the teachers need assistance and guidance, my school will provide what we need.</td>
<td>234</td>
<td>4.17</td>
<td>0.82</td>
</tr>
<tr>
<td>Q28.DF3</td>
<td>At my school, teachers support each other personally and professionally.</td>
<td>234</td>
<td>4.21</td>
<td>0.82</td>
</tr>
<tr>
<td>Q29.DF4</td>
<td>At my school, teachers devote themselves to gaining new knowledge and skills.</td>
<td>234</td>
<td>4.25</td>
<td>0.75</td>
</tr>
<tr>
<td>Q30.DF5</td>
<td>Teachers share the new gained ideas and strategies with each other.</td>
<td>234</td>
<td>4.16</td>
<td>0.78</td>
</tr>
</tbody>
</table>
Table 4.18

The Frequency and Percentage of Participants with Responded Score 3, 4 and 5 for Items of Developmental Focus (DF)

<table>
<thead>
<tr>
<th>Item of DF</th>
<th>Score 3</th>
<th></th>
<th>Score 4</th>
<th></th>
<th>Score 5</th>
<th></th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q26.DF1</td>
<td>24</td>
<td>10.3</td>
<td>109</td>
<td>46.6</td>
<td>94</td>
<td>40.2</td>
<td>227</td>
<td>97.1</td>
</tr>
<tr>
<td>Q27.DF2</td>
<td>40</td>
<td>17.1</td>
<td>95</td>
<td>40.6</td>
<td>93</td>
<td>39.7</td>
<td>228</td>
<td>97.4</td>
</tr>
<tr>
<td>Q28.DF3</td>
<td>35</td>
<td>15.0</td>
<td>93</td>
<td>39.7</td>
<td>99</td>
<td>42.3</td>
<td>227</td>
<td>97.0</td>
</tr>
<tr>
<td>Q29.DF4</td>
<td>29</td>
<td>12.4</td>
<td>104</td>
<td>44.4</td>
<td>97</td>
<td>41.5</td>
<td>230</td>
<td>98.3</td>
</tr>
<tr>
<td>Q30.DF5</td>
<td>41</td>
<td>17.5</td>
<td>102</td>
<td>43.6</td>
<td>87</td>
<td>37.2</td>
<td>230</td>
<td>98.3</td>
</tr>
</tbody>
</table>

Table 4.19 and Table 4.20 combine to illustrate the detailed responded scores of items of recognition. The mean score for the item Q33 “I feel valued and respected for my ideas and opinions” is 4.09 (0.77) which is the lowest score in these five questions. As can be seen from the Table 4.19, Q31 “at my school, administrators have confidence in my professional skills and competence” and Q32 “my professional skills and competence are recognized by other teachers” present higher mean scores than the other items, respectively being 4.29 (0.72) and 4.30 (0.71). For these three items, although the percentage of participants responding with score 3, 4 and 5 are all above 99% (in Table 4.20), there are 51 respondents (21.8%) who choose “sometimes” getting 3 scores when they respond to the Q33, which are approximately twice as many as ones who selected “sometimes” in the other two questions. This is the reason why Q33 gets a lower mean score than the other two. The scores of Q34 and Q35 are quite close, with 4.22 (0.78) and 4.24 (0.74). Regarding Q34 “at my school, we celebrate each other’s development and successes” and Q35 “at my school, administrators have confidence in teachers’ abilities to deal with the problems relevant to teaching practice”, there are respectively 84.2% and 85.5% of respondents choosing “often” and “always”.
Table 4.19

*Mean Scores for the Five Items of Recognition (R)*

<table>
<thead>
<tr>
<th>Item of R</th>
<th>Item Description</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q31.R1</td>
<td>At my school, administrators have confidence in my professional skills and competence.</td>
<td>234</td>
<td>4.29</td>
<td>0.72</td>
</tr>
<tr>
<td>Q32.R2</td>
<td>My professional skills and competence are recognized by other teachers.</td>
<td>234</td>
<td>4.30</td>
<td>0.71</td>
</tr>
<tr>
<td>Q33.R3</td>
<td>I feel valued and respected for my ideas and opinions.</td>
<td>234</td>
<td>4.09</td>
<td>0.77</td>
</tr>
<tr>
<td>Q34.R4</td>
<td>At my school, we celebrate each other’s development and successes.</td>
<td>234</td>
<td>4.22</td>
<td>0.78</td>
</tr>
<tr>
<td>Q35.R5</td>
<td>At my school, administrators have confidence in teachers’ abilities to deal with the problems relevant to teaching practice.</td>
<td>234</td>
<td>4.24</td>
<td>0.74</td>
</tr>
</tbody>
</table>

Table 4.20

*The Frequency and Percentage of Participants with Responded Score 3, 4 and 5 for Items of Recognition (R)*

<table>
<thead>
<tr>
<th>Item of R</th>
<th>Score 3</th>
<th>Score 4</th>
<th>Score 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Q31.R1</td>
<td>28</td>
<td>12.0</td>
<td>104</td>
<td>44.4</td>
</tr>
<tr>
<td>Q32.R2</td>
<td>25</td>
<td>10.7</td>
<td>107</td>
<td>45.7</td>
</tr>
<tr>
<td>Q33.R3</td>
<td>51</td>
<td>21.8</td>
<td>105</td>
<td>44.9</td>
</tr>
<tr>
<td>Q34.R4</td>
<td>32</td>
<td>13.7</td>
<td>102</td>
<td>43.6</td>
</tr>
<tr>
<td>Q35.R5</td>
<td>31</td>
<td>13.2</td>
<td>106</td>
<td>45.3</td>
</tr>
</tbody>
</table>

Table 4.21 and Table 4.22 provide an overview of the next dimension--autonomy. Q36 “as a teacher, I am free to make adjustments based on the demands of my students” is the highest with the mean score of 4.41 (0.70), while the relatively
lower scores go to Q39 “teachers can be innovative, creative and experimental at my school” and Q40 “administrators and other teachers are supportive of the changes in my instructional strategies, by removing barriers and providing resources” respectively with the means of 4.12 (0.81) and 4.11 (0.79). When respondents were asked to answer the Q36, there were 233 participants (99.6%) choosing “sometimes” “often” and “always”, including over 90% participants getting 4 and 5 scores. Compared with Q36, there were relatively more participants obtaining a score of 3 when they responded to Q39 and Q40, resulting that only 80.4% of respondents selected “often” and “always” for both these two questions.

**Table 4.21**

*Mean Scores for the Five Items of Autonomy (A)*

<table>
<thead>
<tr>
<th>Item of A</th>
<th>Item Description</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q36.A1</td>
<td>As a teacher, I am free to make adjustments based on the demands of my students.</td>
<td>234</td>
<td>4.41</td>
<td>0.70</td>
</tr>
<tr>
<td>Q37.A2</td>
<td>We could bend the rules if it is necessary for students’ learning.</td>
<td>234</td>
<td>4.21</td>
<td>0.77</td>
</tr>
<tr>
<td>Q38.A3</td>
<td>Teachers are encouraged to take initiative to make improvements for students.</td>
<td>234</td>
<td>4.32</td>
<td>0.75</td>
</tr>
<tr>
<td>Q39.A4</td>
<td>Teachers can be innovative, creative and experimental at my school.</td>
<td>234</td>
<td>4.12</td>
<td>0.81</td>
</tr>
<tr>
<td>Q40.A5</td>
<td>Administrators and other teachers are supportive of the changes in my instructional strategies, by removing barriers and providing resources.</td>
<td>234</td>
<td>4.11</td>
<td>0.79</td>
</tr>
</tbody>
</table>
Table 4.22

The Frequency and Percentage of Participants with Responded Score 3, 4 and 5 for Items of Autonomy (A)

<table>
<thead>
<tr>
<th>Item of A</th>
<th>Score 3</th>
<th>Score 4</th>
<th>Score 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Q36.A1</td>
<td>22</td>
<td>9.4</td>
<td>91</td>
<td>38.9</td>
</tr>
<tr>
<td>Q37.A2</td>
<td>29</td>
<td>12.4</td>
<td>109</td>
<td>46.6</td>
</tr>
<tr>
<td>Q38.A3</td>
<td>26</td>
<td>11.1</td>
<td>95</td>
<td>40.6</td>
</tr>
<tr>
<td>Q39.A4</td>
<td>39</td>
<td>16.7</td>
<td>105</td>
<td>44.9</td>
</tr>
<tr>
<td>Q40.A5</td>
<td>40</td>
<td>17.1</td>
<td>109</td>
<td>46.6</td>
</tr>
</tbody>
</table>

Table 4.23 illustrates the overall statistics for items of collegiality. From this table, it can be seen that the lowest score goes to Q45 of collegiality “at my school, I am supported by other teachers to deal with challenges in my classes”, which is 4.17 (0.81). The mean scores for the other items were close, ranging from 4.27 (0.82) to 4.29 (0.73). The results, as shown in Table 4.23, could also correspond to the results presented in Table 4.24. Q41 “at my school, teachers discuss strategies, share materials and give advice” has the highest mean score and the highest proportion of responses to the options of “sometimes”, “often” and “always” at 99.1 percent. Compared with other items, there are most respondents obtaining a score of 3 and the least getting a score of 5 for the item Q45, with 42 (17.9%) and 93 (39.7%) participants. Overall, respondents provide a good evaluation of collegiality.
Table 4.23

*Mean Scores for the Five Items of Collegiality (C)*

<table>
<thead>
<tr>
<th>Item of C</th>
<th>Item Description</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q41.C1</td>
<td>At my school, teachers discuss strategies, share materials and give advice.</td>
<td>234</td>
<td>4.29</td>
<td>0.73</td>
</tr>
<tr>
<td>Q42.C2</td>
<td>At my school, teachers observe other teachers’ classes.</td>
<td>234</td>
<td>4.27</td>
<td>0.82</td>
</tr>
<tr>
<td>Q43.C3</td>
<td>My colleagues give me feedback, when I talk with them about my teaching and the curriculum.</td>
<td>234</td>
<td>4.28</td>
<td>0.74</td>
</tr>
<tr>
<td>Q44.C4</td>
<td>Encountering students’ academic and behavior problems, teachers and administrators work together to discuss, analyze and solve these problems.</td>
<td>234</td>
<td>4.28</td>
<td>0.76</td>
</tr>
<tr>
<td>Q45.C5</td>
<td>At my school, I am supported by other teachers to deal with challenges in my classes.</td>
<td>234</td>
<td>4.17</td>
<td>0.81</td>
</tr>
</tbody>
</table>

Table 4.24

*The Frequency and Percentage of Participants with Responded Score 3, 4 and 5 for Items of Collegiality (C)*

<table>
<thead>
<tr>
<th>Item of C</th>
<th>Score 3</th>
<th>Score 4</th>
<th>Score 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Q41.C1</td>
<td>29</td>
<td>12.4</td>
<td>100</td>
<td>42.7</td>
</tr>
<tr>
<td>Q42.C2</td>
<td>37</td>
<td>15.8</td>
<td>81</td>
<td>34.6</td>
</tr>
<tr>
<td>Q43.C3</td>
<td>29</td>
<td>12.4</td>
<td>101</td>
<td>43.2</td>
</tr>
<tr>
<td>Q44.C4</td>
<td>29</td>
<td>12.4</td>
<td>97</td>
<td>41.5</td>
</tr>
<tr>
<td>Q45.C5</td>
<td>42</td>
<td>17.9</td>
<td>94</td>
<td>40.2</td>
</tr>
</tbody>
</table>

It is apparent from Table 4.25 that the mean scores for the items of participation are lower than the items of four dimensions mentioned above. While the
The lowest mean score occurs in the Q49 “at my school, administrators seek my opinions and ideas” which is 3.65 (1.11), the highest mean is 4.06 (0.95) for the Q46 “teachers have a say in the development of school and students”. The mean scores for the other three items are between 3.81 (1.10) and 3.94 (1.03). The results obtained from Table 4.25 can also be reflected in Table 4.26. Whereas the high proportion of participants choosing a score of 3, 4 and 5 for items of developmental focus, recognition, autonomy and collegiality displayed in tables above, there is a clear decrease in these three options for the dimension of participation. When respondents were asked to answer the Q49, there were only 84.6% of them selecting “sometimes”, “often” and “always”, including over a quarter of the respondents (27.4%) obtaining a score of 3 and just 63 participants (26.9%) getting 5. For the Q47 and Q50, there are closely similar proportions of respondents choosing the score of 4 and 5 both at 67.6 percent, and the score of 3 respectively at 20.5 percent and 19.2 percent, which is in accordance with the similar mean scores in Table 4.25. In summary, these results show that respondents provided a relatively lower evaluation score on participation than the other four dimensions above.
Table 4.25

Mean Scores for the Five Items of Participation (P)

<table>
<thead>
<tr>
<th>Item of P</th>
<th>Item Description</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q46.P1</td>
<td>Teachers have a say in the development of school and students.</td>
<td>234</td>
<td>4.06</td>
<td>0.95</td>
</tr>
<tr>
<td>Q47.P2</td>
<td>At my school, teachers and administrators jointly decide how time is used and how the school is organized.</td>
<td>234</td>
<td>3.86</td>
<td>1.08</td>
</tr>
<tr>
<td>Q48.P3</td>
<td>At my school, teachers participate in mentoring or evaluating new faculty and/or staff.</td>
<td>234</td>
<td>3.94</td>
<td>1.03</td>
</tr>
<tr>
<td>Q49.P4</td>
<td>At my school, administrators seek my opinions and ideas.</td>
<td>234</td>
<td>3.65</td>
<td>1.11</td>
</tr>
<tr>
<td>Q50.P5</td>
<td>Teachers and administrators make conversations and try to reach consensus before making important decisions.</td>
<td>234</td>
<td>3.81</td>
<td>1.10</td>
</tr>
</tbody>
</table>

Table 4.26

The Frequency and Percentage of Participants with Responded Score 3, 4 and 5 for Items of Participation (P)

<table>
<thead>
<tr>
<th>Item of P</th>
<th>Score 3</th>
<th>Score 4</th>
<th>Score 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Q46.P1</td>
<td>43</td>
<td>18.4</td>
<td>83</td>
<td>35.5</td>
</tr>
<tr>
<td>Q47.P2</td>
<td>48</td>
<td>20.5</td>
<td>79</td>
<td>33.8</td>
</tr>
<tr>
<td>Q48.P3</td>
<td>45</td>
<td>19.2</td>
<td>83</td>
<td>35.5</td>
</tr>
<tr>
<td>Q49.P4</td>
<td>64</td>
<td>27.4</td>
<td>71</td>
<td>30.3</td>
</tr>
<tr>
<td>Q50.P5</td>
<td>45</td>
<td>19.2</td>
<td>86</td>
<td>36.8</td>
</tr>
</tbody>
</table>

Interestingly, Table 4.27 reveals that mean scores of the five items of open communication are all under but approaching to the score of 4. Q51 “because teachers and administrators share ideas about our work, I stay aware of what is happening” and
Q55 “faculty meeting time is used for discussions and problem solving” obtain the
closely similar mean score which is 3.88, the lowest score among the five items. The
highest score goes to Q54 “at my school, when things go wrong, we are not blamed
and try not to blame, but find ways to do better the next time”, which is 3.99 (0.94).
Q52 and Q53 have similar mean scores, which are respectively 3.91 (0.99) and 3.93
(0.98). From Table 4.28, it can also be seen that they have close proportions of
respondents for the score of 3, 4 and 5 respectively at 91.0% and 91.9%. Q54 not only
has the highest score, but simultaneously owns the highest proportion of participants
in the score of 3, 4 and 5 at 92.3%, with more respondents for “often” and “always”
and less for “sometimes” than the other items.

**Table 4.27**

*Mean Scores for the Five Items of Open Communication (OC)*

<table>
<thead>
<tr>
<th>Item of OC</th>
<th>Item Description</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q51.OC1</td>
<td>Because teachers and administrators share ideas about our work, I stay aware of what is happening.</td>
<td>234</td>
<td>3.88</td>
<td>0.97</td>
</tr>
<tr>
<td>Q52.OC2</td>
<td>At my school everybody talks about their feelings, opinions and concerns, in free, open and honest ways.</td>
<td>234</td>
<td>3.91</td>
<td>0.99</td>
</tr>
<tr>
<td>Q53.OC3</td>
<td>Teachers and administrators openly accept diversity of opinion.</td>
<td>234</td>
<td>3.93</td>
<td>0.98</td>
</tr>
<tr>
<td>Q54.OC4</td>
<td>At my school, when things go wrong, we are not blamed and try not to blame, but find ways to do better the next time.</td>
<td>234</td>
<td>3.99</td>
<td>0.94</td>
</tr>
<tr>
<td>Q55.OC5</td>
<td>Faculty meeting time is used for discussions and problem solving.</td>
<td>234</td>
<td>3.88</td>
<td>1.01</td>
</tr>
</tbody>
</table>
Table 4.28

The Frequency and Percentage of Participants with Responded Score 3, 4 and 5 for Items of Open Communication (OC)

<table>
<thead>
<tr>
<th>Item of OC</th>
<th>Score 3</th>
<th></th>
<th>Score 4</th>
<th></th>
<th>Score 5</th>
<th></th>
<th>Total</th>
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</thead>
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<tr>
<td></td>
<td>n</td>
<td>%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q51.OC1</td>
<td>56</td>
<td>23.9</td>
<td>90</td>
<td>38.5</td>
<td>70</td>
<td>29.9</td>
<td>216</td>
<td>92.3</td>
</tr>
<tr>
<td>Q52.OC2</td>
<td>47</td>
<td>20.1</td>
<td>92</td>
<td>39.3</td>
<td>74</td>
<td>31.6</td>
<td>213</td>
<td>91.0</td>
</tr>
<tr>
<td>Q53.OC3</td>
<td>51</td>
<td>21.8</td>
<td>88</td>
<td>37.6</td>
<td>76</td>
<td>32.5</td>
<td>215</td>
<td>91.9</td>
</tr>
<tr>
<td>Q54.OC4</td>
<td>44</td>
<td>18.8</td>
<td>92</td>
<td>39.3</td>
<td>80</td>
<td>34.2</td>
<td>216</td>
<td>92.3</td>
</tr>
<tr>
<td>Q55.OC5</td>
<td>45</td>
<td>19.2</td>
<td>97</td>
<td>41.5</td>
<td>69</td>
<td>29.5</td>
<td>211</td>
<td>90.2</td>
</tr>
</tbody>
</table>

The results obtained from the statistical analysis of the dimension of the positive environment are presented in Table 4.29 and Table 4.30. Based on what is shown in Table 4.29, we can see that the lowest mean score happens in the item Q57 “teachers at my school look forward to coming to work every day”, which is 3.99 (0.87) that is slightly lower than the mean score of 4.02 (0.94) for Q58. The item Q60 “teachers and administrators are positive to respond to our students’ need” has the highest mean score of 4.42 (0.72). It is apparent that Q60 obtains higher mean than the other items. Although the items, “at my school, teachers are regarded as professionals, respected by administrators, parents and students” (Q56) and “at my school, teachers and administrators work in partnership and as a team” (Q59), have closely similar mean scores which are both 4.09, they have different proportions of respondents choosing the score of 3, 4 and 5 respectively at 97.0 percent (227 participants) and 92.7 percent (217 participants). From Table 4.30, it can be seen that Q60 has the highest proportion of respondents in answering “sometimes”, “often” and “always” with 233 participants at 99.6 percent. In addition, compared with the results of other items of positive environment, just over 10% of participants who get the score of 3 and just under 90% of respondents getting the score of 4 and 5, could also
indicate why Q60 obtains the highest score. Overall, respondents give a good
evaluation on the opportunity in a positive environment provided by their schools.

**Table 4.29**

*Mean Scores for the Five Items of Positive Environment (POE)*

<table>
<thead>
<tr>
<th>Item of POE</th>
<th>Item Description</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q56.POE1</td>
<td>At my school, teachers are regarded as professionals, respected by administrators, parents and students.</td>
<td>234</td>
<td>4.09</td>
<td>0.82</td>
</tr>
<tr>
<td>Q57.POE2</td>
<td>Teachers at my school look forward to coming to work every day.</td>
<td>234</td>
<td>3.99</td>
<td>0.87</td>
</tr>
<tr>
<td>Q58.POE3</td>
<td>Teachers are satisfied with the working environment.</td>
<td>234</td>
<td>4.02</td>
<td>0.94</td>
</tr>
<tr>
<td>Q59.POE4</td>
<td>At my school, teachers and administrators work in partnership and as a team.</td>
<td>234</td>
<td>4.09</td>
<td>0.98</td>
</tr>
<tr>
<td>Q60.POE5</td>
<td>Teachers are positive to respond to our students’ needs.</td>
<td>234</td>
<td>4.42</td>
<td>0.72</td>
</tr>
</tbody>
</table>

**Table 4.30**

*The Frequency and Percentage of Participants with Responded Score 3, 4 and 5 for Items of Positive Environment (POE)*

<table>
<thead>
<tr>
<th>Item of POE</th>
<th>Score 3</th>
<th></th>
<th>Score 4</th>
<th></th>
<th>Score 5</th>
<th></th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Q56.POE1</td>
<td>42</td>
<td>17.9</td>
<td>105</td>
<td>44.9</td>
<td>80</td>
<td>34.2</td>
<td>227</td>
<td>97.0</td>
</tr>
<tr>
<td>Q57.POE2</td>
<td>45</td>
<td>19.2</td>
<td>103</td>
<td>44.0</td>
<td>72</td>
<td>30.8</td>
<td>220</td>
<td>94.0</td>
</tr>
<tr>
<td>Q58.POE3</td>
<td>49</td>
<td>20.9</td>
<td>90</td>
<td>38.5</td>
<td>83</td>
<td>35.5</td>
<td>222</td>
<td>94.9</td>
</tr>
<tr>
<td>Q59.POE4</td>
<td>34</td>
<td>14.5</td>
<td>88</td>
<td>37.6</td>
<td>95</td>
<td>40.6</td>
<td>217</td>
<td>92.7</td>
</tr>
<tr>
<td>Q60.POE5</td>
<td>25</td>
<td>10.7</td>
<td>81</td>
<td>34.6</td>
<td>127</td>
<td>54.3</td>
<td>233</td>
<td>99.6</td>
</tr>
</tbody>
</table>
T-test and ANOVA of Opportunity for Teacher Leadership in School Context (OTLSCS)

After demonstrating the statistical results of seven dimensions and 35 items of OTLSCS in detail above, this section focuses on the analysis of OTLSCS related to the demographic questions. The analysis reveals how respondents with different genders, positions and teaching years feel about the opportunities for teacher leadership provided by their schools. In addition, T-test and ANOVA were adopted to see if there was a significant difference among groups.

Gender is the first demographic variable being used to test the dimensions of OTLSCS. From Table 4.31, it can be seen that the majority of respondents are females (196 accounting for 83.8%) far more than males (38 accounting for 16.2%). Although there is a big difference in quantity between males and females, they don’t present so much differences in mean scores of OTLSCS. The results from Figure 4.5 and Table 4.32 reveal that both female teachers and male teachers report the highest score for collegiality, which are respectively 4.27 (0.67) and 4.19 (0.68). The lowest score for female teachers \( (M=3.89, \ SD=0.91) \) is found in participation which is also responded with the lowest score \( (M=3.74, \ SD=1.02) \) by males. In addition, male teachers report a relatively lower score in open communication as well, which is 3.76 (0.98). Moreover, female and male teachers present a relatively apparent difference in open communication, which is 0.19. Compared with other dimensions, the biggest difference between the two genders happens in positive environment, which is 0.20. Overall, female teachers report higher scores than male teachers on all seven dimensions.
Table 4.31

**Demographic Information of Participants**

<table>
<thead>
<tr>
<th>Demographic Information</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>38</td>
<td>16.2</td>
</tr>
<tr>
<td>Female</td>
<td>196</td>
<td>83.8</td>
</tr>
<tr>
<td><strong>Position</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teachers with formal or informal positions</td>
<td>82</td>
<td>35.0</td>
</tr>
<tr>
<td>Teacher without any positions</td>
<td>152</td>
<td>65.0</td>
</tr>
<tr>
<td><strong>Years of teaching</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-5 years</td>
<td>128</td>
<td>54.7</td>
</tr>
<tr>
<td>6-10 years</td>
<td>73</td>
<td>31.2</td>
</tr>
<tr>
<td>Over 10 years</td>
<td>33</td>
<td>14.1</td>
</tr>
</tbody>
</table>

Figure 4.5

*The Differences between Male and Female on the Opportunity for Teacher Leadership in School Context*
Table 4.32

Results of T-test between Male and Female on Seven Dimensions of Opportunity for Teacher Leadership in School Context Survey (OTLSCS)

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Male M</th>
<th>Female M</th>
<th>t-value</th>
<th>Sig.(2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SD</td>
<td>SD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Developmental</td>
<td>4.12</td>
<td>4.22</td>
<td>-0.835</td>
<td>.405</td>
</tr>
<tr>
<td>Focus</td>
<td>0.68</td>
<td>0.68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recognition</td>
<td>4.11</td>
<td>4.25</td>
<td>-1.208</td>
<td>.228</td>
</tr>
<tr>
<td>Autonomy</td>
<td>4.18</td>
<td>4.24</td>
<td>-0.525</td>
<td>.600</td>
</tr>
<tr>
<td>Collegiality</td>
<td>4.19</td>
<td>4.27</td>
<td>-0.695</td>
<td>.488</td>
</tr>
<tr>
<td>Participation</td>
<td>3.74</td>
<td>3.89</td>
<td>-0.891</td>
<td>.374</td>
</tr>
<tr>
<td>Open</td>
<td>3.76</td>
<td>3.95</td>
<td>-1.213</td>
<td>.227</td>
</tr>
<tr>
<td>Communication</td>
<td>3.96</td>
<td>4.16</td>
<td>-1.465</td>
<td>.144</td>
</tr>
<tr>
<td>Positive</td>
<td>0.83</td>
<td>0.72</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environment</td>
<td>4.16</td>
<td>4.16</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. * indicates p < .05; ** p < .01, which means that the result of the t-test is statistically significant.

To determine if there were significant differences between female and male teachers on the opportunities for teacher leadership provided by their schools, we adopted a T-test to process the data. From the results of Table 4.32, it is apparent that there is no statistically significant difference between the female teachers and male teachers in all dimensions (p>.05), which also could be reflected in the means scores (see Table 4.32 and Figure 4.5). Although female respondents report higher mean scores on developmental focus, recognition, autonomy, collegiality, participation, open communication and positive environment in their school contexts, male and female teachers have similar evaluation on these dimensions with close mean scores. In addition, the differences between female and male respondents’ scores range from
0.06 to 0.20 based on Table 4.32 and Figure 4.5. Therefore, gender does not have impacts on the opportunity for teacher leadership.

The next demographic question comes to the teaching position in the survey. The position is categorized into two groups: teachers with formal or informal positions (e.g., subjects’ leaders, head teachers, excellent teachers, backbone teachers and teaching experts) and teachers without any positions. From Table 4.31, we can see that teachers without any positions are in the majority, accounting for 65% of respondents, which is approximately two times the amount of the teachers with formal or informal positions. However, the higher proportion does not result in a higher mean score. On the contrary, as shown in Figure 4.6 and Table 4.33, teachers without any positions report lower scores on the seven dimensions than teachers with formal or informal positions. It is clear that teachers with formal or informal positions present relatively good evaluations on the opportunities for teacher leadership, with the mean scores ranging from 4.04 (0.92) to 4.39 (0.62). The highest score goes to collegiality that is also the dimension teachers without any positions give the highest score to, which is 4.19 (0.69). Interestingly, these two groups both report two lowest scores on participation ($M=4.04, SD=0.92$; $M=3.77, SD=0.92$) and open communication ($M=4.11, SD=0.83$; $M=3.81, SD=0.87$) respectively. In addition, compared with other dimensions, the biggest differences in opportunities between two groups occur in these two dimensions as well, which are respectively about 0.27 and 0.30 (see Figure 4.6 and Table 4.33). In general, teachers with formal or informal positions reflect higher scores on every dimension than teachers without any positions.
**Figure 4.6**

*The Differences between Teachers with Formal or Informal Positions and Teachers without any Positions on the Opportunity for Teacher Leadership in School Context*

![Bar chart showing differences in opportunity for teacher leadership between teachers with formal or informal positions and teachers without any positions across seven dimensions: Developmental Focus, Recognition, Autonomy, Collegiality, Participation, Open Communication, Positive Environment.](image)

**Table 4.33**

*Results of T-test between Teachers with Formal or Informal Positions and Teachers without any Positions on Seven Dimensions of Opportunity for Teacher Leadership in School Context Survey (OTLSCS)*

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Teachers with formal or informal positions</th>
<th>Teachers without any positions</th>
<th>t-value</th>
<th>Sig.(2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Developmental Focus</td>
<td>4.33</td>
<td>0.58</td>
<td>4.14</td>
<td>0.72</td>
</tr>
<tr>
<td>Recognition</td>
<td>4.35</td>
<td>0.59</td>
<td>4.16</td>
<td>0.67</td>
</tr>
<tr>
<td>Autonomy</td>
<td>4.33</td>
<td>0.58</td>
<td>4.18</td>
<td>0.67</td>
</tr>
<tr>
<td>Collegiality</td>
<td>4.39</td>
<td>0.62</td>
<td>4.19</td>
<td>0.69</td>
</tr>
<tr>
<td>Participation</td>
<td>4.04</td>
<td>0.92</td>
<td>3.77</td>
<td>0.92</td>
</tr>
<tr>
<td>Open</td>
<td>4.11</td>
<td>0.83</td>
<td>3.81</td>
<td>0.87</td>
</tr>
<tr>
<td>Communication</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive Environment</td>
<td>4.26</td>
<td>0.66</td>
<td>4.05</td>
<td>0.77</td>
</tr>
</tbody>
</table>

*Note. * indicates $p < .05$; ** $p < .01$, which means that the result of the t-test is statistically significant.

The results of T-test presented in Table 4.33, indicate that there were statistically significant differences between teachers with formal or informal positions and teachers without any positions on the majority of the opportunities for teacher leadership provided by their schools. As mentioned above, two groups report the biggest difference in open communication where there is a score of 0.30 gap between them ($t=2.540, p=.012$). Similarly, participation reflects 0.27 gap ($t=2.092, p=.037$). Besides these two dimensions, developmental focus, recognition, collegiality and positive environment are also found to have statistically significant differences between two groups, ranging from approximately 0.18 to 0.21 with $p$ value all less than .05. Compared with these six dimensions, teachers with formal or informal positions and teachers without any positions report closer mean scores on autonomy, respectively 4.33 (0.58) and 4.18 (0.67). In addition, the test result also confirms that there is no significant difference between two groups on the opportunity in autonomy provided by their schools ($t=1.719, p=.087$). Therefore, given these results, we could conclude that teaching positions can influence the majority of opportunities for teacher leadership provided by school contexts.

The last demographic variable is the teaching years. In this study, teaching years are categorized into three ranges: 1-5 years, 6-10 years and over 10 years (see Table 4.31). There are more than half of respondents (54.7%) belonging to young teachers with 1-5 years’ teaching experience, 73 teachers (31.2%) from the range of 6-10 teaching years, and 33 respondents (14.1%) from the most experienced teaching
group. As the results shown both in Figure 4.7 and Table 4.34, respondents with over 10-year teaching experience perform the highest scores in developmental focus, recognition, collegiality and positive environment between groups, respectively 4.29 (0.51), 4.40 (0.56), 4.47 (0.51) and 4.22 (0.60). For autonomy, participation and open communication, respondents with 6-10 years’ teaching experience report the highest scores among the three groups. From Figure 4.7 and Table 4.34, it can be seen that on autonomy, the 6-10 years group performs the highest degree \(M=4.39, SD=0.70\), while the 1-5 years group is the lowest \(M=4.12, SD=0.62\), which leads to a difference of 0.27. In addition, it is interesting that young teachers with 1-5 working years’ experience have higher scores than those most experienced teachers on participation. Although young teachers also present slightly a higher score on open communication, the mean scores are close among each group, ranging from 3.90 to 3.93. Moreover, three groups all report relatively lower scores on participation and open communication than other dimensions. From Figure 4.7 and Table 4.34, it can be seen that teachers with 1-5 years’ teaching experience reflected relatively lower scores in these opportunities, compared with other groups.
Figure 4.7

The Differences among the Three Ranges of Teaching Years on Dimensions of Opportunity for Teacher Leadership in School Context Survey (OTLSCS)

Table 4.34

Results of ANOVA among the Three Ranges of Teaching Years on Seven Dimensions of Opportunity for Teacher Leadership in School Context Survey (OTLSCS)

<table>
<thead>
<tr>
<th>Dimension</th>
<th>1-5 years</th>
<th>6-10 years</th>
<th>Over 10 years</th>
<th>F-value</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Developmental Focus</td>
<td>4.15</td>
<td>0.65</td>
<td>4.26</td>
<td>0.78</td>
<td>4.29</td>
</tr>
<tr>
<td>Recognition</td>
<td>4.15</td>
<td>0.59</td>
<td>4.28</td>
<td>0.76</td>
<td>4.40</td>
</tr>
<tr>
<td>Autonomy</td>
<td>4.12</td>
<td>0.62</td>
<td>4.39</td>
<td>0.70</td>
<td>4.35</td>
</tr>
<tr>
<td>Collegiality</td>
<td>4.19</td>
<td>0.65</td>
<td>4.28</td>
<td>0.76</td>
<td>4.47</td>
</tr>
<tr>
<td>Participation</td>
<td>3.87</td>
<td>0.89</td>
<td>3.94</td>
<td>1.04</td>
<td>3.68</td>
</tr>
<tr>
<td>Open</td>
<td>3.92</td>
<td>0.84</td>
<td>3.93</td>
<td>0.96</td>
<td>3.90</td>
</tr>
<tr>
<td>Communication</td>
<td>4.08</td>
<td>0.73</td>
<td>4.15</td>
<td>0.83</td>
<td>4.22</td>
</tr>
<tr>
<td>Positive Environment</td>
<td>4.15</td>
<td>0.65</td>
<td>4.29</td>
<td>0.78</td>
<td>4.47</td>
</tr>
</tbody>
</table>
Note. * indicates $p < .05$; ** $p < .01$, which means that the result of the t-test is statistically significant.

ANOVA is the other test adopted to see whether there is significant difference between groups. Based on the results of ANOVA test from Table 4.34, it can be seen that there is statistically significant difference among groups in autonomy ($F=4.791$, $p=.009$). This result could be illustrated in Figure 4.7. As mentioned above, the difference between teachers with 6-10 years of teaching experience and teachers with 1-5 years of teaching experience is as large as 0.27. In other dimensions, there are no statistical differences among the three groups. Therefore, it can be preliminarily concluded that the teaching years have influences on the opportunity in autonomy for teacher leadership provided by schools.

**Summary of the Chapter**

Based on the four dimensions of the attribute of teacher leadership and seven dimensions of the opportunity for teacher leadership and the results of reliability and validity of two surveys, this chapter offered an overview of the quantitative analysis and presented the results. This study adopted descriptive statistical analysis, T-test and ANOVA to answer the questions: What are the attributes of teacher leadership that teachers have within Chinese junior and senior high schools? In what ways do teachers exhibit these attributes of teacher leadership? How do schools provide opportunities for teachers to develop teacher leadership within the Chinese junior and senior high schools’ context? What evidence exists to demonstrate schools’ success in providing such opportunities? According to the quantitative results, teachers reported relatively high scores on the attribute of teacher leadership. The highest score was reported on cooperation, while the lowest happened on perception. Simultaneously,
teachers also reported high scores on the opportunity for teacher leadership. Collegiality obtained the highest score and the participation got the lowest.

In addition, through the analysis, it could be found that no matter whether teachers had leading positions, what gender they were and how many years they worked for, teachers did not present significant differences in the attribute of teacher leadership. Therefore, teachers’ genders, positions and teaching years had no influence on the attribute of teacher leadership. Similarly, gender did not influence the opportunity for teacher leadership. However, teachers’ positions have significant influence on six dimensions of teacher leadership except autonomy. Moreover, years of teaching experience only had a significant influence on autonomy.

This chapter provides a big picture for the attribute of teacher leadership and the opportunity for teacher leadership development. To make deep understanding and interpretation of teacher leadership, interviews were conducted with 15 teachers. The results of interviews will be presented in the next chapter. The qualitative findings provide support and enhance the quantitative analysis.
Chapter 5

Qualitative Analysis and Findings

This chapter presents the main findings from the qualitative phase of our study. After the qualitative analysis from fifteen interviews, eleven categorical codes and three themes were extracted. As shown in Table 5.1, the first theme is “Opportunities to Exhibit of Teacher Leadership Attributes”. The second theme is “Challenges in Teacher Leadership Development”. The third theme is “Expectations for Opportunities Provided by School Context”. The qualitative data not only provided validation and support for the quantitative results, they simultaneously deepened understanding of teacher leadership in the Chinese context and explored the challenges and expectations of teachers as leaders throughout the developmental process for their skills and competencies.

Table 5.1

Themes and Categorical Codes Extracted from Interviews

<table>
<thead>
<tr>
<th>Theme</th>
<th>Categorical code</th>
<th>Initial code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunities to Exhibit Teacher</td>
<td>Opportunity in Development Focus to Improve Instructional Knowledge and Skills</td>
<td>Providing training and guidance by inviting teaching experts for teaching knowledge and skills</td>
</tr>
<tr>
<td>Teacher Leadership Attributes</td>
<td></td>
<td>Being channels and sources of information and resources for teaching and learning</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Encouraging experienced teachers to mentor novice teachers for instructional development</td>
</tr>
<tr>
<td>Opportunity in Recognition to</td>
<td>Reinforcing self-affirmation of teachers in recognition</td>
<td></td>
</tr>
<tr>
<td>Influence Teachers’ Perception</td>
<td>Consolidating teachers’ self-perception in students’ development in recognition</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mutual stimulation</td>
<td></td>
</tr>
<tr>
<td>Opportunity in Autonomy to</td>
<td>Autonomous to adopt suitable instructional adjustments based on students’</td>
<td></td>
</tr>
<tr>
<td>Manipulate Teaching in the Classroom</td>
<td>evaluations</td>
<td>Aware of exploring innovative and creative methods for students’ learning</td>
</tr>
<tr>
<td>Opportunity in Collegiality to Function in the Teacher Community</td>
<td>Initiative to take responsibilities in professional learning community</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td></td>
</tr>
</tbody>
</table>
| Opportunity in Participation to be Involved in Important School-level Action | Indirectly involving in decision-making on the development of school  
Directly participating in professional title evaluation and the vote for leaders |
| Opportunity in Open Communication to Dialogue for Integral development | Formal communication ways to improve collective teaching quality  
Informal communication ways to mainly focus on personal teaching quality  
Open accesses for teachers to give their voices |
| Opportunity in Positive Environment to Engage in Teaching and Learning | Support for teachers in a satisfying and harmonious working environment  
Significant impact on teachers’ professional development through school environment |
| Challenges in Teacher Leadership Development | Increased teaching difficulty and increased working load for teachers to adapt to the reform  
Lack of guidance for testing during the New Curriculum Reform |
| Challenges to Evaluate and Estimate Students’ Situations | Challenge of applying appropriate teaching models according to the actual characteristics of students  
Challenge of achieving tailored instruction in the classroom teaching process |
| Expectations for Opportunities Provided by School Context | Expectations of teacher training from personal and colleague experience  
Expectations for teacher training due to the demands of the New Curriculum Reform  
Expectations of teacher exchange based on geographic limitations |
| Expectations to Mentor Students for Long-term Development | Expectations for students to gain knowledge and proper values  
Expectations for helping students with their mental health development |
As Table 5.2 illustrates, participants who were recruited for individual interviews are fifteen Chinese junior and senior high school teachers. Two of them are males, and thirteen of them are females. The interviewees are in charge of eight different disciplines, and they also have a wide range of teaching experience, so we were able to access diverse voices of teachers from arts teachers to science teachers and from novice teachers to experienced teachers. In addition, seven of them are class masters, one is director, two are excellent teachers and two are backbone teachers, these twelve teachers are all considered as teachers with formal or informal positions according to the classification in Chapter Four. In the same way, three regular teachers are classified as teachers without any positions in our study. Therefore, a variety of perspectives from Chinese junior and senior high school teachers were collected and analyzed.
Table 5.2

Demographic Information of Interviewees

<table>
<thead>
<tr>
<th>Interviewees</th>
<th>Code</th>
<th>Gender</th>
<th>Discipline</th>
<th>Teaching Years</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anna</td>
<td>INT1</td>
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<td>INT15</td>
<td>Female</td>
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Note. Regular teachers in this table are teachers without any leadership positions or honorary titles.

Opportunities to Exhibit Teacher Leadership Attributes

Based on the analysis from Chapter Four, we have identified four attributes of teacher leadership in the Chinese context: perception, influencing, cooperation, and knowledge and skills. In addition, seven opportunities for teacher leadership provided by Chinese school contexts are elaborated from the last chapter as well, which are: developmental focus, recognition, autonomy, collegiality, participation, open communication and positive environment. All these results provided a clear overview
and the big picture of what the attributes of teacher leadership and opportunities provided by schools are and how they look like in the Chinese context.

In order to make a deep understanding and a further interpretation of these attributes and opportunities, this section provides qualitative evidence from fifteen teachers’ interviews. Therefore, the qualitative analysis offers support to the quantitative results presented in Chapter Four, confirming and validating the attributes performed by Chinese teacher leadership and schools’ success in providing opportunities for teacher leadership. Simultaneously, the qualitative data tells the stories of how teachers saw the opportunities as impetus to cultivate competencies and skills of teachers, which reflected the attributes of teacher leadership.

**Opportunity in Developmental Focus to Improve Instructional Knowledge and Skills**

Through interviews with fifteen teachers, the researchers found that the school provides various opportunities for teachers to gain new knowledge and skills. Teachers’ professional development and training are emphasized in the school context. In this section, according to qualitative data, both the opportunity in development focus and the attribute of teacher leadership were confirmed. Teachers spoke of how they were provided with needed assistance and guidance for their professional development by schools, and how they are mentored and supported by their mentors. Working in the school focusing on teachers’ development, teachers could have the opportunity to facilitate their instructional knowledge and skills and reflect the attribute of teacher leadership.

**Providing Training and Guidance by Inviting Teaching Experts for Teaching Knowledge and Skills.** Anthony (INT2) is a director in charge of teaching in his school. At the same time, he is also an excellent mathematics teacher who has
been teaching on the front line for 20 years. He appreciated the opportunity for teachers to get access to experts, which made teachers gain different teaching strategies to improve their professional competencies, and also helped teachers enhance their teaching philosophy. During his interview, he answered how the school provides teachers with supportive training:

From the school level, we invite backbone teachers or famous teachers from our school to give guidance to other teachers within the same grade level, relating to the discipline these experts are familiar with, or organize experts to explain how they understand the teaching skills and knowledge imparting, and make students better grasp knowledge and contents from the curriculum. They also give an experience presentation to other colleagues in the school. If conditions permit, our school also invites some experts from other schools or institutions, in order to enrich our teachers’ knowledge of the outside environment. In addition, experts are invited to give our teachers theoretical instructions, to interpret current education frontiers or relevant content of the New Curriculum Reform and so on.

Regarding the learning opportunities from experts and backbone teachers, INT2 commented that: “The school provides us with these opportunities and so much support, which has positive impacts on our personal teaching, and simultaneously has strict requirements for the teaching of each teacher.” When he encountered relevant content of the New Curriculum Reform, he appreciated the experts’ interpretation and theoretical instructions, and more valued the learning and regenerating process, noting:

To understand and interpret the new curriculum, I am still a novice. So this is a learning and updating process for the teachers, which also makes teachers
take the initiative to learn and accept the fresh and cutting-edge teaching ideas. In my opinion, it promotes teachers’ more autonomy to make teaching plans, and also promotes teachers’ more motivation of independent learning about instructional strategies.

This opportunity leads him to a new requirement for their teaching, making him autonomous and motivated to pay attention to curriculum development, keep contact with fresh teaching ideologies and promote teaching knowledge and skills.

Similarly, Anna (INT1), a female English teacher with 11 years of teaching experience, shared “In our school, our school invests a lot in the development of teachers. Some experts with professional achievements are invited to give some lectures in our school. They also walk in classrooms and give guidance to teachers.” She really appreciated the learning opportunities the school provided for her and viewed the opportunities as an approach to improve her teaching skills. She continued stating: “the guidance and training provided by the school have greatly improved my teaching skills. As a teacher, my teaching skills are constantly improving.” She also pointed out that it was essential for students’ academic performance and the development of schools to improve teachers’ instruction, sharing: “my teaching skills are improving, which also results in the improvement of my students’ academic performance. And the development of the school is also consistent with every teacher’s constant improvement.”

**Being Channels and Sources of Information and Resources for Teaching and Learning.** For these training and practical opportunities, school not only plays a role as provider, but also as a messenger. Because of timely information about training organized by schools or teaching communities at the district and city levels, teachers could have chances to participate in these activities for their professional
development. Therefore, besides platforms for teachers to develop, schools are also channels and sources of information, expanding teachers’ horizons. Jennie (INT7) is a female class master who has taught Chinese for 20 years. She illustrated that her school focuses on providing teachers with long-term professional development opportunities. She said:

Our school actively transmits various training notices issued by higher education departments to all teaching and research groups, so that teachers can directly observe the excellent classes. My school also recommends such an observation so as to expand teachers’ horizons through learning from larger and superior teaching and learning communities. In addition, the school provides opportunities for teachers and encourages them to participate in teaching competitions individually. During this process, they can constantly improve their professional ability, so as to better develop themselves and get such an opportunity to expand their horizons.

Joy (INT8) who had taught mathematics for 11 years also expressed: “The school not only provides training for teachers on how to use multimedia and equipment or small programs, but also releases new information on the Internet about current teaching.” No matter what questions they have, they would definitely be answered. She continued saying: “The school also offers online training resources, which are videos that have been recorded, and teachers can watch the training videos on their own time. These help us a lot in our professional development and learning.”

Similarly, Helena (INT5), a female class master with 17-year teaching experience of history, also talked about how the school helped teachers get resources for their curricula online:
It is not just about lectures. For example, when we prepare materials for class, the school also registers some academic and curriculum website membership for us, and then allows us to download and learn some new resources through the Internet. For example, our school has registered the subject website, and then the subject website will have a lot of course resources for our class preparation, or some test papers that we can use.

**Encouraging Experienced Teachers to Mentor Novice Teachers for Instructional Development.** In addition to these training and practical activities, almost all teachers mentioned the support from their mentors. The mentoring activities initiated by schools are mainly targeted at new teachers. The mentors are those teachers who have years of teaching experience and could give guidance and assistance regarding teaching skills and classroom management. When new teachers encounter difficulties in curriculum and teaching skills, mentors could offer timely support and assist new teachers solve problems as soon as possible, which helps new teachers remove the barriers to their professional development. For example, as a teacher with only two years of teaching experience, Sky (INT11) worked as a regular teacher and stated the opportunity provided for new teachers in her school:

> Our school has carried out the activity of mentoring, which is mainly aimed at our new teachers who have been working for less than three years. Each of our new teachers is taught by a veteran teacher who is their mentor, and then the veteran teacher is welcomed to attend new teachers’ classes at any time where mentors could observe the whole teaching process. If the mentor finds any weakness in the new teacher’s teaching, he will point it out to him or her, and then the mentor will provide coaching opportunities in the future and help the
novice teacher progress in their constant practices. In addition, the new teacher also has the opportunity to observe the mentor’s class.

Xilia (INT15) had been teaching Biology for 17 years and she pointed out that when a new teacher started to conduct real teaching practices, it was hard for them to apply the knowledge and skills learned in the university to the class, and also difficult to convey the knowledge to students in an understandable way. Encountering this situation, it is important for new teachers to find someone to help them. However, novice teachers cannot tell which teacher was suitable. Therefore, schools will “take the responsibility to find an excellent and appropriate teacher to be the mentor. The mentor will give the proper support and guidance about instruction and classroom management to the new teacher.” She also emphasized the generous assistance from the mentor and continued saying “if a new teacher has a mentoring relationship with the other teacher in the school, the mentor will guide you and help you without reservation. My mentor has taught me for many years.”

From the above evidence from interviews, it is clear that most schools focus on the professional development of their teachers, and they make efforts to provide opportunities for teachers to improve their teaching skills and competencies via initiating training and guidance activities, sharing the latest resources, and carrying out mentoring activities by experienced teachers. Through these opportunities, teachers facilitate their instructional development and broaden their teaching knowledge, making them grow into qualified teacher leaders who could exhibit their teacher leadership with their professional knowledge and skills. In summary, the opportunity in development focus provided by school context and the attribute of knowledge and skills of teacher leadership are both validated by the qualitative data.
Opportunity in Recognition to Influence Teachers’ Perception

The school with the culture of recognition values the contributions of teachers and is filled with respect and caring among teachers, which provides a healthy environment for teaching and learning, as well as opportunities for the positive development of teachers. The qualitative data from these Chinese teachers’ interviews further confirms the quantitative results about recognition, which offers evidence to support and supplement the opportunity in recognition in the Chinese school context. At the same time, the attributes of teacher leadership are confirmed in this part. Every teacher interviewed said that the respect and recognition they received from school and colleagues was largely spiritual.

Reinforcing Self-affirmation of Teachers in Recognition. Recognition from colleagues is an affirmation of teachers’ instructional competencies. Wendy (INT14), a female class master who taught English for 20 teachers, shared her experiences that teachers respected and celebrated each other’s success in teaching and classroom management, and stated:

Our teachers have QQ and WeChat group chats. For example, if one of our teachers participates in a teaching activity in the district and achieves good results with being rewarded with a certificate, the leader in our group chat will share the good news, and then we will express our congratulations to the colleagues in the group chat. If the teachers working in the same curriculum group are familiar with each other, they will congratulate him or her in person and say “you are excellent!”, “it is such a great class!” or “you did a great job in class management!” I think such language communication or face-to-face praise can also be regarded as recognition for such a good teaching or management of the class.
INT15 similarly expressed that her school also valued the contribution of teachers and gave full recognition to teachers’ abilities. She said:

Most of the rewards and recognition is from the spiritual level. Our school measures a teacher’s ability not only from students’ results, but also from such as how teachers and students get along with each other, the daily teaching practices, and the ability to organize classroom activities. When a teacher performs well in these areas, he or she will get recognized by their colleagues and the school.

In addition to the affirmation of teachers’ abilities, recognition also brought self-fulfillment and a sense of achievement to teachers, which could promote teachers’ self-affirmation. INT15 continued saying: “After all, as a teacher, most of the time we will not have physical and material rewards, but I think I got great fulfillment and reward in spiritual aspects, which makes me feel happy to work in our school.” Spring (INT12) teaching politics for 20 years and working as a class master, expressed the similar feeling and talked about the recognition in her school:

In fact, you know that the content of a teacher’s work exists in an invisible form. The work content of teachers exists in the daily process of dealing with the problems relevant to students and teaching practice, as well as communicating with administrators and teachers. The recognition in these various processes is actually accepted by teachers themselves. This recognition is not about specific material rewards or other types of rewards, but mainly about the teacher’s self-fulfillment in spirit. For example, a word of recognition from students’ parents, a word of love from students, a word of praise from leaders, and a word of encouragement from colleagues are all
different ways for teachers to get rewards and recognition. They are all forms of recognition that can make teachers happy for a long time.

INT2 also thought “the recognition of parents and students is the biggest reward for me” especially when parents and students express their thanks for my caring and the students’ progress. “When I hear such language, I feel it trumps all other words,” he added. Based on the words above, it can be found that besides affirmation from colleagues, teachers also value the recognition of students whose development and achievement bring meaning to teaching and lead teachers to happiness and self-fulfillment, which all reinforced the self-affirmation of teachers.

Consolidating Teachers’ Self-perception in Students’ Development in Recognition. In addition to self-affirmation, recognition also consolidates the perception of teachers to devote themselves to make their students develop and progress. And, what teachers care about most is students’ future studying and whether they possess skills to function well in their social life. Linda (INT10) was a backbone teacher who had taught Chinese for 20 years, sharing:

Whether working with colleagues and leaders, or conducting my teaching practices with students, as a teacher, of course, I want to get recognition from them and to help my students. The profession of teacher is mainly teaching and educating people, and teachers might prefer to chase some recognition for our work. Leading students to development and progress is our teachers’ ultimate goal. We actually focus more on the students. Because I, as a senior high school teacher, consider whether my students can adapt to university study, and whether they can integrate themselves into the society in the future. Senior high education is a key stage for students to form their outlook on life and value. Therefore, we not only pay attention to their study, but also focus
more on whether each student can establish a correct outlook on life and
values, which I think is very important.

Similarly, Bob (INT3), an excellent teacher with 23 years of teaching
experience in chemistry, pointed out that the recognition of colleagues and leaders is a
great reward in the teaching field when a teacher makes certain progress or
achievements. He thought teaching is “a matter of a teacher’s conscience”, which all
starts off by considering every single student’s development. Therefore, “the spiritual
reward brings us more happiness than the material reward”, he stated, and added:

Every motivated teacher has a strong sense of honor. After obtaining the
achievement of the work, the teacher will gain recognition of the students,
parents, and colleagues. The sense of approval is the main aspect that many
teachers pursue in their teaching processes. Of course, schools will also give
teachers modest and appropriate material rewards. However, spiritual rewards
are still the main way the school provides for teachers. For teachers, the value
and the sense of achievement are both embodied in students’ development.

Regarding these interview data, it can be found that mutual respect and
recognition among each colleague, and parents and students’ appreciation and
approval all made them meaningful and fulfilled. It is clear that teachers aim to
facilitate students’ learning and achievement and devote themselves to teaching and
student’s development. Moreover, the teachers’ perceptions are consolidated by the
happiness and self-fulfillment brought from the recognition of colleagues, leaders and
students. Furthermore, recognition also affirmed teachers’ willingness to continuously
focus on their own professional development and teaching competencies. For
example, INT1 spoke of how recognition raised her consciousness of constantly
facilitating her teaching skills:
Of course, colleagues and managers will show their respect if you’re making real progress. I think it is mainly a psychological and spiritual promotion. I believe that people are born to be good and that it’s a virtuous cycle to get progress and development. If you’re recognized, then you want to do better, so I think it’s kind of a virtuous circle for your own development and teaching competencies. And if your own quality develops better, then your teaching performance will progress.

**Mutual Stimulation.** Besides self-perception, recognition could also stimulate teachers to learn from each other to develop instructional capabilities. INT2 stated: “Of course, after one teacher gets an achievement or is rewarded, colleagues will express congratulations. Usually, colleagues will be inspired to learn from him or her, instead of feeling uncomfortable or jealous”. Similarly, INT7 also pointed out that the influence was not just on individual development, but also on the whole discipline’s progress in the school. She shared:

When someone or a subject group progresses and gets an achievement, there will be praise especially at the teaching convention in our school. When the subject group obtains recognition and praise, for example, being encouraged occasionally with some material rewards and mostly with spiritual rewards, every teacher in this subject group will congratulate each other for the development of themselves and their whole discipline. In addition, other subject groups will also express admiration and congratulations, and then they will express the confidence and determination to work hard in the future. Therefore, it is relatively positive for the development of every single teacher and discipline.
Similarly, Hera (INT6) who taught English for 11 years also pointed out that when teachers were praised by the school to endow them with some honorary titles for their teaching achievements, other teachers felt both stressful and inspired. She stated:

When teachers get achievements in their work, the school will give some of them honorary titles. For the other teachers teaching the same subject in other grades, the teacher felt stressful. They will also feel very envious of the teacher who was finally awarded this title by the school. It is also a kind of encouragement for their future work.

Therefore, from the interviews, it can be concluded that in most schools, teachers are valued for their development and achievement. The school context, filled with mutual respect and recognition from leaders, colleagues and students, will facilitate the self-fulfillment and a sense of achievement of teachers. Simultaneously, working in this supportive environment, teachers could strengthen their self-affirmation of teaching competencies; consolidate self-perception of focusing on professional quality and students’ development; and stimulate each other to prepare themselves for professional growth.

**Opportunity in Autonomy to Manipulate Teaching in the Classroom**

Teachers are the conveyor of knowledge and the direct participant in teaching and learning practice. Based on learners’ requirements and diverse situations, teachers need to take initiative to circumstantially adjust their instructional strategies and make the communication with students effective and comfortable. The school plays an important role in teaching and learning activities. When schools provide autonomy for teachers to make adjustments and to change, teachers will have opportunities to facilitate their professional development and enhance teaching quality. The interview
data in this section confirms the autonomy provided by schools for teachers to
develop the attribute of teacher leadership. Fourteen teachers expressed that although
there were unified learning guides, they all had the autonomy to make adjustments
based on students’ situations and their own teaching styles.

**Autonomous to Adopt Suitable Instructional Adjustments Based on
Students’ Evaluations.** Teachers perceived that given the tradition of collective
lesson preparation in Chinese schools, autonomy happens more in classrooms and
teaching practices. “Teachers’ autonomy can be demonstrated by the control of the
class,” shared by INT7. She expressed that she made adjustments on the premise of
teachers having made relatively consistent teaching plans in collective lesson
preparation, and continued saying: “how to implement the teaching objectives in class
is completely under their own control during the 40-minute class, so innovation can
also be reflected in the 40 minutes of class time”. Autonomy endowed teachers’ space
to adjust their teaching strategies, teaching modes and class design based on the
evaluation of students. INT2 pointed out: “Because students have different
characteristics and various levels, my teaching style, teaching skills, or methods will
be circumstantially adjusted for the students”. Similarly, INT5 also stated:

> Because the teaching style of each teacher is different, and the school does not
give us unified regulations on how we teach in our class. For example, the
school will ask for a study guidance plan to help students prepare for class.
Although our learning guidelines for the same subject are relatively unified,
the school does not restrict teaching mode or specify how we arrange teaching
steps in the teaching process. From this aspect, our school gives us a lot of
space to make timely adjustments according to our own teaching style and the
continuous evaluation of the students’ learning situation in my class.

Therefore, teachers’ autonomy is relatively strong.

Not only the autonomy to adjust instructional strategies, teachers also take initiative to adjust teaching resources and additionally choose appropriate materials, which could be supportive of their curriculum and be helpful for their students’ understandings. This process is dynamic and circumstantial. For example, INT7 stated:

Encountering the New Curriculum Reform this semester, many curriculum contents are new, so our teaching plan will be adjusted and changed compared with previous instructions. Each teacher’s perception of how to adjust and change will differ in various details. There is a space for independent innovation for teachers in terms of how to make better use of teaching resources and what resources they can use for reference.

Sunny (INT13), a backbone teacher who taught geography for 18 years, similarly stated: “Although the school highly recommended to use learning guides in our daily teaching, we still have the right to free choice and make some adjustments, because sometimes this way of teaching is not suitable and applicable for every class.” She continued saying: “It may be suitable for you to explain with video material, or to vividly present the curriculum with courseware. If you find the materials inapplicable and unsuitable for your students, you can make independent adjustments, which is totally accepted.” Teachers believed that the autonomy embodied both in the adjustment of the instruction and the application of materials. INT1 spoke of how her school encouraged teachers to expand materials and to integrate their own understanding with teaching materials:
The school does not have specific regulations to teaching form and method, or how much knowledge and extracurricular knowledge to teach, which all requires teachers to control and adjust based on their students. Therefore, in these areas teachers can have some personal space to convey knowledge to students with their own understanding. In terms of the use of teaching materials, the school encourages teachers to integrate teaching materials with their own cognition and then teach them to students.

From the qualitative data above, it can be found that schools provided autonomy for teachers to make adjustments to students’ learning, involving instructional strategies and the application of teaching materials. In this supportive environment, the knowledge and skills of teachers were presented and facilitated. Teachers were able to make continuous evaluation of their teaching and student’s learning, synthesize and apply teaching resources, and make appropriate adjustments.

**Aware of Exploring Innovative and Creative Methods for Students’ Learning.** In addition to the right to apply knowledge and skills to adjust instruction, schools also endowed teachers’ autonomy to explore innovative and creative methods for students’ learning. Teachers continuously focused on the learning quality and achievement of students; be conscious of adopting innovative, creative, and appealing and experimental teaching approaches; and take initiative to motivate students. INT12 expressed that her school encouraged teachers to exert their characteristics to teach and teachers were willing to dedicate themselves to students’ achievement. She stated:

> We pay special attention to cultivate students now. Because of new curriculum reform, every school is exploring instructional approaches. Our school advocates student-centered instruction and gives the classroom back to students in the process of new curriculum reform. Teachers just play a role in
assistance and guidance. Each teacher has his or her own personality and characteristics, so schools encourage teachers to give full play to their expertise. As long as it can attract students, let students learn something and make them improve their capacities, we are willing to do it. Therefore, we have relatively more autonomy and innovation.

Hera (INT6) talked about how she designed an English dubbing activity for students during the pandemic, which obtained the support of the school. She made efforts to stimulate students to participate in the activity. She thought that student achievement was related to the “joint force” of students and teachers. This “joint force” could be amplified by adopting innovative and creative means both inside and outside the curriculum. She continued saying:

In fact, the school gives our teachers a lot of space and freedom to make innovation. It is very supportive of us because both students and teachers need a space. The school hopes that students can learn more from this innovative learning process and have a high level of improvement.

Similarly, INT3 perceived that when the school made an overall plan, it would consider the diversities among different disciplines and allow teachers to motivate students to the maximum extent, which made him focus on how to keep students enthusiastic in learning. He stated:

Because each subject has its own content, the teaching method will be different. I am a science teacher, and my class may focus more on experiments. For example, when I design the experiment, in addition to the content of our textbook, I can also properly arrange some small family life experiments, which can improve the enthusiasm of students to learn.
However, INT11, as a novice teacher, spoke of the limitation of her autonomy. She said: “I have the autonomy to adjust my class, but for other aspects, I think I don’t have enough right to regulate students. As a regular teacher, my power is limited to decision-making within the classroom, compared with outside the classroom.”

Based on the interviewees’ answers, most schools fully gave teachers autonomy for their teaching in the classroom, and did not give teachers too many restrictions. Most teachers had the right to change and adjust teaching strategies independently. In this applicable condition, teachers sustained and strengthened their perception, focusing on students’ learning and teaching quality by continuously innovating instructional methods. Simultaneously, teachers exerted their competencies to make instructional adjustments contextually based on the evaluation of students, and organize information and resources.

**Opportunity in Collegiality to Function in the Teacher Community**

Collegiality is a critical component of a successful school, reflecting teachers’ engagement and professionalism. In this section, each of the teachers interviewed indicated that there was a cooperative relationship between teachers, especially in terms of their teaching and student-related matters. The data both confirms the opportunity in collegiality for the development of teacher leadership and the attribute of teacher leadership. Based on the interviews, the researchers found that in Chinese junior and senior high schools, teachers were regularly organized to carry out collective lesson preparation activities where most collaboration between colleagues is reflected. Teachers took initiative to communicate and share views, and took responsibilities in their teaching groups. Moreover, cooperation also happened among teachers in solving students’ academic problems.
Initiative to Take Responsibilities in Professional Learning Community. It is very important for a good relationship between teachers to maintain a good cooperative manner. A collaborative environment values participation of individuals with respective responsibilities. In the process of managing to complete the task assignments in a group, teachers not only get self-improvement, but also contribute to an effective collaboration for the collective teaching quality. For example, INT15 expressed the good relationship between colleagues during their collaboration. She said:

In our school, colleagues cooperate happily, and there is no dispute between colleagues about who does more work and who does less work, who does difficult work and who does easy work. Teachers take on their own responsibilities voluntarily. In fact, while preparing teaching resources in cooperation with others, teachers are also polishing and actively cultivating their own professional abilities.

Teachers were willing to take initiative to share responsibilities with others and regarded the collaborative opportunity as a developmental process for their competencies. Similarly, INT2 also presented how teachers took respective responsibilities in collective lesson preparation and how they promote personal capabilities and foster relationships in the process.

There are four teachers in my grade who teach the same subject as me. When we make an outline for the learning guides, all four of us are responsible to read our own materials and then put forward individual ideas or opinions, which will be helpful to our personal teaching improvement. In addition, it improves the emotional communication or academic communication between
colleagues as well, which both leads to our common progress and avoids some misunderstandings.

**Communicating Ideas and Sharing Resources for Teaching Improvement.**

In addition, in collective lesson preparation activities, teachers discussed teaching plans and arrangement, analyzed problems encountered or to be encountered by students, communicated opinions and shared teaching resources with each other. When INT7 talked about teaching planning, she pointed out that teachers would communicate about students’ learning issues they predicted, and stated: “Colleagues communicate with each other about the specific issues that need to be paid attention to, discuss teaching content of curriculum for this week, and then clearly write the teaching plan at the same time.” She continued saying:

In this process, each group member can take initiative to provide their advice and ideas, and then after the discussion and adjustment among the members, the ultimate plan will be settled. At the same time, if teachers find good teaching resources in the process of lesson preparation, they will learn from each other and share with their colleagues.

INT14 also stated: “The collective lesson preparation group holds regular meetings with teachers to arrange our teaching tasks, teaching plans, and sharing of key points and difficulties in teaching. In addition, we share good teaching resources with our colleagues.” In addition to collective lesson preparation, teachers in the same teaching group also shared suggestions with each other. She continued saying:

If I participate in a curriculum competition in our district on behalf of the whole group, the teachers in the same group will listen to my class beforehand, and then help me to revise the courseware or make some suggestions. Then I will integrate their ideas and adjust my curriculum.
Similarly, INT5 spoke of how teachers assisted each other to improve their instructional competencies by sharing effective feedback after observing classes:

Our school values the heterogeneous forms for the same subject. Therefore, every semester, all teachers will go to one classroom to observe the class. After observation, we will find time together to make evaluations and share feedback about what specific problems need to be adjusted in time, such as improving the effectiveness of the classroom or mobilizing students to participate in class.

**Making Discussion about Students’ Academic Issues and Making Solution Together.** In addition, teachers also presented their collaboration in making solutions to students’ academic problems. INT11 said: “If we find some difficulties in teaching, several teachers will get together to discuss how to teach the knowledge to students.” Similarly, INT13 points out the cooperation between teachers from a different angle, that is, the cooperation between the class master and the subject teachers.

This kind of mutual cooperation between the class master and the subject teacher is mainly reflected in the student’s study. If it is a student’s issue in the learning, the subject teacher will report the student’s current situation to the class master, and the class master will take the initiative to communicate with the subject teachers to work together to solve this problem. In our school, there are regular discussions between teachers about student performance.

Dream (INT4) was an English teacher with 15 years of teaching experience. She also talked about the cooperation between class master and subject teachers: “The communication between the class master and our subject teachers is mainly conducted after exams or some students presenting learning or behavior problems, which all
draw attention from teachers. We make mutual communication and cooperate together to solve these problems.”

Teachers working in a school with an environment of collegiality could mutually communicate instructional strategies and discuss teaching plans; share resources and ideas related to students’ learning with each other; and provide feedback and advice for colleagues. Simultaneously, these competencies are constantly facilitated in the collaborative relationship and embody the attribute of teacher leadership which involves sharing assistance, fostering relationships and taking responsibility among colleagues. When teachers play a positive role in their collaborative working with others, the competency of the whole teaching community will develop.

**Opportunity in Participation to be Involved in Important School-level Action**

Almost all interviewees indicate that schools provide teachers with opportunities to participate in decision-making. Teachers have the right to vote and make decisions in the selection of leaders, they also have the right to be involved in important decisions, especially about teaching and research issues. In general, teachers are involved at the school-level action in two main ways, indirectly and directly. With regard to school development issues, voting by the faculty representative conference is an effective form of indirect teacher participation in school decision-making. When it comes to the selection of leaders, the evaluation of titles, and the election of teacher representatives, it is the direct participation of all teachers.

**Indirectly Involving in Decision-making on the Development of School.**

Most of the interviewees mentioned that their school had a faculty representative conference, and many of them said that their schools’ decisions were made through
democratic assessments, which were relatively fair. A number of teachers mentioned the existence of faculty representative conferences at their schools as a way for teachers to participate in decision-making. Among them, INT2, as a formal leader in his school, stated the current situation in his school from a leader’s perspective:

In fact, in our school, there are almost no so-called administrators. I am equivalent to a teacher administrator, but I also teach students. For instance, today I have two classes in the morning and four classes in the afternoon, so when I am with other teachers, our topics are more about academic discussions... When teachers are needed to participate in the development of the school or other decision-making aspects, we will hold a faculty representative conference. Every decision of the school is not decided by the school administrators, but must be decided by the faculty representative conference and the collective discussion of all teachers’ representatives. The opportunity for teachers to participate in decision-making is through the faculty representative conference to express their ideas. After that, the school will also respect the representatives’ ideas and suggestions, so as to make reasonable improvements.

INT3, as an excellent teacher with 23 years of teaching experience, also said that there were faculty representative conferences for teachers to participate in decision-making processes:

If it is related to the school development of some major issue that needs to be made decisions, holding a faculty representative conference is a relatively official choice. In addition, when it comes to trivial contents in the teaching and school work, our school often adopts a relaxed way, in which teachers’ representatives give feedback to leaders on behalf of other teachers.
Moreover, when asked about the criteria for faculty representatives to be elected and whether they represent the aspirations of the entire faculty, INT15 provided us with a detailed answer. She mentioned that her school has faculty representatives, and faculty representatives were supposed to be elected every year. She took herself as an example: “I am an experienced teacher and have been lucky enough to be elected four or five times as a faculty representative. The faculty representatives are not fixed in my school, and they are involved in a range of tasks including grade level management, school management, and the evaluation of teacher titles”. Then she added:

The criteria for selecting faculty representatives are mainly based on the amount of work that faculty members have undertaken during the year. More significantly, the selection of faculty representatives is based on whether the faculty member has credibility among colleagues, for example, some faculty members are usually willing to serve other colleagues, and such faculty members have more opportunities to be selected as faculty representatives. Faculty representatives are voted in by the entire faculty, and each of our offices elects a faculty representative.

After explaining how the faculty representatives were elected, she told us about what the faculty representatives usually do and how they represent the views of other colleagues. She pointed out:

At faculty representative conferences we bring up many issues that we want the school to address. The issues raised by the faculty representatives are not limited to their own issues, but definitely start with issues that need to be addressed urgently by the teachers they are usually close to. Since there are faculty representatives from every office in every grade, it is relatively
equivalent to having every teacher participate in the school’s decision-making process.

**Directly Participating in Professional Title Evaluation and the Vote for Leaders.** Additionally, teachers also had opportunities to be directly involved in professional title evaluation and elect leaders. Every teacher could assess and vote for the leaders they considered as qualified ones. INT12 also talked about in her school every teacher has the right to participate in decision-making process:

Teachers are involved in decision-making through a faculty representative conference when something important happens. When there are more important issues to be decided, all the faculty and staff will have a collective meeting in the big conference room of our school to discuss and finally vote on the decision. That is to say, in my school, every teacher has the right to make decisions and vote if he or she wants to.

In the context of Chinese education, it can be seen from the interview results that the major decisions teachers participate in are closely related to the selection of leaders and the evaluation of teachers’ professional titles. When it comes to teachers’ professional titles, INT6 believes that the school gives every teacher the right to participate in the decision-making process such as the evaluation of teachers’ professional titles and other selections, she also expressed her gratitude for the opportunity provided by the school. She mentioned:

When it comes to the evaluation of teachers’ professional titles, colleagues can actually grade each other. So, the school actually gives the right of every teacher to participate in decision-making. Teachers have the right to decide who has a better chance of being selected and who should be better qualified.

In the process of participating in the professional title evaluation, I believe the
school provides a good opportunity for teachers to think that they have the right to participate, rather than the direct decision of the leader. Teachers actually have a voice in all the selections and all the evaluations every year. So when it comes to whether school leaders are competent for this job, in fact, teachers have the right to make decisions.

It is evident from the interview data that a school with a supportive environment not only gives teachers the opportunity to develop their teaching, but also empowers them to participate in school-level evaluation, selection and decision-making. Teachers are empowered to go beyond the classroom and are not restricted to pedagogical issues, but rather to the ability to exert teacher leadership within the school context. Thus, the attribute--Perception of teacher leadership is confirmed when schools provide participation opportunities for teachers.

INT10 who believed that all faculty have the opportunity to be involved in decision making shared the situation in her school with us during the interview:

The opportunity to participate in decision-making is provided by the school. For example, we need to vote in the selection of the leader. We also need to vote for colleagues’ professional title evaluation. And when it comes to selection of faculty representatives, we all have to vote. And every year the school sends out some forms for suggestions on the development of the school, and then collects the opinions of each teacher. If the school administrators consider that what we say is beneficial to the development of the school, they will actively adopt it.

INT 14 reveals how her workplace provides direct opportunities for teachers to participate in leadership selection and title evaluation activities. She said: “We have the opportunity to vote for the leaders during the specified time to listen to their work
reports for the year or semester. In the title evaluation process, our individual vote accounted for a certain percentage of the final results”. Moreover, INT13 explained in more detail how teachers are involved in voting during leader reporting. She stated:

Teachers are definitely involved in decision-making. For example, the leader will give a report every semester and every school year, and then the mid-level leader should be democratically evaluated and democratically selected by our teachers, and the candidates will compete fairly with each other. For the evaluation of teachers’ professional titles, we conduct democratic evaluation every semester and every academic year, and the results of democratic evaluation account for part of the final results, and everyone participates in it anyway. Our democratic evaluation is mandatory for everyone to participate. The selection criteria for the leadership consists of two components: the proportion of the democratic evaluation votes and the proportion of the results of the voting of the faculty representatives.

According to the results of the interviews, it can be discovered that the school provides teachers with the participation opportunity, typically through the following three ways, the first is that when the school leaders report on their duties, the school leaders will also be subject to re-examination by their superiors, and in the process of their report on their duties, there will be a vote of the faculty. Secondly, the title evaluation of colleagues is the whole staff voting, which can also reflect whether the faculty pay attention to the merits of their colleagues. This is also an opportunity for teachers to express their assessment of their colleagues. The third way is that the school also has a faculty representative conference, which listens to the teachers’ opinions on matters that concern their interests. The faculty representative conference is an obvious way to involve the teachers in the decision-making process.
Therefore, teachers have the opportunity to participate not only directly in voting and elections at the school level, but also indirectly in the school decision-making process. Perception, which is one of teacher leadership attributes, is also successfully demonstrated as teachers are provided with opportunities to participate.

**Opportunity in Open Communication to Dialogue for Integral Development**

Most interviewees said the communication climate at their school was satisfactory. According to the answers of the interviewees, most of the topics in the communication between teachers and administrators are about teaching strategies and student performance. Teachers can also discuss student management issues or the development of students with administrators. If the teachers have questions about individual professional development, the administrators will give guidance and help. Some of the communication is official, such as at grade analysis meetings or faculty meetings. Teachers and administrators can also have informal communication anywhere and anytime in the school context. The following evidence confirms that it is possible for integral development to take place between teachers and administrators through the form of dialogue.

**Formal Communication Ways to Improve Collective Teaching Quality.**

Based on the results of the interviews, it can be found that teachers and administrators can make a dialogue with each other in formal or informal ways. In general, there are some school-organized meetings as formal communication channels, which aim to improve the quality of teachers’ collective teaching.

INT10 introduced open communication in her school. She mentioned that the administrators in her school are more concerned about students’ performance, so most of the formal communication between teachers and administrators comes from the aspect of teaching:
When the school organizes teachers for collective lesson preparation, it usually involves the principal, the vice principal in charge of teaching or the director of teaching. Administrators grasp the direction in time and communicate with teachers. Especially after a large examination, there is a result analysis meeting and also a comparison between the test results of each school, so the school puts forward requirements for a certain subject or a teaching and research group. When participating in teachers’ collective lesson preparation, administrators have a better interpretation of the general direction, and at the same time, administrators often motivate teachers.

Since INT10 mentioned participating in collective lesson preparation and result analysis meeting to share and receive opinions with administrators, INT3 also talked about the two kinds of official meetings to communicate with administrators in his school, such as collective lesson preparation and faculty representative conference:

There are various ways to communicate between teachers and school administrators, among which there are two main ways. The first way is through the weekly collective lesson preparation or teaching and research activities, in which the vice principal in charge of teaching and the teaching director participate. The second way is through the regular conference of faculty representatives in our school. In this kind of conference, the administrators and teachers usually discuss at this meeting regarding the development of the school and the professional training of teachers, as well as the routine requirements of teaching. At last, a resolution is formed, it will be passed on to all the teachers in the school.
In the meetings, teacher leaders and administrators discussed with teachers and interpreted the direction and requirements of teaching for teachers. In addition, teachers and leaders shared expertise with the educational community and exchanged opinions. In INT13’s interview, she mentioned an equal way of communication between teachers in her school. She said:

In our school, we have weekly class masters’ meetings where class masters introduce their experiences to each other. Then the directors or other leaders who are teachers with formal leadership titles, do not come as leaders to communicate with us, we are all equal and speak freely in the meetings. If there is no question, we will exchange some matters that we need to pay attention to next, the work schedule of this period, etc. These are the contents that we must exchange every week.

Teachers communicated suggestions with each other to help colleagues progress in teaching. Using examples of teachers listening to and evaluating open classes at their own schools, INT7 revealed that the open communication environment that schools provide for teachers also gives teachers the opportunity to exercise their own teacher leadership and thus make a positive impression on the development of their colleagues. She stated:

There are many forms of communication. For those of us who teach classes, communication is mainly about teaching and learning. For example, when a teacher holds an open class, there is a leader or other colleagues who participate in the whole process of listening and evaluating the class, during which the teachers can communicate with each other according to the teaching aspect. In some cases, the teachers can further cooperate with the school’s guidance to bring out their own strengths after the communication. The school
will also provide opportunities for teachers to participate in subsequent development plans.

**Informal Communication Ways to Mainly Focus on Personal Teaching Quality.** The open communication environment motivates teachers to propose personal issues, opinions, ideas, and suggestions about teaching and learning. When informal communication happens, administrators also provide directions for teachers’ individual teaching quality growth. Unlike official meetings such as faculty representative conferences, teachers can share their opinions about school development privately and informally with administrators.

In fact, most informal communication opportunities between teachers and their administrators are related to personal teaching issues. INT10 pointed out:

If the communication is between the teacher and the administrator, most topics are about the teacher’s teaching strategies or teaching contents. Sometimes the administrators attend and observe the teacher’s class, after the class, the administrators usually discuss and communicate with the teacher about the teaching contents. Teachers can also take the initiative to find administrators to communicate in an informal way and seek help or solutions according to the issues they need help with.

INT5 also used her own school as an example to reveal how informal communication between teachers and administrators usually takes place. She stated:

If teachers have any questions, they can always meet with the director or the principal to communicate, so teachers are still relatively free and democratic in their speech. Teachers can communicate with their administrators whenever they have a question or issue. It is not always necessary to go to the office to discuss the issues in a serious way, but teachers and administrators can
communicate informally at any time when they encounter each other on campus.

Through the evidence above, these channels of open communication provided by the school reflect the attribute of Perception of teacher leadership. INT1 illustrated to us that the presence of these open communication channels in schools made a contribution to the perception. She said:

I think the communication channels in our school are relatively open, and our school is enlightened in this regard. If the communication channels in our school are smooth, the teachers will be relatively comfortable working in this school, and they will be willing or have the idea to improve their teaching skills for the benefit of the students.

According to the interview data, the school provides a relatively good communication environment for teachers. Smooth and open communication between teachers and administrators usually exists. In addition to formal faculty meetings, the school also offers informal opportunities to facilitate teachers to put forward suggestions and help the development of the school.

**Open Accesses for Teachers to Give Their Voices.** Based on the interview data, schools provide open access for teachers to present their voices. For example, some schools allow teachers to submit suggestion letters anonymously for the school development. Since most school decisions are made at faculty representative conferences and not all teachers have the opportunity to speak at these conferences, this letter-writing format provides a more comprehensive way for school administrators to hear the voices of all teachers. In addition, teachers can also reach out to administrators for communication anytime. The following is the evidence.
INT1 illustrated that there is open communication between teachers and administrators in her school. She also pointed out another useful way to share personal opinions and ideas with school administrators. She stated:

First of all, the principal or the administrators talk to the teachers regularly or irregularly to know what the teachers’ demands are. If teachers really have any demands, they can also take the initiative to communicate with administrators. These channels of communication are relatively smooth. Teachers can also use mailboxes to put forward their ideas. If teachers make suggestions to the school and do not want the administrators to know who made them, they put an anonymous letter in the mailbox to make suggestions to the administrators. Thus, everyone can write down their suggestions or ideas on the development of the school.

Through teachers’ presentations, more than one school used the mailboxes to collect teachers’ suggestions, ideas and feedback. Similarly, in INT2’s school, they also have a kind of mailbox called suggestion box. He explained that:

In our school, teachers can put forward their own opinions or suggestions. They can directly reflect their opinions or suggestions to the school administrators through the suggestion box. The related administrators include the principal, vice principal, director, etc. There are plenty of ways of putting forward feedback. Teachers can also talk to the administrators directly, and the faculty of all leadership levels can be found to communicate.

However, INT11 indicated that communication between her and her administrators was limited. In the following, she presented us with a different view from the perspective of a novice teacher:
At the moment, I probably communicate more with the administrators about my professional development in teaching. I am not particularly involved in school-level and student-level matters. Because I am still in the process of familiarizing myself with the teaching materials, the students, and personal teaching style, my contact with the administrators is basically limited to the teaching aspect.

All in all, teachers and administrators communicate openly and honestly about their thoughts, emotions, and information that is relevant to the improvement and enhancement of students and the school. This open access and transparent manner in school context has a positive impact on the communication between teachers and administrators or colleagues. The exchange of ideas and feelings among teachers in relation to the effective growth of students and the school has become the norm for both formal and informal communication. Teachers are also aware of what is going on in the school during the communication process. Two attributes of teacher leadership, Perception and Influencing, are reflected as schools provide opportunities for teachers to communicate openly.

**Opportunity in Positive Environment to Engage in Teaching and Learning**

It is crucial that the school administrators create a positive environment that promotes student and faculty achievement. School administrators have the responsibility to provide successful teaching and learning environments for educators and students, they should first do so while also ensuring that the school’s environment is favorable. According to the results from the interview data, teachers are generally comfortable with their working environment, and their schools possess effective administrative leadership.
Support for Teachers in a Satisfying and Harmonious Working Environment. INT13 expressed her satisfaction with the environment of her school. When asked if the school provided a relatively positive environment for the teachers, she replied:

The relationship between our teachers and administrators and the relationship between our colleagues are very harmonious. When teachers have corresponding opportunities for performance, we encourage, support and help each other. Then when we achieve certain results, everyone is happy for each other. For example, in our teaching process, the most common is the competition of high-quality lessons. The competition of high-quality lessons includes districts, cities, provinces and even the whole country level lessons. In our school, some colleagues may be formal leaders with positions, and some may be experienced excellent teachers, which provide valuable opinions and suggestions to some younger teachers. Then teachers with formal leadership positions and experienced teachers help young teachers find ways to solve the incoherent points in the teaching process, or point out several knowledge points which are not thorough enough. The relationship between us is particularly harmonious, we help each other positively.

INT12 indicated that the working environment provided by the school was satisfactory and that communication between teachers and administrators was readily available to address the interests and development of students, mentioning both formal and informal communication scenarios between teachers and administrators in her response:

Overall, it seems that within my school, there is not that strict a hierarchy between teachers and administrators. We can actually work things out in
informal settings, such as when we all eat in the cafeteria or when we run into each other in the hallways. Some of our school administrators are also front-line teachers, and some of them even serve as class masters, so teachers and administrators can communicate with each other very casually through regular communication. In addition, there are formal ways for teachers to contribute to student development with their administrators. For instance, every time students take an important test, the school organizes a meeting for teachers to sit down and analyze the test results, and both administrators and teachers participate in these meetings to review the students’ test scores, the teachers’ work, and the students’ development. If a teacher has a request or feedback about teaching or student development to the administrator, they are always given the opportunity to share their views, so teachers and administrators communicate and cooperate very well.

Quite similar to the previous interviewee’s response, INT14 also mentioned that some formal collective meetings organized by the school and informal discussion could provide a positive working environment and effective problem-solving opportunities for teachers:

The administrators are involved in the collective meetings, and they usually listen to the teachers’ opinions, and the teachers have the opportunity to express their ideas, and then the administrators help the teachers to make appropriate or timely adjustments. I think this opportunity is what we call a more effective problem-solving opportunity between teachers and school administrators, and it is also a positive working environment provided by the school. In case of emergencies or urgent situations, teachers are always ready to consult with the relevant administrators and solve issues in a timely manner.
with their help. In other words, the school provides a relatively positive working environment for the teachers, and I think we work well together.

The above statements are from two experienced teachers. In addition to their statements, the novice teacher responded to whether they liked the work environment from a different perspective. As a novice teacher, INT11 conveyed her satisfaction with her working environment through specific examples from her school. She stated:

The school provides a relatively harmonious environment for teachers, which is beneficial for my personal development and for helping students develop in the future. Our school advocates intra-teaching group lesson evaluation. The specific procedure is that I teach a lesson, other teachers come to observe my lesson, then they give me comments and feedback, and finally I correct the shortcomings in my teaching. I think this is a very valuable opportunity for teachers, especially for new teachers like me, and I also treasure this opportunity. So, I think the whole working environment is more comfortable for me.

INT5 also directly expressed her preference for the working environment of the school. She said: “I feel that the overall atmosphere of our school is good, and the relationship between the administrators and the teachers is harmonious, and we are basically willing to share ideas or resources with our colleagues. Our ultimate goal is to promote the development of the school as a whole, not just the development of individual classes.” In addition to INT5, another teacher also articulated the goals of the teachers in their working environment. Dream said that:

The school provides us with a relatively good environment, and this harmonious environment has a positive impact on the relationships between our colleagues and between teachers and administrators. Teachers have a good
relationship with each other in the working environment, and we all have a feeling when we are together that work is life and life is work. We are all able to support each other with communication and understanding, and the relationship between us is relatively cordial. All of us are all making our own efforts for the development of our careers, for the development of our students, and for the development of our school.

**Significant Impact on Teachers’ Professional Development through School Environment.** The positive working environment that schools provide can be beneficial in developing the attribute of Influencing of teacher leadership. Through the interview data, it is evident that the school environment has a significant impact on teachers’ professional development. The following is evidence that can demonstrate that a teacher leadership attribute is influenced by the environment.

INT3 took his personal experience as an example, that is, the help he received from other administrators and experienced teachers in preparing for the open class. We can find that the presence of these guidance in the school environment has a very positive impact on the professional development of the teachers and, at the same time, reflects the attribute of Influencing in the teacher leadership. INT3 said:

In the process of this teaching practice, the school environment provides teachers with the opportunity to participate in provincial and municipal open classroom observation activities. We can be observers in the open classroom, and sometimes we are even participants in the classroom being observed by other teachers. These opportunities are actually the most powerful way to motivate teachers in an invisible way. When I was preparing for the open class, I tried to make it perfect in every aspect. Then, during the preparation process, various school administrators and experienced teachers and
researchers from the district teaching and research office would give me
guidance. I can say that in a short period of time, the positive environment of
school greatly improves the development of teachers’ personal skills.

The attribute of Influencing of teacher leadership also exists when teachers
influence colleagues with their teacher leadership, and when administrators or
experienced teachers share expertise with other teachers in their community. INT11
described for us through her personal experience how she was supported and assisted
by administrators and experienced teachers to positively have an impact on her
improvement of teaching skills. She stated:

As a new teacher, I had to participate in the mentorship activities that the
administrators were proposing in the overall school development context. In
terms of the leadership design of the administrators, the school environment
provided me with this opportunity. If I had a personal issue in a discipline
where I wanted to improve my teaching skills, I could seek help from the
administrators, and they would refer me to more experienced teachers or
researchers to help me improve, and they would find the appropriate resources
for me. Generally speaking, the administrators introduced me to other
excellent teachers, and then the excellent teachers provided me with help.

Moreover, the attributes of Knowledge and Skills of teacher leadership can
also be enhanced by the school environment. Based on the interview data, the teachers
mentioned the impact of the school environment on them, all of which had vital
implications for them. The evidence is shown below.

Lauren (INT9), as a teacher in a small city, believes that the environment
provided by the school has a significant impact on her personal professional
development. She told us:
There is not much room for me to grow personally if the school does not provide a positive environment for us. In that case, I would have to work behind closed doors, and would have to read more books on my own to make myself improve. The opportunities and positive environment provided by the school are very valuable, and I am able to access opportunities that are not available to me on my own, so the school environment has a great impact on my improvement, mainly in terms of the level of teaching, because the resources provided by the school are mainly related to our teaching skills and level.

Similar to the previous interviewee, INT6 also talked about how the environment provided by the school had an essential impact on her long-term development. She said:

The school environment allows me to reflect at any time on whether I have missed any content in my work or whether I should improve my strengths or whether I have gaps in my profession. In addition, I consider whether my teaching style is appropriate for each class and whether I have made adjustments to suit the characteristics of the students. These adjustments include changes in teaching style, changes in teaching methods, changes in teaching strategies, etc., all of which have a great impact on me. The school environment helps and enhances my personal ability.

Combining these interviewees’ answers above, it can be seen that a positive school environment plays a crucial role in the development of teachers, especially in terms of their teaching skills and professional development. In general, teachers are comfortable with their working environment and believe that the school’s administrative leadership is effective. Moreover, teachers and administrators are
working tirelessly in the further development of their students. When it comes to teacher leadership attributes, the two attributes of Influencing and Knowledge and Skills are reflected in the school context. At the same time, we can find that schools provide support for teachers to let them work in a satisfying and harmonious environment, and significantly impact teachers’ professional development through the working environment.

**Challenges in Teacher Leadership Development**

While teachers are nurtured by the various opportunities offered by the school, they also inevitably encounter challenges and difficulties in the actual teaching process or in the workplace. The challenges that teachers are currently facing come from two main sources: one is because of the challenges that the New Curriculum Reform has thrown up for teachers, and the second is that teachers are faced with feeling challenged by the constant changes in how to evaluate and estimate the situation of their students.

**Challenges to Teaching and Learning from the New Curriculum Reform**

From the interviews with the fifteen teachers, it is apparent that among the challenges mentioned by the interviewees, the most frequently mentioned was the challenges to teaching and learning posed by the New Curriculum Reform. Such challenges are in line with the current context of Chinese education reform, and the interview data provide a timely reflection of what challenges teachers are likely to encounter in the reform process and what approaches they are expected to take to address them.

**Increased Teaching Difficulty and Increased Working Load for Teachers to Adapt to the Reform.** We can deduce from the teachers’ responses that teaching has grown more difficult in the setting of the New Curriculum Reform, including
teachers currently confronting challenges such as comprehending new textbooks, extracting knowledge points, and conveying them to students. Furthermore, as a result of the New Curriculum Reform, teachers’ workload has expanded, and there is a teacher shortage in specific disciplines, which undoubtedly increases the pressure of teachers’ workload. The evidence is shown below.

As a high school teacher going through the New Curriculum Reform, INT5 reveals to us specifically the changes in teaching materials, the increase in teaching content, the heightened teaching tasks, and the solutions needed for teachers to respond appropriately by considering the real learning situation. She said:

We now have a new textbook, and the original textbook has been replaced by the Ministry of Education’s unified textbook. However, the new textbook has much more knowledge than the textbook we used to teach in the past. One lesson in the new textbook is equivalent to four to five lessons in the old textbook. In addition, the new textbook has added many new knowledge points that may be confusing for students to understand, so this is actually a great challenge for teachers to teach. Our first task is to allocate time scientifically and rationally, and then to make all the knowledge in the book available in the teaching process. Secondly, teachers have to think about how to emphasize the key points among the large number of knowledge points in the teaching. In this new teaching mode, how to deal with the new college entrance examination, how to deal with the new environment changes, in fact, is a great challenge for teachers. Therefore, we need to better integrate the teaching materials and deal with the relationship between the huge number of knowledge points and our limited class time according to the learning situation.
Similarly, INT12 also told us about the current reform of the New Curriculum Standards in China. She said that student development is now the top priority, so now her school is in the process of New Curriculum Reform, and it seems that every school and every city’s education system is exploring the new curriculum. She added: Because this is the time of the New Curriculum Reform, the grasp of the new textbooks has become the biggest challenge for teachers. It is really the first round of curriculum reform, so it is a challenge for teachers to get through the textbook and then comprehend the key points in it and then convey it to their students.

INT15 expressed her views on the challenges and difficulties brought about by the New Curriculum Reform from the perspective of the shortage of teachers. She pointed out: “In the past few years, due to the New Curriculum Reform, the demand for teachers in my subject has suddenly become very high. But this problem cannot be solved overnight, because the gap in the number of teachers cannot be made up immediately”.

The above interviewees addressed a variety of teaching pressures due to the New Curriculum Reform, and this next teacher raised challenges that were also related to the New Curriculum Reform. However, she emphasized the lack of sample test questions and the scope of the test in the new curriculum standards, thus making her face considerable challenges in the lesson preparation process and her teaching process.

**Lack of Guidance for Testing during the New Curriculum Reform.**

Teachers are confronting a lack of guidance for testing during the New Curriculum Reform, since the new curriculum standards do not contain sample exam questions that are as obvious to educators as they previously were. More specifically, INT10
explained to us in detail the reasons why this issue of the new curriculum is a challenge for teachers. She stated:

The new curriculum standards only give a very patterned thing, unlike the old days when the college entrance exams were given in June and teachers received sample exam questions in March, but now teachers do not have sample questions. There is no explicit direction from the higher education department for teachers to predict what questions will be on the exam. For teachers, we can only imitate other provinces and let students practice the sample exam questions from their provinces. Our province is in the first year of the New Curriculum Reform, so we have to practice the mock questions from those provinces and the sample questions from the previous year’s college entrance exams from those provinces. Our teachers refer to their question types, and we look for such questions or make up such questions for students to practice.

From the evidence above, it is clear that the new curriculum reform is indeed a novel and meaningful challenge for educators in the Chinese educational context. It is also obvious from the interview data that even though teachers face new challenges and pressures, they are still eager to overcome these obstacles to help students do well on tests and to help students adapt to these changes to achieve academic success.

All of these responses reflect the challenges that teachers are facing as a result of the New Curriculum Reform. In addition to this challenge, student development is always a major concern for educators. Some interviewees mentioned that teachers who have a better grasp of their students’ situations will be better able to help them develop physically and mentally.
Challenges to Evaluate and Estimate Students’ Situations

According to the interview data, the interviewees also mentioned their concerns about evaluating and estimating students’ learning situation. They have to adjust models’ instruction and management based on students’ current situations, which is a practical challenge for them in the teaching process. The current challenges that teachers face in this area come from two main aspects, one is the challenge of applying appropriate teaching models according to the actual characteristics of students, the other is the challenge of achieving tailored instruction in the classroom teaching process. Here is the evidence.

Challenge of Applying Appropriate Teaching Models according to the Actual Characteristics of Students. INT3, when answering the interview questions, believes that the difficulties teachers encounter is mainly reflected in the degree of grasping students’ learning conditions in the teaching process. He said:

In the new era, students’ learning situation is an element that teachers cannot ignore in the teaching process. We cannot use the old teaching mode, teaching method or educational point of view to educate the students of today’s newest era. Each generation of students has its own characteristics, and each generation has its own characteristic of development. Therefore, I can know what the latest form of education is in the process of communication with colleagues and teachers around me. Only after grasping the students’ learning situation, I can better target the teaching process.

Through his answer, we can see that only by first mastering the students’ learning situation and characteristics can teachers select the appropriate teaching methods to teach in a more appropriate way.
Challenge of Achieving Tailored Instruction in the Classroom Teaching Process. In addition to the challenges mentioned above about grasping the learning situation and applying appropriate teaching models, another challenge mentioned by the interviewees is how teachers can tailor their teaching to their students.

INT14 believed that the biggest confusion for teachers is how to achieve tailored instruction in the classroom teaching process according to students’ ability. She stated:

Nowadays it is a requirement for teachers to have a fixed task for each class. However, when I face all students to teach, the content of the lesson is actually not enough for some students, but there are students who simply cannot keep up with the class. Therefore, it is very difficult for teachers to manage a classroom according to their students’ needs, and they need to make their classroom activities involve at least three different levels of students.

The above challenges were extracted from the interviewees’ stated responses, which gave us a clearer picture of the current dilemmas faced by junior and senior high school teachers in the Chinese educational context and the solutions they are currently working out on their own. In addition to these challenges, teachers also expressed a variety of expectations about the opportunities offered by the school context.

Expectations for Opportunities Provided by School Context

Because curriculum standards are constantly being updated and student populations are changing, educators’ expectations of the opportunities available in schools are also increasing. These perceptible changes raise the important question of the need for teachers themselves to develop to ensure that educators are able to meet the needs of their students and provide them with guidance for learning and help them
develop the right values to lead them on a long-term developmental path. According
to the interview data, teachers’ expectations of the opportunities offered by the school
context fall into two main aspects: the first is the expectations to expand horizons
from larger and superior teaching and learning communities, and the second is the
expectations to mentor students for long-term development. The following examples
from interviewees confirmed these aspects of expectations for school context.

**Expectations to Expand Horizons from Larger and Superior Teaching and Learning Communities**

Teachers’ expectations to expand horizons from larger and superior teaching
and learning communities, a kind of expectation mentioned by nearly all interviewees,
is by far the most important aspiration for teachers, as indicated by the interview data.
Based on the results of the fifteen teacher interviews, twelve teachers indicated that
they were looking forward to more teacher training opportunities at their schools.
Most of the teachers talked about the expectation of “going out and bringing in”. The
teachers were looking forward to more opportunities to go out to study or to be
familiar with other advanced teaching ideas and resources. Specifically, if possible,
schools are expected to implement an open strategy of “going out”, while at the same
time, teachers wish that if the “going out” strategy is difficult to achieve in practice,
schools can also adopt the “bringing in” concept which is also a very effective way
for teacher training and learning. The following is the evidence.

**Expectations of Teacher Training from Personal and Colleague Experience.** The model of colleagues going for teacher training and coming back to
pass on their experience for teachers actually makes teachers recognize the
significance of teacher training and have expectations of the training. INT4 stated her
expectations for the opportunities offered by the school. She expressed her hope to get
more opportunities to go out to study in some of the more prestigious high schools in the country and to listen to the advice given by experts. Then she said:

When it comes to expectations, I expect to really be in the atmosphere of their schools, to feel the overall environment, the teaching status of the teachers, and the teaching style of the teachers in other schools. Actually, we don’t have many opportunities to go out to study, and if we do, maybe only one or two people can go at a time. This is the case every time. Our group has a lot of people, so teachers like me, who don’t have formal leadership positions, don’t have many opportunities to go out and learn. Maybe the head of the teaching and research group or the leader of the teaching preparation group can be provided with such opportunities more often. But for me, I don’t have either of these positions, so I have very few opportunities for real learning. In fact, I could only learn about teacher training and learning from my colleagues after they came back from their training.

INT15 mentioned the expectations in terms of teacher exchange and teacher training. She said that teachers are looking forward to going out to see more and communicate more with other teachers from other excellent schools to learn from each other and promote each other’s teaching skills. She expressed that when she is with good people, she can become much better. She also shared her personal experience with us:

I met a really good teacher in another school when I went out to observe a class one year, and at that time I thought this teacher was really my idol. It is true that in the process of listening to the expert teacher, I found that his educational philosophy and mine are very compatible. He has been working with very high-quality students for many years, and because of his strong
teaching skills, his teaching proficiency is much better than mine. In fact, I always want to study with such a good teacher for a year or six months. However, it may be relatively difficult for me to go to another school to study, so I hope that my school will bring such excellent teachers to our campus. I think there are many problems that cannot be solved if we just ask these teachers to give a lecture for us, so I hope to spend some time with them at work and to learn from them for a while, just like a novice teacher who is new to the profession to learn advanced experience from experts.

**Expectations for Teacher Training due to the Demands of the New Curriculum Reform.** In addition to the needs of teachers’ personal professional development, the New Curriculum Reform has prompted teachers to be more eager to attend teacher training or exchange activities to improve themselves to meet the requirements of the new situation.

As a teacher going through the New Curriculum Reform, INT7 revealed the situation of schools and teachers after the New Curriculum Reform. In addition, she explained to us in detail why teachers want schools to provide more opportunities for teacher training and teacher exchange. She said:

Currently, we are faced with the issue of the New Curriculum Reform, in which all disciplines are involved. That is why every year teachers who teach first graders will be trained, their mentors include experts and textbook writers at the national level. But even so, in the actual teaching process, teachers still encounter some details that are confusing, so I hope to have more opportunities to get out of school to improve and have a learning and observation experience with more experts or outstanding people. At the same time, we would be lucky if the school could have the opportunity to invite
experts in this field to our campus when the teaching schedule or our own work energy allows.

Very similarly, INT2 mentioned the issue of the New Curriculum Reform in his answer as well. He also shared his experience of teacher training to illustrate the benefits of broadening horizons. He stated:

Since the New Curriculum has just been reformed, this year’s senior students are the first group of students to experience this reform, and teachers are trying to figure out how to teach and what to teach. As a teacher, I want to broaden my horizons, and in fact, we are receiving all kinds of training at all levels, just like our students. For example, at the end of March, I attended a provincial training which is about this year’s New Curriculum Reform of mathematics training. I hope there will be more training like this, because it can broaden my horizon, otherwise I cannot see so far and so deep by myself. I hope that there will be some experts or textbook writers who can give us a detailed explanation of the textbook and solve our confusion in the process of teaching or in the process of learning, which will also facilitate us to teach the main contents of the textbook to students.

From this evidence, it is clear that teachers are more eager for teacher training opportunities in the context of the New Curriculum Reform. This is because teachers need to be familiar with the new textbooks and the new examination standards before they can teach their students with precision and accuracy to help them achieve good results.

**Expectations of Teacher Exchange Based on Geographic Limitations.**

Another meaningful finding for this study is that teachers also mentioned the limitations that their school’s district imposed on their teacher training and exchange
opportunities. INT1 believed that her expectation for her school was that the school would allow more teachers to go outside to learn. She stated:

Because for our school, the development of teaching is definitely limited by the geographical area. I hope that our school can send teachers to some higher-level schools or bigger cities to learn more about the advanced teaching philosophy and culture. The ideal state of learning is a certain kind of immersion, but this is difficult to achieve in practice, so at the moment I would prefer to go to an outside environment to learn some teaching methods, which is the way I am satisfied. For example, I would like to go to a school that is better than ours, and then I can have the opportunity to listen to how their excellent teachers teach, and learn about their usual student management mode, and how their students are like.

Like the previous interviewee, INT13 also pointed out the geographic issues limit the opportunities for teachers to go outside for training. She sincerely expressed her desire for more opportunities to expand her horizon. She stated:

I actually had quite a number of expectations. Because our school is not the highest-level high school in the city, our opportunities to go out for training are limited to going to city and provincial teacher training activities. Thus, the teachers’ horizons are still limited to a very small area. If I can “go out”, my horizon will be broadened and my students’ achievements will be on a higher level. In fact, all of our teachers hope to go out, go farther, go to a higher platform, and then let themselves have more room for improvement. This is our greatest expectation. If we can’t “go out”, it is fine to bring in experts, and the school can invite top teachers to improve our ability. Therefore, we also
hope that the school can bring in some resources or experts from other good schools.

**Expectations to Mentor Students for Long-term Development**

A teacher’s duty is to teach and educate people, and how to be a good teacher is really an art. Through the interviews, many teachers mentioned that being a teacher in today’s society is really a job of conscience, and teachers are committed to selflessness and spiritual satisfaction. Therefore, because the transmission of knowledge and values from teachers to students is a long-term process, the results of education are not always immediate. Therefore, teachers are willing to mentor and support the long-term development of their students.

**Expectations for Students to Gain Knowledge and Proper Values.** The teachers interviewed expressed their expectations that their students would gain knowledge and the proper values. They hope the knowledge and values they convey will have a long-term impact on their students, not just a temporary impact on them at the moment. INT14 confided in us and expressed exactly how she expects in this regard. She said:

I feel that imparting knowledge was my most basic understanding of the responsibility of a teacher, but now I feel that the goal of a teacher is to be a designer and instructor of the course I teach or the activities of my class, or even a co-participant with the students. It is possible that after three years of teaching a student, when he graduates and goes to college, suddenly he will understand what I have taught him about knowledge and life. I think both knowledge and values have an impact on the student’s life.

**Expectations for Helping Students with Their Mental Health Development.** The results of the interviews showed the teachers were very concerned
about the mental health of their students. Teachers are very willing to work with students on psychological issues and would like the school to provide more opportunities to better develop students’ mental health. INT4 pointed out that she has very special students in her class, some of whom may have certain psychological issues. She mentioned:

   We pay a lot of attention to their mental health development. As far as our school is concerned, we hold class meetings with very positive themes, which is a good guidance for students’ values and a means of education for students’ mental health. I hope the school can provide more opportunities like this.

INT13 also said: “students’ psychological issues are a prominent problem at the moment, and the psychological issues may come from family impacts. There are some students who have this sub-healthy state of psychology, and such students need the help of teachers and schools”.

Mental health is indeed an issue that cannot be ignored by teachers, who want to be able to better communicate with their students in order to better help them in their future development. INT10 explained her expectation:

   In fact, in the rapid development of the times, teachers also have new expectations at all times. Now the generation gap between teachers and students is also relatively large, so we as teachers should always care about the psychological state of students. I think teachers should always track the psychological changes of students, and schools should also provide more opportunities for students to obtain psychological guidance.

According to the above evidence, in response to the New Curriculum and examination syllabus changes, teachers are seeking a higher level of understanding of the content they teach and the teaching strategies they use. In addition, the
opportunities for teachers to “go out and bring in” are also not ideal due to geography. However, most teachers’ greatest desire is to expand horizons from larger and superior teaching and learning communities. Teachers wish to be provided with more in-depth visits to other outstanding schools to observe and learn from experts. Additionally, experts and excellent teachers can be brought to the school for teacher training. In this way, teachers in this school can learn from other teachers in their own familiar working environment, which will have a positive impact on their teaching capabilities. In addition, teachers have a high degree of expectation to guide students’ long-term development as well as to help them develop their mental health under the school context. The teachers hope that the school will provide guidance and assistance accordingly to fulfill the teachers’ expectations of education. Therefore, teachers can help improve the quality of their teaching more effectively and thus contribute significantly to the development of their students.

**Summary of the Chapter**

Regarding the concurrent triangulation design, the qualitative data were collected concurrently with the quantitative data collection. This chapter was designed to support and supplement the quantitative results, which provided a deep understanding and interpretation of teacher leadership. This chapter further answered: In what ways do teachers exhibit these attributes of teacher leadership? What evidence exists to demonstrate schools’ success in providing such opportunities? What skills and competencies have teachers acquired? The answers to these questions present a concrete picture of how teacher leadership is successfully developed in school contexts, as well as confirming the specific attributes of teacher leadership in Chinese junior and senior high schools.
We conducted interviews with 15 teachers who participated in a quantitative survey. There were 14 teachers having over six years of teaching experience and one teacher with two years of teaching experience. The interviewees consisted of seven class masters, two excellent teachers, two backbone teachers, one director and three teachers without any positions. The qualitative results not only validated and verified the quantitative findings, but also elaborated how these opportunities contributed to the development of teachers’ skills and competencies. Additionally, the results also demonstrated how teachers exhibited attributes of teacher leadership in school context. Besides, this chapter involved the investigation of the challenges in teacher leadership development and teachers’ expectations for opportunities provided by the school context. The discussion and conclusion of the next chapter will summarize the results of the two phases.
Chapter 6

Discussion and Conclusions

This study mainly explored the situation of teacher leadership in Chinese junior and senior high schools with students’ learning as the final goal, such as scholars stating that developing teacher leadership in school has positively affected student achievement (Crowther et al., 2009; Leithwood & Jantzi, 2000). International researchers have engaged in research of teacher leadership since the 1980s (e.g., Leithwood & Jantzi, 2000; Rosenholz, 1989; Sickler, 1988), which attracted more and more attention from Chinese scholars who were interested in Chinese teacher leadership research from the 2000s (e.g., Chen & Long, 2012; Du, 2010; Liu & Liu, 2007; Liu & Luo, 2013; Wu, 2008; Yuan & Peng, 2011; Zhong & Xu, 2011; Zhou, 2009). Some classic theories are referred to by Chinese scholars from the international studies on teacher leadership for exploring the teacher leadership’s conceptualization (Barth, 2001; Harris, 2005; Katzenmeyer & Moller, 2001; Murphy, 2005; York-Barr & Duke 2004). While, it was not clear about the attributes and developing opportunities of Chinese teacher leadership, and inquiring about the practice of Chinese teacher leadership is in need.

This research specifically explored two aspects: teacher leadership attributes and the opportunities for developing teacher leadership that schools provide in both theory and practice within Chinese junior and senior high schools. The Situation of Chinese Teacher Leadership Attributes Survey (SCTLAS) was developed to measure the attributes of teacher leadership in the context of Chinese junior and senior high school. The Opportunity for Teacher Leadership in School Context Survey (OTLSCS) was used to provide information regarding how opportunities provided by schools influenced the development of teacher leadership in the context of Chinese junior and
senior high school. In addition, differentiating from the studies that specifically focus on formal teacher leaders and were pointed out by Smylie (1995), this study researches teachers with formal or informal leading positions, as well as teachers without any positions. As Hunzicker (2018) asserts, both formal position holders and the ones who have no positions in leadership should serve teacher leadership responsibilities.

This chapter is unfolding from three sections. The first section discusses our research findings with the perspectives in the existing literature. The second section discusses the implications, limitations and recommendations for practice and further research. Finally, conclusions for this study are provided.

**Discussion of Findings**

This section synthesizes the research findings and combines the relevant literature to discuss the key points. Four groups of key points are reported and discussed below, including: developing Chinese teacher leadership attributes both in theory and practice, findings from quantitative analysis of opportunities synthesizing with attributes for teacher leadership, synthesis of qualitative and quantitative findings about opportunities, and attributes, challenges, and expectations.

**Developing Chinese Teacher Leadership Attributes both in Practice and Theory**

Chinese teacher leadership has been developing in practice for a few decades, even though more research on it in practice is in need. Since the “The Curriculum Reform of 2001” in China (Minister of Education, 2001), teachers have had more power in curriculum development and autonomy in teaching activities (Liu, 2006; Zhan & Xiong, 2009). A few decades’ developments on teachers’ power and autonomy facilitate Chinese junior and senior high school teachers to be qualified to some degree in perspectives, influencing, cooperation, knowledge and skills for the
success of teacher leadership. Based on this situation, scholars have great research resources for inquiring about Chinese teacher leadership in practice and theory.

**Developing Teachers’ Perception of Teacher Leadership.** According to quantitative findings for SCTLAS in Chapter Four, the responses of “teacher leadership corresponding to “focus on teachers’ professionalization and students’ learning rather than managerial or administrative roles” are Mostly Qualified. This presents that the general perspectives of respondents are consistent with York-Barr and Duke’s (2004) statement that the aim of teacher leadership is increasing student learning and achievement, as well Hart’s (1995) argument that teacher leadership takes advantage of teachers’ professional knowledge of instruction.

In our results of perception dimension on SCTLAS, teacher leadership attributes performance on “decision making, problem-solving, mentor colleagues, redesign school” received the lowest score. We point out the performance is the weakness of teacher leadership attributes, which is necessary to improve to develop teacher leadership, and we should never neglect it. Green (2000) asserted it was essential to empower school teachers and other stakeholders that individuals provide important information to make meaningful decisions and have the necessary resources to carry out their roles and functions. Meanwhile, we should focus on improving the role that teacher leadership promotes in curriculum development. Some scholars have suggested teacher leaders can make decisions that shape a school’s curriculum, and others have suggested that teacher leaders can make decisions that help develop and implement new lesson plans (Little, 1988; Smylie & Denny, 1990). While the attributes of “decision making, problem-solving, mentor colleagues, redesign school” are the weakness in our findings, in other words, teacher leadership attributes also encountered barriers that hindered teachers from joining into teacher leadership
development in the context of Chinese education. A possible reason is that teachers almost cannot make decisions about shaping the curriculum in a school in the Chinese context. As stated by Hu and Gu (2012), Chinese teachers had limited influence on decision-making about school affairs. In addition, Miao (2018) also pointed out that “in discussions of a curriculum, obedience may be seen more often than participation (p. 191).”

**Teachers’ Influence and Cooperation among Colleagues.** The activities of teachers sharing practical experiences, mentoring others, and collaborating on school improvements are considered as the process of influencing colleagues when exerting teacher leadership (Fairman & Mackenzie, 2015). The quantitative findings of the dimension, influencing, shows that the respondents perform well on the abilities of influencing colleagues. This verifies Berg’s (2018) consideration that teachers influence colleagues by sharing common thoughts and relevant expertise which contribute to organizational improvement. Moreover, cooperation is a critical domain for teacher leadership exerting. As Yarger and Lee (1994) stated “the success of teacher leadership depends largely on the cooperation and interaction between teacher leaders and their colleagues” (p. 229). One item about teachers “sharing risk” with colleagues that gained the lowest score among the items included by the dimension, cooperation, calls us to attention. Teacher leaders being brave to share risk is expected by Wattelton (2000), as the mistakes that come when teacher leaders take risk in teacher leadership exerting are learning resources and serving for school adjustment. For schools that are in development, even though it is reasonable that respondents showed lower abilities and willingness to some items, encouraging teachers to share responsibilities is necessary. Furthermore, when mutually influencing and
cooperating, teacher leadership plays the roles of instructional management and communicating.

In the cooperation dimension of SCTLAS, teacher leadership attributes on “teachers agree to foster good relationships with colleagues in the school, inequality, autonomy, and privacy” have good performance. Teachers agree to keep independence and individual space for making contributions instead of fully depending on others. This performance indicates that teachers would like to share responsibilities and obligations to exerting teacher leadership. This result is consistent with the view that teachers will gain professional autonomy, which plays an important role in teacher leadership development (Stone et al., 1997). However, the attribute on “share risk and responsibilities” of respondents is placed at the lowest extreme of the range. The mediating role of teacher leadership requires teachers to make full use of additional resources and expertise and support external assistance, which we should not ignore. As cited in educational literature, “A good vision is a prod that — if it is really powerful; — creates a pull. It attracts commitment and energizes people, creates meaning in workers’ lives, establishes a standard of excellence, and creates a bridge between present and future” (Espejo et al., 1996, p. 12).

Results on Knowledge and Skills Dimension. Based on the knowledge and skills dimension, teacher leadership attributes include “knowledge of the content matter, pedagogy, classroom management, and general administration,” which showed good performance. The knowledge and skills play an important role in the teacher’s professional learning. While the enhancement of the teachers’ professional learning was also as the teacher leadership roles (Bird & Little, 1985; Lieberman et al., 1988). We suggest that we need to pay attention to the importance of the teacher leadership attributes for school improvement, as Gronn (2000) stated teachers must
also possess knowledge and skills related to leadership. Even if these teachers are the best in the classroom, they still need to be prepared to take on teacher leadership roles all the time (Zimpher & Howey, 1992). The previous studies also provided “creating leadership roles without providing opportunities for learning how to enact those roles ...leads to failure and despair” (Lieberman & Miller, 1999, p. 91); “if a teacher is not proficient in professional skills, then the focus in the classroom is on daily survival. This teacher will need to develop classroom expertise before leading others beyond the classroom” (Katzenmeyer & Moller, 1996, p. 43). Knowledge and skills play an important role in teacher leadership practices in Chinese junior and senior high schools, and improving teachers’ professional learning should be focused from beginning to end.

While the attribute of “ability to build strong collaborative relationships” was the weakness of all participants in SCTLAS. Promoting teacher collaboration as a teacher leadership role is not performed well in Chinese junior and senior high schools. The result is inconsistent with the argument that to foster teacher leadership, we must “...flatten the present hierarchies ... and create structures that empower teachers to collaborate with one another and to lead from within the heart of the school, the classroom” (Coyle, 1997, p. 239). It is essential to develop collaborative relationships where teacher leaders share their ideas for the benefit of the whole school (Little, 1988). Little (1995) also suggested that learning from each other was important to develop teacher leadership. At the same time, York-Barr and Duke (2004) also pointed out that “developing trusting and collaborative relationships is the primary means by which teacher leaders influence their colleagues” (p. 34), which is also a kind of relational barrier that teacher leadership development faces. The possible reason is that overheated discussions often occur in many learning
environments. Therefore, teachers with formal or informal positions and teachers without positions should emphasize the specific goals as critical to ensure teacher collaboration over the form.

**Teachers’ Organizational View.** The working scope of teacher leadership holders’ outreaches from classroom to school-wide. Lambert (1998) recognizes teacher leadership extending to school-level change and improvement. Similarly, Katzenmeyer and Moller (2001) point out that teacher leaders ought to lead both within and outside the classroom. While, the item “teachers know school system knowledge, such as resources management, sustaining school improvement, understanding of the range of stakeholder interest” got the lowest score among the seven items of the item included by Knowledge and Skill, which is worthy of attention. We point out that one of the foundations for teacher leadership development is to equip each type of teacher with a school-level view. According to the functioning range of teacher leadership, we would like to emphasize both teachers with formal and informal positions, and teachers without any positions are able to and do make influence outreaching the school-wide. Teacher leadership is not on an individual level but is dedicated to school organizations. Ogawa and Bossert (1995) posit that “leadership ...flows through the networks of roles that comprise organizations. Moreover, leadership is based on the deployment of resources that are distributed across the network of roles, with different roles having access to different levels and types of resources” (p. 238). For schools, teachers with informal positions have some attributes as the teachers with formal positions do when dealing with organizational issues (Smylie & Denny, 1990; Wasley, 1991), and teachers without any positions nor administrative responsibilities as well have the potential to influence and lead (Smylie & Mayrowetz, 2009).
According to the Teacher Leadership for Student Learning Framework (York-Barr & Duke, 2004) and Teacher Leadership Skills Framework (Center for Strengthening the Teaching Profession, 2009), organizational capacity and system thinking are the pieces of knowledge of teacher leadership that teachers should take away. Furthermore, in order to operate in highly fragmented organizations of schools, “control based on fragmented specialization appears to be a logical way to organize schools” (Senge et al., 2012, p. 51).

### Findings from Quantitative Analysis of Opportunities Synthesizing with Attributes for Teacher Leadership

The gender of responded teachers does not significantly influence the performance of teacher leadership attributes in the context of Chinese junior and senior high school. This finding in relation to gender has been discussed in many studies, which have supported the notion that gender does not affect leadership performance. For example, Aliakbari and Sadeghi (2014) stated that the gender of participants did not have much effect on teacher leadership practice. Hallinger (2015) also reported that teacher leadership practice was not necessarily gender-bound. While according to Pounder and Coleman (2002), some studies argued that there were significant differences in leadership practice between men and women. Pounder and Coleman (2002) pointed out that “because of the socialization process, women have developed values and characteristics that result in leadership behaviors that are different from the traditional competitive, controlling aggressive leadership behaviors of men” (p. 124). One possible reason for this divergence is that teacher leadership across the field has changed significantly in recent years. Another possible reason is the fact that the results depend on the different educational contexts.
Investigating each dimension of teacher leadership attributes with participants’ positions showed that teachers with leading titles (with formal or informal positions) and teachers without leading titles do not significantly affect their leadership attributes. However, this study is inconsistent with Miao’s study, which stated that a teacher leader’s status regarding leadership positions could significantly influence that teacher’s performance. While there is consensus within the field that all informal teacher leaders have influence beyond their classrooms, fewer studies have been conducted that explicitly examine the attributes of these individuals (Danielson, 2006). Therefore, the findings from this study are notable in that they identify the teacher leadership attributes of teachers with leading titles (with formal or informal positions) and without leading titles, essentially indicating the kinds of qualities that enable those individuals to have a positive influence on teacher leadership development.

The finding of teacher leadership attributes concerning respondents’ teaching experience is surprising that the teaching experience, including one to five years, six to ten years, and over ten years, does not affect the teacher leadership attributes in the four dimensions of perception, influencing, cooperation and knowledge and skills. With that said, the findings of this study differ to some extent from previous research. For example, teaching experience identified in the study was rated as significant (Danielson, 2006). The teaching experience was still an important indicator of teacher leadership because the teacher leader with the longest teaching experience was the knowledge base that others often referred to (Miao, 2018).

From the aspect of opportunities, this study shows that different genders did not reflect significant differences in obtaining the opportunities provided by school to develop their teacher leadership competence. This finding confirmed Aliakbari and
Sadeghi’s study (2014), in which they pointed out there was no significant difference between male and female on the opportunities to participate in school-related activities, improve their expertise, collaborate and interact with colleagues, and take an initiative to make changes.

In addition, compared with teachers without any positions, teachers with formal and informal leadership positions feel more support and space to perform in all seven dimensions, especially with significant differences in developmental focus, recognition, collegiality, participation, open communication and positive environment. Although based on what teachers all expressed, many administrators and teachers with formal leading titles were classroom teachers, they still demonstrated more opportunities in their school. This finding is similar to Angelle and DeHart’s (2011) study, which showed that teachers with leadership positions rated higher scores on the opportunities to be involved in leadership practice.

Besides, in this study teaching experience also reported significant differences only in the dimension of autonomy, which means teaching experience could influence the opportunity in the autonomous practice of leadership. Experienced teachers reported significantly higher scores than the novice teachers, which is opposite to the finding of Skaalvik and Skaalvik’s study (Skaalvik & Skaalvik, 2009) stating that teachers’ feeling of autonomy decreased with the number of teacher years. However, the overall results about the relationship between other dimensions of opportunities for teacher leadership practice and teaching years were similar with Aliakbari and Sadeghi’s study (2014), which showed teachers with diverse teaching experience did not present significant differences in the opportunities contributing to the development of teacher leadership. Moreover, Angelle and DeHart’s (2011) study demonstrated another result about the opportunities for leadership practice, which
showed novice teachers reported significantly higher scores than experienced teachers. This result is different from our findings that novice teachers presented relatively lower scores. Regarding all results above, future research could investigate the influence of teaching experience on the opportunities for teacher leadership in further detail.

Based on the mixed-method research, our findings present what the opportunities for teacher leadership development and the attributes of teacher leadership look like and how they exist in Chinese junior and senior high schools. The findings describe that schools succeed in providing an appropriate environment for teachers to facilitate their skills and competencies and exhibit their teacher leadership. Simultaneously, teachers in Chinese junior and senior high schools reflect relatively good capabilities in manipulating professional knowledge and skills, fulfilling a function in the teacher community. This finding confirms and extends what Hu and Gu’s (2012) study found, which pointed out that most Chinese teacher leaders had confidence in their instructional abilities and presented strong willingness to offer professional support to colleagues and share their teaching experience and materials with others. This study also confirmed that a supportive school context is fertile soil for teachers to develop leadership capabilities, which makes all teachers be leaders (Huang, 2015; Harris & Muijs, 2005; Katzenmeyer & Moller, 2009; Lambert, 2003; York-Barr & Duke, 2004).

**Synthesis of Qualitative and Quantitative Findings about Opportunities and Attributes**

This part synthesizes the findings of the quantitative and qualitative phases to explore research conclusions, based on the information provided in previous chapters. The following are seven groups of research findings that are reported and addressed.
They are: developmental focus to improve instructional knowledge and skills, recognition to influence teachers’ perception, autonomy to manipulate teaching in the classroom, collegiality to function in the teacher community, participation to be involved in important school-level action, open communication to dialogue for integral development, and positive environment to engage in teaching and learning.

**Developmental Focus to Improve Instructional Knowledge and Skills.**

According to the synthesis of quantitative and qualitative results, the study finds that these junior and senior high schools successfully provide continuous developmental and learning opportunities for teachers to facilitate their instructional knowledge and skills. Teachers continuously improve their professional capacities in the supportive environment. This finding confirms Hunzicker’s study (2012), which showed that teachers emerge teacher leadership by holding dispositions to serve students and pursue professional improvement. Hunzicker (2012), as well as Wenner and Campell (2017) both pointed out that teachers could exert teacher leadership in schools with positive culture for focusing on teachers’ continuous learning and growth and the “ongoing pursuit of professional growth” was seen as one of the “prerequisites for teacher leadership” (Hunzicker, 2012, p. 269).

**Recognition Influence Teachers’ Perception.** The synthesized results demonstrate that in the schools of participants, teachers value, celebrate and acknowledge the achievement of each other. The study also finds that recognition from administrators, colleagues and students could increase teachers’ satisfaction and the sense of achievement, which reinforces teachers’ self-affirmation of their capabilities, consolidates their self-perception to prioritize students’ learning and development, and also inspires other teachers to progress. This finding is consistent with Liu’s research in 2021 and Hunzicker’s study in 2012. Liu (2021) argued that
recognition could have a positive influence on teachers’ perceptions of their own competence. Similarly, Hunzicker (2012) revealed that schools with supportive environments could increase teachers’ self-confidence and assertiveness, which were the necessary dispositions for teachers to take leadership actions and be functional beyond the classroom (Hunzicker, 2012; Wenner & Campell, 2017). Therefore, teachers’ perception is an important leadership competence to improve student’s achievement (Angelle & Teague, 2014; Gabriel, 2005; Hunzicker, 2017).

**Autonomy to Manipulate Teaching in the Classroom.** Schools provide autonomous environments for teachers to apply instructional knowledge and skills in the classroom where they could adopt appropriate teaching strategies and resources, make adjustments based on students’ evaluations, and be aware of taking initiative to make innovation for student’s learning. This finding presents different results from Hu and Gu’s study (2012), which demonstrated that teachers’ personal capacities of creation and practical spirit were ignored. However, findings in this study show that over 80 percent of participants thought their school “often” and “always” encouraged teachers to make innovation and thought teachers in their school were generally innovative and experimental. In addition, 14 interviews reflected that they had autonomy in the classroom to take initiative to explore suitable methods and experiment with new teaching strategies to improve students’ learning. Our findings confirm Skaalvik and Skaalvik’s study (2014) regarding autonomy as an opportunity to lead teachers to being engaged in their jobs to serving students’ needs and to facilitating instructional development, thereby obtaining self-perceived and intrinsic motivation (Skaalvik & Skaalvik, 2014), which were the elements of teacher leadership (Hunzicker, 2012).
Collegiality to Function in the Teacher Community. Our findings also show that schools with collaborative environments provide opportunities for teachers to share and communicate with colleagues, participate in decision-making discussions, and share responsibility for collective professional development. Teacher leadership could develop in the professional cooperation with colleagues (Wang et al., 2020). Building a professional work condition in schools for teachers was helpful to promote their teaching quality and practice teacher leadership (Huang, 2015; Li, 2015), and creating a collaborative school culture with focusing on continuous learning could also assist teachers to exhibit leadership beyond the classroom and be functional in the teacher community (Hunzicker, 2012; Lin et al., 2018).

Participation to be Involved in Important School-level Action. This study presents two ways schools provided for teachers to participate in school-level activities, which were respectively indirect involvement and direct participation. For the development of school, most teachers expressed that although they did not indirectly participate in decision making, their opinions were collected by faculty representatives to be reflected in faculty representative conferences. This indirect way actually offered a channel to teachers to participate in school-level issues, but it still reflected a fact that this channel did not lead teachers to a greater engagement with the decision-making process on school affairs (Hu & Gu, 2012), which was also supported by the quantitative results. The dimension of participation got the lowest score, compared with the other dimensions, especially involving in the 3 items about seeking teacher opinions to make decisions, with the means ranging from 3.65 to 3.86. The relatively limited opportunities for teachers’ participation could influence teachers’ engagement to read the situation and orientation of schools’ development, which would block the leadership competence (Barth, 2001; Cheng, 2008). Only
when teachers really get involved in the operation and development of the school, can
the operational efficiency of the school and the job engagement of teachers increase
(Cao & Lu, 2006; Wang et al., 2020), and teacher leadership be exerted well.

**Open Communication to Dialogue for Integral Development.** The
dimension of open communication obtains the second lowest mean score with all
mean scores of items below the score of 4. Our findings show schools mainly
provided two communication ways for teachers to give their voices, and most of the
time, the communications were about teaching planning, professional development
and issues related to students, less involving decision making on the development of
school. Although most interviewees expressed the relatively open environment to
communicate, what we should pay attention to is that 12 of 15 interviewees are the
teachers both with formal and informal leading positions and experienced teachers
with many years of teaching experience. It is not surprising that most interviewees felt
more opportunities in open communication to give their voices, because “older, more
experienced teachers are more likely to be recognized as teacher leaders by their
colleagues” (Hunziker, 2017). We also could explain why open communication got
relatively lower mean scores in our quantitative results, which is possibly due to the
relatively high proportion of novice teachers and teachers without any positions
respectively with 54.7% and 65.0%. In addition, 92 out of 234 were teachers who did
not have any position with 1-5 years of teaching experience. Just as what INT11, the
regular teacher with two-year teaching experience, mentioned was that she was not
always involved in participation in school-level and student-level communication, and
contacted administrators only about teaching. From this angle, we could also interpret
why the dimension of participation obtained the lowest mean score as well.
Positive Environment to Engage in Teaching and Learning. Our findings also show that most schools of participants succeeded in providing a positive and supportive environment for teachers to communicate and cooperate with others happily, achieve self-improvement, keep ongoing professional development and increase job engagement and satisfaction. This finding confirms Wang et al. (2020), Hunziker (2012, 2017) as well as Angelle and Teague (2014)’s studies, that teacher leadership was influenced by schools’ environment. The school with collaborative, sharing, supportive and innovative environment could increase teachers’ self-perception to focus on professional development and serve student’ learning (Hunziker, 2012, 2017); exhibit leadership competency to improve instructional strategies and reinforce the cooperation with colleagues to share ideas and practice (Wang et al., 2020); and affirm their capabilities to accomplish tasks and tackle the issues related to teaching and learning (Angelle & Teague, 2014).

Challenges and Expectations

Based on interviews, this study finds that teachers in Chinese junior and senior high schools value the instructional competencies and position themselves to serve students’ development. When they talked about the challenges, the topics were around the new curriculum, teaching strategies, instructional adjustments, the evaluation of students, and the guidance for examinations. In addition, when they expressed their expectations for the opportunities, they still focused on the improvement of their instructional knowledge and skills, as well as the development of students. Our study presented that Chinese junior and senior high school teachers have exhibited teacher leadership in many aspects, such as the cooperation with colleagues, assistance for the development of colleagues, as well as the participation in school-level and student-level activities. However, teachers still place emphasis on exerting leadership in
classroom teaching and exhibit self-perception in instructional and student
development.

The development of teaching competence is the major concern among most
Chinese teachers, which could reflect the situation that teachers prefer to invest their
time and efforts into matters related to student and personal teaching development
instead of participating in school-level decision-makings and having influence on
colleagues (Zhang, 2016, 2014). In another word, teachers regarded teaching
competency as the most element teacher competence. This was consistent with Zhang
et al.’s study (2021) where teachers reported the highest score in teacher teaching
competence compared with other abilities. Similarly, in Hu and Gu’s study (2012),
teachers demonstrated confidence in student-level matters and their teaching
competence. However, teaching competence is the necessary but not sufficient
element for teacher leadership. Teacher leadership is the reflection of teachers’
comprehensive abilities and depends on teachers’ general competence (Zhang et al.
2021). Therefore, it is important for the development of teacher leadership that
teachers should break the conceptual stereotype of teacher leadership and take initiate
to exert influence on school-level activities and colleagues (Hu & Gu, 2012; Zhang
2016). In response to the cultivation of teacher leadership, schools should provide a
safe space and positive conditions for teachers to promote their professional
competence, deepen collaboration with others and empower them to make decisions
on schools’ development.

Implications of the Study

From the research conducted and analysis of findings of this study,
implications are discussed herein. Overall, researchers believe that teacher leadership
has a significant positive impact on school reform (Leithwood et al., 2010; Lieberman
& Miller, 2005; Murphy, 2005; Spillane, 2005). It is clear that all teachers, including teachers with formal or informal positions and teachers without positions, should play a key role in shaping the educational practices in schools and beyond the classroom walls.

Based on the results of this study, it helped cultivate teacher leadership and promote further understanding of the concept among teacher leadership in the context of Chinese junior and senior high school. As noted by Danielson (2006), “Teacher leaders see themselves first as teachers; although they are not interested in becoming administrators, they are looking to extend their influence” (p. 15). This point means administrators need to recognize all teachers and their desires to impact the school as a whole. However, it must also be recognized that teacher leaders are not only teachers with formal and informal positions. It is essential to consider that teachers without positions have the teacher leadership attributes to help when making school changes.

This study also plays an important role in encouraging widespread teacher leadership in the context of Chinese junior and senior high schools. Though some teachers may be more focused on learning their teaching skills, such as curriculum and classroom management skills, they are still more comfortable stepping into teacher leadership roles. However, if even teachers without positions were enlisted to take on teacher leadership roles or responsibilities, we can imagine the huge improvement both in school development and in student achievement.

Limitations of the Study

The main focus of this study was to examine the attributes of teacher leadership in Chinese schools and the opportunities provided by school context for teacher leadership development. Through a review of the literature and analysis of the
data, this study aimed to explore what attributes of teacher leadership and opportunities provided by school context look like in Chinese junior-senior high schools, thereby enriching the research on Chinese teacher leadership. However, the research on teacher leadership in the Chinese context has limitations and lacks a widely accepted definition (Wang & Zhu, 2020). Therefore, the inquiry of teacher leadership in Chinese educational contexts is still in its infancy due to the paucity of research on teacher leadership in China. Inevitably, the co-authors also encountered constraints in conducting their research. Since this study adopted mixed-method design to conduct research on teacher leadership, the limitations are presented next from the perspective of quantitative and qualitative phase respectively.

Regarding the quantitative research section, this study was conducted through a quantitative analysis of 234 valid surveys from over 30 cities to explore the attributes of Chinese teacher leadership and the opportunities provided by the school context. Thus, the sample size was a major limitation in this study. However, such a small sample is not representative of the current status of teacher leadership in the entire China, a larger sample size would make the study more representative and help survey a larger number of teachers. In addition, we recruited significantly more participants from the north than from the south, so geographic diversity is a focus for continuous improvement in our future studies. In this study, we used a snowball sampling method to collect the data, the surveys were first filled out by the volunteers we knew and then forwarded to other teachers they knew who were willing to participate in our study, because the first group of volunteers who participated in our study were mostly teachers from the north, so most of the volunteers they found worked in the same area or even the same institution as them. Although the ratio of the number of teachers from the north and the south participating in the quantitative
research did not reach one to one, a number of teachers from the south of China participated in our study. This is also in line with our study design, as we collected data with snowball sampling, which inherently did not allow us to precisely control which districts and schools the participants came from.

When it comes to the qualitative section, this study examined the results of interviews with fifteen Chinese junior and senior high school teachers, twelve of whom had formal or informal leadership positions or honorary titles, and only three interviewees, who were considered regular teachers, had neither formal leadership positions nor honorary titles. The co-authors were actually looking forward to hearing from regular teachers, however, the majority of those who volunteered to participate in our interviews were experienced teachers or those in leadership positions. In addition, only two of the interviewees were male teachers, while the remaining thirteen were female teachers. It is true that there are many more female teachers than male teachers in junior and senior high school settings in China, and the proportion of male teachers who participated in our interviews to the total number of interviewees was actually roughly the same as the proportion of male teachers who completed the surveys to the total number of survey respondents. Furthermore, the teachers who agreed to be interviewed were from the north of China, so their views do not accurately represent those of junior and senior high school teachers in other regions of China. As a result, the findings of this study have limited generalizability to other populations (Yin, 2014), however, these limitations do not seriously weaken the significance of this study. In the future, we hope to hear the voices of teachers from regions other than northern China in further studies to enrich our knowledge and understanding of teacher leadership in China.
In addition, there were some inevitable limitations from our translation. Although we strove to adopt accurate and equivalent approaches to alleviate and control the errors, ensuring the integrity of information, it was not easy for researchers to find the equivalent terms in English which were unique and with Chinese characteristics. Besides, when conducting the language conversion, different language structures also posed challenges to investigators to deliver the exact information without any errors or missing in original language to the target groups. These limitations from translations in research are unavoidable, but as researchers, we will continue to improve the research design to offset the bias in studies.

**Recommendations for Future Research**

This section presents three aspects that we recommend the researchers to take into consideration when conducting studies in the future.

*Enriching the Theoretical Framework of Teacher Leadership Within the Specific School Contexts*

The theoretical frameworks constructed (SCTLAS & OTLSCS) in this study are widely general for the average schools in the Chinese mainland, but not specific for varying school contexts. There are some schools succeeding in school culture, leadership styles, teachers’ professional qualifications, student’s enrollment rates specifically, or the other advantages. In the future research and for digging into the knowledge of Chinese teacher leadership, conducting research in practice on the schools with different features is in demand. Even though developing teacher leadership has been in the process of schools operating in China for a few decades, theorizing by taking away the gains from the practice is imperative for education research.
**Study on the Influencing Factors for Teacher Leadership Development**

Teacher leadership development contributes to schools’ improvement and students’ achievement. There are some demographic differences among various schools in the same level of education or policy differences due to the policy on trial, which would be influencing factors on teacher leadership development. Understanding in-depth the effective factors for leadership development may require the peers to recognize and explore the correlation among the independent factors and dependent factors. For principals and policymakers, more knowledge of influencing factors is helpful for avoiding ineffective actions, as well as strengthening and supplying productive actions.

**Conducting Comparative Studies on Teacher Leadership in Different Regions**

More comparative studies of Chinese teacher leadership domestically or internationally will benefit educational research and theories. Meanwhile, the theories promote the practice in turn. It is expected for scholars to conduct comparative studies on teacher leadership that contribute to the educational research areas in China and abroad. It is worth noting that specific research backgrounds and conditions have to be considered when gaining implications and transmitting. For a school, it may not be appropriate to directly bring an effective plan that benefits other schools without modifying according to its own situation.

**Conclusions**

Research studies show that a supportive and applicable school context is significant for teachers to develop leadership competencies, which provides all teachers with opportunities to be leaders (Harris & Muijs, 2005; Katzenmeyer & Moller, 2009; Lambert, 2003; York-Barr & Duke, 2004). Whether in western countries or in China, there are no unified definitions, functions or development ways
of teacher leadership (Pang & Miao, 2017; Wenner & Campbell, 2017; York-Barr & Duke, 2004), which brings challenges to researchers to study. However, almost all researchers acknowledge that schools as a platform for teachers to “emerge, develop and establish” teacher leadership (Hunziker, 2012, p. 269). Therefore, our research, based on Chinese school context, adopted mixed-methods design to explore what teacher leadership looks like in Chinese school context and how the opportunities provided by schools for teachers to develop competencies and to exhibit teacher leadership successfully.

This study found that schools with supportive contexts with developmental focus, recognition, autonomy, collegiality, participation, open communication and positive environment, succeeded in providing opportunities for teachers to exhibit their leadership with perception, influencing, cooperation as well as knowledge and skills. We used both quantitative and qualitative methods to grasp a big picture image of teacher leadership and provide deep interpretations for the development of teacher leadership. We elaborated how schools offered teachers opportunities to improve instructional knowledge and skill, influence teachers’ perceptions, manipulate teaching in the classroom, function in the teaching community, participate in school-level activities and make dialogues for integral development. The findings of this study enrich the knowledge and theory of teacher leadership and provide reference for the development of teacher leadership.
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https://doi.org/10.1177/21582440211002175


# Appendix A

## Core Attributes of Chinese Teacher Leadership

<table>
<thead>
<tr>
<th>Preliminary Items</th>
<th>Core Attributes</th>
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</thead>
<tbody>
<tr>
<td>1. Aim to increase students learning and achievement.</td>
<td>Aim to increase students’ learning and students’ achievement.</td>
</tr>
<tr>
<td>2. Teacher leadership focus on teaching quality including teachers’ professionalization and students’ learning rather than managerial or administrative roles.</td>
<td>Work focusing on teachers’ professional quality and students’ achievement.</td>
</tr>
<tr>
<td>3. Teacher leadership works at the school level, such as decision making, problem solving, mentor colleagues, redesign school, instead of regular classroom teaching.</td>
<td>Work at school level, rather than only at classroom level.</td>
</tr>
<tr>
<td>4. The way of participant into teacher leadership is sharing expertise with participating community.</td>
<td>Share expertise with community.</td>
</tr>
<tr>
<td>5. Help colleague with professions for student’s learning, engage and influence colleagues.</td>
<td>Take positively influencing colleagues as a duty.</td>
</tr>
<tr>
<td>6. Make their own judgments concerning their classroom, and that they are allowed to do this in a private manner with minimal external intrusion.</td>
<td>Work individually but not alone.</td>
</tr>
<tr>
<td>7. Foster good relationships with the other teachers in the school, equality, autonomy, and privacy, teachers share an equal professional status.</td>
<td>Corporate in equal status with colleagues.</td>
</tr>
</tbody>
</table>
## Appendix B

### Item Pool of Teacher Leadership

<table>
<thead>
<tr>
<th>Item Pool</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Aim to increase students learning and achievement.</td>
</tr>
<tr>
<td>2. Teacher leadership focus on teaching quality including teachers’ professionalization and students’ learning rather than managerial or administrative roles.</td>
</tr>
<tr>
<td>3. Teacher leadership works at the school level, such as decision making, problem solving, mentor colleagues, redesign school, instead of regular classroom teaching.</td>
</tr>
<tr>
<td>4. The way of participant into teacher leadership is sharing expertise with participating community.</td>
</tr>
<tr>
<td>5. Help colleague with professions for student’s learning, engage and influence colleagues.</td>
</tr>
<tr>
<td>6. Make their own judgments concerning their classroom, and that they are allowed to do this in a private manner with minimal external intrusion.</td>
</tr>
<tr>
<td>7. Foster good relationships with the other teachers in the school, equality, autonomy, and privacy, teachers share an equal professional status.</td>
</tr>
<tr>
<td>8. Teachers are willing to assist colleagues who need help voluntarily, share risk and responsibility.</td>
</tr>
<tr>
<td>9. Instructional strategies, differentiation strategies, curriculum development, using assessment data to make decisions.</td>
</tr>
<tr>
<td>10. Manage resources, sustain school improvement, understanding of the range of stakeholder interest.</td>
</tr>
<tr>
<td>11. Teachers are able to synthesize information, intercommunicate, and give productive feedback after communicating.</td>
</tr>
<tr>
<td>12. Having an ability to build strong collaborative relationships.</td>
</tr>
</tbody>
</table>
Appendix C

The Preliminary Dimension of Attributes of Teacher Leadership within the Context of Chinese Junior or Senior High Schools

**Dimension 1:** In Chinese junior or senior high schools, the teachers’ perspectives should match teacher leadership requirements.

Performance:
· The aim of teachers is to increase students’ learning and students’ achievement.
· The focus of teachers’ work is on their own professional quality and students’ achievement.
· The scope of work is school level, rather than limited to classroom level.

**Dimension 2:** In Chinese junior or senior high schools, teachers should participate in teaching development with their teacher leadership.

Performance:
· The means of teachers participating in teaching development is sharing expertise with teaching community.
· The duty of teachers participating in teaching development is to positively influence colleagues.

**Dimension 3:** In Chinese junior or senior high schools, teachers should collaborate with colleagues which is a requirement of teacher leadership.

Performance:
· Teachers work individually but not alone. Teachers make their own judgments concerning their classroom, and that they are allowed to do this in a private manner with minimal external intrusion.
· Teachers cooperate in an equal status with colleagues. Teachers foster good relationships with the other teachers in the school, equality, autonomy, and privacy, teachers share an equal professional status.

· Teachers should assist colleagues who need help voluntarily, share risk and responsibility.

**Dimension 4:** Within the context of Chinese junior or senior high schools, professional knowledge and skills are essential for teachers’ teacher leadership.

**Performance:**

· Teachers know well and also can apply pedagogical knowledge, such as instructional strategies, differentiation strategies, curriculum development, and using assessment data to make decisions.

· Teachers know well and also can apply systems knowledge, such as resources management, sustaining school improvement, understanding of the range of stakeholder interest.

· Teachers have the skill of communicating, they have an ability to synthesize information, intercommunicate, and give productive feedback after communicating.

· Teachers have the interpersonal skills, they have an ability to build strong collaborative relationships.
Appendix D

Teacher Leadership in the Context of Chinese Education Survey

Part A: Situation of Chinese Teacher Leadership Attribute Survey (SCTLAS)

English Version

Your name: __________________________ Your contact information: ______________

Your gender: female ☐; male ☐; other ☐

Your position title: teacher with formal or informal leadership position ☐; normal teacher without any leadership position ☐

Years of teaching experience: ________________________________

Current working school or city: ________________________________

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<tr>
<th></th>
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<th>Absolutely not qualified</th>
<th>Barely qualified</th>
<th>Basically qualified</th>
<th>Mostly qualified</th>
<th>Absolutely qualified</th>
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<tbody>
<tr>
<td>1</td>
<td>Teachers have always been working for students learning and students’ achievement.</td>
<td>☐</td>
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<tr>
<td>2</td>
<td>Teachers are able to focus on their teaching quality including teachers’ professionalization and students’ learning rather than managerial or administrative roles.</td>
<td>☐</td>
<td>☐</td>
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<td>☐</td>
<td>☐</td>
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<tr>
<td>3</td>
<td>Teachers have the ability to work at the school level, such as decision making, problem solving, mentor colleagues, redesign school, instead of regular classroom teaching.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>4</td>
<td>Teachers are willing to share expertise with colleagues and participating community.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>5</td>
<td>Teachers are able to help and influence colleagues.</td>
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<td>☐</td>
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<tr>
<td>6</td>
<td>Teachers are able to complete teaching task individually.</td>
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<td>7</td>
<td>Teachers agree to foster good relationships with colleagues in the school, in equality, autonomy, and privacy.</td>
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<td>8</td>
<td>Teachers agree to share an equal professional status with colleagues.</td>
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<tr>
<td>9</td>
<td>Teachers are willing to assist colleagues who need help voluntarily.</td>
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<tr>
<td>10</td>
<td>Teachers are willing to share risk and responsibilities with participating community</td>
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<tr>
<td>11</td>
<td>Teachers have pedagogical knowledge, such as instructional strategies, differentiation strategies, curriculum development, using assessment data to make decisions.</td>
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<tr>
<td>12</td>
<td>Teachers have the capabilities of applying pedagogical knowledge such as instructional strategies, differentiation strategies, curriculum development, using assessment data to make decisions.</td>
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<tr>
<td>13</td>
<td>Teachers know school system knowledge, such as resources management, sustaining school improvement, understanding of the range of stakeholder interest.</td>
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<td>14</td>
<td>Teachers are able to synthesize information.</td>
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<td>15</td>
<td>Teachers are able to listen and express clearly.</td>
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<tr>
<td>16</td>
<td>Teachers are able to give productive feedback after communicating.</td>
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<tr>
<td>17</td>
<td>Teachers have an ability to build strong collaborative relationships.</td>
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</tbody>
</table>
Teacher Leadership in the Context of Chinese Education Survey

Part A: Situation of Chinese Teacher Leadership Attribute Survey (SCTLAS)

Chinese Version

中国教育背景下教师领导力探究调查问卷

（问卷一）中国初高中教师领导力水平现状调查

姓名：__________________________  联系方式：__________________________。

性别：女____________；男____________；其他____________。

职位：教师领导____________；非教师领导____________。

教学年限：____________。

当前工作学校或所在城市名称：__________________________。

<table>
<thead>
<tr>
<th></th>
<th>完全不符</th>
<th>不符合</th>
<th>基本符合</th>
<th>大部分符合</th>
<th>完全符合</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>教师一直在为学生的学习和成就而努力。</td>
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<td></td>
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</tr>
<tr>
<td>2</td>
<td>比起领导职位的头衔及荣誉，教师更加专注于教学质量、专业能力，和学生的学习情况。</td>
<td></td>
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</tr>
<tr>
<td>3</td>
<td>教师的工作范围不仅局限于课堂之内的教学，而且具有在学校范围内发挥领导力的能力，例如决策，解决问题，指导同事，重新设计学校管理体系。</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>4</td>
<td>教师乐意与同事及所在小组分享专业知识。</td>
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<tr>
<td>5</td>
<td>教师能够帮助同事并对同事产生积极影响。</td>
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<td>6</td>
<td>教师具备单独完成教学任务的能力。</td>
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<td>7</td>
<td>教师认同在与同事建立良好关系的同时，互相尊重，保证他人独立自主的权利。</td>
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<td>8</td>
<td>教师认同自己与同事享有同等的专业地位。</td>
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<td>9</td>
<td>教师乐意自发地帮助同事。</td>
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<td>10</td>
<td>教师愿意与所在小组、群体或组织共担风险和责任。</td>
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<td>11</td>
<td>教师具备教育学知识，例如教学策略，课程开发，教学评价，等。</td>
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<td>12</td>
<td>教师能够运用教育学知识，根据教学现状进行教学评价，最终做出相应改进或决策。</td>
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<td>13</td>
<td>教师了解学校系统的管理运营知识，例如资源管理，学校的可持续发展，了解利益相关者的兴趣点等。</td>
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<td>14</td>
<td>教师具有整合有关信息的能力。</td>
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<tr>
<td>15</td>
<td>教师具备认真倾听同事，和清晰表达的能力。</td>
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<td>16</td>
<td>与同事交流后，教师能够提供富有成效的反馈。</td>
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<td>17</td>
<td>教师能够与同事建立稳固的合作关系。</td>
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</table>
Appendix E

Teacher Leadership in the Context of Chinese Education Survey

Part B: Opportunity for Teacher Leadership in School Context Survey

(OTLSCS)

English Version

Your name: ___________________________ Your contact information: _________________.

Your gender: female □; male □; other □

Your position title: teacher with formal or informal leadership position □; normal teacher without any leadership position □

Years of teaching experience: ___________________________.

Current working school or city: ___________________________.

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<th>Never</th>
<th>Rarely</th>
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<td></td>
<td></td>
<td>At my school, administrators and experienced teachers try to help new teachers get process.</td>
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<td></td>
<td></td>
<td>If the teachers need assistance and guidance, my school will provide what we need.</td>
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<td></td>
<td></td>
<td>At my school, teachers support each other personally and professionally.</td>
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<td></td>
<td></td>
<td>At my school, teachers devote themselves to gaining new knowledge and skills.</td>
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<td></td>
<td></td>
<td>Teachers share the new gained ideas and</td>
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<tr>
<td>6</td>
<td>At my school, administrators have confidence in my professional skills and competence.</td>
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<td>7</td>
<td>My professional skills and competence are recognized by other teachers.</td>
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<td>8</td>
<td>I feel valued and respected for my ideas and opinions.</td>
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<td>9</td>
<td>At my school, we celebrate each other’s development and successes.</td>
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<td>10</td>
<td>At my school, administrators have confidence in teachers’ abilities to deal with the problems relevant to teaching practice.</td>
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<td>11</td>
<td>As a teacher, I am free to make adjustments based on the demands of my students.</td>
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<td>12</td>
<td>We could bend the rules if it is necessary for students’ learning.</td>
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<td>13</td>
<td>Teachers are encouraged to take initiative to make improvements for students.</td>
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<td>14</td>
<td>Teachers can be innovative, creative and experimental at my school.</td>
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<td>15</td>
<td>Administrators and other teachers are supportive of the changes in my instructional strategies, by removing barriers and providing resources.</td>
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<td>16</td>
<td>At my school, teachers discuss strategies, share materials and give advice.</td>
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<td>17</td>
<td>At my school, teachers observe other teachers’ classes.</td>
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<td>18</td>
<td>My colleagues give me feedback, when I talk with them about my teaching and the curriculum.</td>
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<td>19</td>
<td>Encountering students’ academic and behavior problems, teachers and administrators work together to discuss, analyze and solve these problems.</td>
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<td>20</td>
<td>At my school, I am supported by other teachers to deal with challenges in my classes.</td>
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<td>21</td>
<td>Teachers have a say in the development of school and students.</td>
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<td>22</td>
<td>At my school, teachers and administrators jointly decide how time is used and how the school is organized.</td>
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<td>23</td>
<td>At my school, teachers participate in mentoring or evaluating new faculty and/or staff.</td>
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<td>24</td>
<td>At my school, administrators seek my opinions and ideas.</td>
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<td>25</td>
<td>Teachers and administrators make conversations and try to reach consensus before making important decisions.</td>
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<td>26</td>
<td>Because teachers and administrators share ideas about our work, I stay aware of what is happening.</td>
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<td>27</td>
<td>At my school everybody talks about their feelings, opinions and concerns, in free open and honest ways.</td>
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<td>28</td>
<td>Teachers and administrators openly accept diversity of opinion.</td>
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<td>29</td>
<td>At my school, when things go wrong, we are not blamed and try not to blame, but find ways to do better the next time.</td>
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<td>30</td>
<td>Faculty meeting time is used for discussions and problem solving.</td>
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<td>31</td>
<td>At my school, teachers are regarded as professionals, respected by administrators, parents and students.</td>
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<tr>
<td>32</td>
<td>Teachers at my school look forward to coming to work every day.</td>
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<td>33</td>
<td>Teachers are satisfied with the working environment.</td>
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<tr>
<td>34</td>
<td>At my school, teachers and administrators work in partnership and as a team.</td>
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<td>35</td>
<td>Teachers are positive to respond to our students’ need.</td>
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</table>
Teacher Leadership in the Context of Chinese Education Survey

Part B: Opportunity for Teacher Leadership in School Context Survey

(OTLSCS)

Chinese Version

中国教育背景下教师领导力探究调查问卷

(问卷二) 学校环境下教师领导力发展机遇调查

姓名: ____________________ 联系方式: ____________________.

性别: 女____; 男____; 其他____.

职位: 教师领导 _______; 非教师领导 _______.

教学年限: _______.

当前工作学校或所在城市名称: _______.

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<tbody>
<tr>
<td>1</td>
<td>在我的学校中，管理者和经验丰富的教师努力帮助新教师了解工作流程。</td>
<td>从不</td>
<td>很少</td>
<td>有时候</td>
<td>经常</td>
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<td>2</td>
<td>如果教师们需要帮助和指导，我的学校将会为教师们提供所需要的帮助。</td>
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<td>3</td>
<td>在我的学校中，教师们在个人发展和专业发展上相互支持。</td>
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<td>4</td>
<td>在我的学校中，教师们致力于学习新的知识和技能。</td>
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<td>5</td>
<td>教师们相互分享关于教学及管理方面的新想法和新策略。</td>
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<tr>
<td>6</td>
<td>在我的学校中，管理者对我的专业技能充满信心。</td>
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<td>7</td>
<td>我的专业技能能够得到其他教师的认可。</td>
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<td>8</td>
<td>我觉得自己的想法和观点受到学校其他同事的重视和尊重。</td>
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<tr>
<td>9</td>
<td>在我的学校中，同事们都会为彼此的发展和成功而庆贺。</td>
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<tr>
<td>10</td>
<td>在我的学校中，管理者相信教师有能力处理好与教学实践相关的问题。</td>
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<tr>
<td>11</td>
<td>作为一名教师，我可以根据学生的需求对教学及课堂管理进行调整。</td>
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<td>12</td>
<td>在必要的情况下，教师可以放宽既定的教学规定来帮助学生的学习。</td>
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<tr>
<td>13</td>
<td>学校鼓励教师为了学生的发展主动作出改进。</td>
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<td>14</td>
<td>在我的学校中，老师是具有创造力的，创新精神的，和实验精神的。</td>
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<td>15</td>
<td>在我对教学策略改进的过程中，管理者和其他教师为我提供资源和帮助，从而消除改进过程中所遇到的障碍。</td>
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<td>16</td>
<td>在我的学校中，教师们讨论教学策略，分享资料并为彼此提出建议。</td>
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<td>17</td>
<td>在我的学校中，教师们会旁听其他教师的课。</td>
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<td>18</td>
<td>当我和同事们就我的教学和课程进行讨论时，我会得到他们的反馈。</td>
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<td>19</td>
<td>面对学生学习及表现上的问题，教师和管理者会共同探讨、分析，从而解决这些问题。</td>
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<td>20</td>
<td>在我的学校中，我得到了其他教师的支持来应对课堂上的挑战。</td>
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</table>
21. 教师们对学校和学生的发展都有发言权。

22. 在我的学校中，教师和管理者共同决定时间是如何被利用的，以及学校是以何种方式被规划的。

23. 在我的学校中，教师们参与指导或评估新入职的教职人员。

24. 在我的学校中，管理者会征求我的意见和想法。

25. 在做出重要决定之前，教师与管理者会进行对话并努力达成共识。

26. 由于教师与管理者彼此会分享关于工作的看法和意见，所以我了解当前的工作状况。

27. 在我的学校中，每一名教师都可以自由、开放且真诚地谈论他们的感受、意见和担忧。

28. 教师和管理者都以开放的态度接受多种多样的意见。

29. 在我的学校中，当工作出现失误时，我们不会受到责备，同时也尽量不去责备他人，而是找到解决方法以便下次做得更好。

30. 教职员工会议主要是用来讨论和解决问题。

31. 在我的学校中，教师被视为专业人士，被领导、家长和学生所尊重。

32. 在我的学校中，教师们对每天的工作都充满了期望。

33. 教师们对工作环境很满意。

34. 在我的学校中，教师与管理者是合作关系，大家重视团队合作。
| 35 | 教师会对学生的需求做出积极的回应。 |        |        |        |
Appendix F

Opportunity for Teacher Leadership in School Context Interview

English Version

Your name: ________________________________.

Your position title: ________________________.

Years of teaching experience: ________________.

Current working school or city: ________________.

1. How do you understand teacher leadership? What attributes do you think teacher leadership should have and what literacies should teachers possess?

2. How does your school provide you with opportunities for professional development and learning at your workplace? Does the school provide you with the necessary guidance and assistance while providing you with professional development and learning opportunities? (How was this provided?)

3. How are teachers rewarded and recognized at your workplace? Do school administrators and colleagues show respect and recognition for your work when you make certain progress and achievements? As a teacher, how are you recognized by school administrators and other colleagues?

4. In your workplace, does the school provide you with the autonomy to make positive changes or adjustments to help students’ development in an autonomous, innovative way? How does your school encourage you to make improvements and innovations for the development of your students?

5. How do teachers and administrators communicate with each other in your school (regarding personal development or teacher teaching, student development, and school development, etc.)? Does the school provide a relatively good environment for teachers to communicate and interact with each other?
6. Does your school provide you with opportunities to participate in decision-making? How are you involved in decision-making at your school? (e.g., selection of leaders, evaluation of colleagues’ titles, teacher teaching, student development, school development)

7. How do teachers collaborate with each other in your school? How do teachers discuss, share resources, and exchange ideas with each other?

8. How have the opportunities provided by your school impacted your teaching and career? How have the opportunities provided by the school impacted your teaching goals, career plans, and relationships with colleagues? (Are you willing to share your teaching experience with colleagues, share teaching resources, and offer advice to colleagues? / Is there a collaborative relationship between colleagues?)

9. What other aspects of professional development, teacher teaching, collegial collaboration, participation in teaching-related activities, and participation in decision-making (regarding student development, teacher development, and school development) are you looking forward to in terms of the opportunities provided by your school? In addition, what are the difficulties and challenges you have encountered in your professional development as a teacher?
Opportunity for Teacher Leadership in School Context Interview

Chinese Version

中国教育背景下教师领导力机遇访谈提纲

姓名: ________________  职位: ________________

教学年限: __________  当前工作学校或所在城市: __________

1. 您是如何理解教师领导力的？您觉得教师领导力应该具有哪些属性，教师应该具备哪些素养？

2. 在您的工作单位，学校是如何为您提供专业发展和学习的机会的？在为您提供专业发展和学习机会的同时，学校是否给予您必要的指导和帮助？（如何给予的？）

3. 在您的工作单位，教师是如何被奖励和认可的？当您的工作取得一定的进步和成就时，学校管理者和同事是否对您的工作表示尊重和认可？作为一名教师，您是如何被学校管理者和其他同事认可的？

4. 在您的工作单位中，学校是否为您提供了空间，让教师可以自主地，有创新性地做出积极的改变或调整，以帮助学生的发展？学校是如何鼓励您为学生的发展做出改进和创新的？

5. 在您的学校中，教师和管理人员是如何进行沟通和交流的（关于教师个人发展或教师教学，学生发展，以及学校发展方面等等）？学校是否为教师们提供了一个相对良好的沟通和交流的环境？

6. 您的学校是否为您提供了参与决策的机会？您是如何参与到学校的决策中去的？（例如，领导的选拔，同事的职称评定，教师教学，学生发展，学校发展）

7. 在您的学校中，教师间是如何合作的？教师们是如何讨论，共享资源，相互交换意见的？

8. 学校为您提供的这些机会对您的教学和职业生涯有着怎样的影响？学校提供的这些机会对您的教学目标，职业规划和同事之间的关系有着怎样的影响？（是否愿意与同事分享自己的教学经验，是否愿意分享教学资源，是否愿意为同事提供建议？/ 同事之间是否存在合作关系？）

9. 在专业发展，学生教学，同事合作，参与与教学相关的活动，参与决策（参与决策可以是关于学生发展的决策，教师自身发展的决策，及学校发展的决策）等方面，您对于学校为您提供的机遇还有哪些方面的期待？此外，在您的教师职业发展过程中，您遇到了哪些困难和挑战？
Appendix G
Expert Review of SCTLAS

Evaluation of Situation of Chinese Teacher Leadership Attribute Survey

中国初高中教师领导力水平现状调查—评价

<table>
<thead>
<tr>
<th>Relevance Scale</th>
<th>量表测评</th>
</tr>
</thead>
<tbody>
<tr>
<td>1=not relevant</td>
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<tr>
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<table>
<thead>
<tr>
<th>NO.</th>
<th>Item</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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</thead>
<tbody>
<tr>
<td>Dimension 1: Perception—In Chinese junior or senior high schools, the teachers’ perspectives should match teacher leadership requirements as the basic of insight and perception.</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>1</td>
<td>Teachers have always been working for students’ learning and students’ achievement. 教师一直在为学生的学习和成就而努力。</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Teachers are able to focus on their teaching quality including teachers’ professionalization and students’ learning rather than managerial or administrative roles. 比起领导职位的头衔及荣誉，教师更加专注于教学质量、专业能力，和学生的学习情况。</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Teachers have the ability to work at the school level, such as decision making, problem solving, mentor colleagues, redesign school, instead of regular classroom teaching. 教师的工作范围不仅局限于课堂之内的教学，而且具有在学校范围内发挥领导力的能力，例如决策，解决问题，指导同事，重新设计学校管理体系。</td>
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</table>
### Dimension 2: Influencing—In Chinese junior or senior high schools, teachers should participate in teaching development with their teacher leadership as the influencing approach.

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<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>4</td>
<td>Teachers are willing to share expertise with colleagues and participating communities.</td>
</tr>
<tr>
<td></td>
<td>待教师乐意与同事及所在小组分享专业知识。</td>
</tr>
<tr>
<td>5</td>
<td>Teachers are able to help and influence colleagues.</td>
</tr>
<tr>
<td></td>
<td>教师能够帮助同事并对同事产生积极影响。</td>
</tr>
</tbody>
</table>

### Dimension 3: Cooperation—In Chinese junior or senior high schools, teachers should collaborate with colleagues as an alliance.

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>6</td>
<td>Teachers are able to complete teaching task individually.</td>
</tr>
<tr>
<td></td>
<td>教师具备单独完成教学任务的能力。</td>
</tr>
<tr>
<td>7</td>
<td>Teachers agree to foster good relationships with colleagues in the school, in equality, autonomy, and privacy.</td>
</tr>
<tr>
<td></td>
<td>教师认同在与同事建立良好关系的同时，互相尊重，保证他人独立自主的权利。</td>
</tr>
<tr>
<td>8</td>
<td>Teachers agree to share an equal professional status with colleagues.</td>
</tr>
<tr>
<td></td>
<td>教师认同自己与同事享有同等的专业地位。</td>
</tr>
<tr>
<td>9</td>
<td>Teachers are willing to assist colleagues who need help voluntarily.</td>
</tr>
<tr>
<td></td>
<td>教师乐意自发地帮助同事。</td>
</tr>
<tr>
<td>10</td>
<td>Teachers are willing to share risk and responsibilities with participating community.</td>
</tr>
<tr>
<td></td>
<td>教师愿意与所在小组、群体或组织共担风险和责任。</td>
</tr>
</tbody>
</table>

### Dimension 4: Knowledge and skills—Within the context of Chinese junior or senior high schools, professional knowledge and skills are essential for teachers’ ability to exert teacher leadership.

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<table>
<thead>
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<tbody>
<tr>
<td>11</td>
<td>Teachers have pedagogical knowledge, such as instructional strategies, differentiation strategies, curriculum development, using assessment data to make decisions.</td>
</tr>
<tr>
<td></td>
<td>教师具备教育学知识，例如教学策略，课程开发，教学评价等。</td>
</tr>
</tbody>
</table>
|   | Teachers have the capabilities of applying pedagogical knowledge such as instructional strategies, differentiation strategies, curriculum development, using assessment data to make decisions.  
教师能够运用教育学知识，根据教学现状进行教学评价，最终做出相应改进或决策。 |
|---|---|
|   | Teachers know school system knowledge, such as resources management, sustaining school improvement, understanding of the range of stakeholder interest.  
教师了解学校系统的管理运营知识，例如资源管理，学校的可持续发展，了解利益相关者的兴趣点等。 |
|   | Teachers are able to synthesize information.教师具有整合有关信息的能力。 |
|   | Teachers are able to listen and express clearly.  
教师具备认真倾听同事，和清晰表达的能力。 |
|   | Teachers are able to give productive feedback after communicating.  
与同事交流后，教师能够提供富有成效的反馈。 |
|   | Teachers have an ability to build strong collaborative relationships.  
教师能够与同事建立稳固的合作关系。 |
Appendix H

Expert Review of OTLSCS

Evaluation of Opportunity for Teacher Leadership in School Context Survey

学校环境下教师领导力发展机遇调查—评价

<table>
<thead>
<tr>
<th>NO.</th>
<th>Item</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimension 1: Developmental Focus—School environment provides opportunities for teachers to gain new knowledge and skills. Teachers are encouraged to assist others to learn and develop. Teachers are provided with needed assistance and guidance.</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>At my school, administrators and experienced teachers try to help new teachers get process. 在我的学校中，管理者和经验丰富的教师努力帮助新教师了解工作流程。</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>If the teachers need assistance and guidance, my school will provide what we need. 如果教师们需要帮助和指导，我的学校将会为教师们提供所需要的帮助。</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>At my school, teachers support each other personally and professionally. 在我的学校中，教师们在个人发展和专业发展上相互支持。</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>At my school, teachers devote themselves to gaining new knowledge and skills. 在我的学校中，教师们致力于学习新的知识和技能。</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Relevance Scale

量表测评

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<thead>
<tr>
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<td>4=与维度高度相关</td>
</tr>
</tbody>
</table>
5   Teachers share the new gained ideas and strategies with each other.  教师们相互分享关于教学及管理方面的新想法和新策略。

Dimension 2: Recognition—Teachers are valued for the roles they take and the contributions they make. Mutual recognition, respect and caring exist among teachers.

6   At my school, administrators have confidence in my professional skills and competence. 在我的学校中，管理者对我的专业技能充满信心。

7   My professional skills and competence are recognized by other teachers.  我的专业技能能够得到其他教师的认可。

8   I feel valued and respected for my ideas and opinions.  我觉得自己的想法和观点受到学校其他同事的重视和尊重。

9   At my school, we celebrate each other’s development and successes.  在我的学校中，同事们都会为彼此的发展和成功而庆贺。

10  At my school, administrators have confidence in teachers’ abilities to deal with the problems relevant to teaching practice.  在我的学校中，管理者相信教师有能力处理好与教学实践相关的问题。

Dimension 3: Autonomy—Teachers are encouraged to make improvements and innovations for students’ development. Barriers are removed and resources are provided to support teachers’ innovative, creative and experimental spirits.

11  As a teacher, I am free to make adjustments based on the demands of my students.  作为一名教师，我可以根据学生的需求对教学及课堂管理进行调整。

12  We could bend the rules if it is necessary for students’ learning.  在必要的情况下，教师可以放宽既定的教学规定来帮助学生的学习。
<table>
<thead>
<tr>
<th>13</th>
<th>Teachers are encouraged to take initiative to make improvements for students. 学校鼓励教师为了学生的发展主动作出改进。</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>Teachers can be innovative, creative and experimental at my school. 在我的学校中，老师是具有创造力的，创新精神的，和实验精神的。</td>
</tr>
<tr>
<td>15</td>
<td>Administrators and other teachers are supportive of the changes in my instructional strategies, by removing barriers and providing resources. 在我对教学策略改进的过程中，管理者和其他教师为我提供资源和帮助，从而消除改进过程中所遇到的障碍。</td>
</tr>
<tr>
<td>16</td>
<td>At my school, teachers discuss strategies, share materials and give advice. 在我的学校中，教师们讨论教学策略，分享资料并为彼此提出建议。</td>
</tr>
<tr>
<td>17</td>
<td>At my school, teachers observe other teachers’ classes. 在我的学校中，教师们会旁听其他教师的课。</td>
</tr>
<tr>
<td>18</td>
<td>My colleagues give me feedback, when I talk with them about my teaching and the curriculum. 当我和同事们就我的教学和课程进行讨论时，我会得到他们的反馈。</td>
</tr>
<tr>
<td>19</td>
<td>Encountering students’ academic and behavior problems, teachers and administrators work together to discuss, analyze and solve these problems. 面对学生学习和表现上的问题，教师和管理者会共同探讨、分析，从而解决这些问题。</td>
</tr>
<tr>
<td>20</td>
<td>At my school, I am supported by other teachers to deal with challenges in my classes. 在我的学校中，我得到了其他教师的支持来应对课堂上的挑战。</td>
</tr>
</tbody>
</table>

Dimension 4: Collegiality—Teachers collaborate on instructional and student-related matters, including discussing strategies, sharing materials, providing advice or observing in other teachers’ classrooms.
Dimension 5: Participation—Teachers actively participate in decision-making and promoting ideas on important issues. Teachers also participate in selecting leaders in the school.

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</thead>
<tbody>
<tr>
<td>21</td>
<td>Teachers have a say in the development of school and students. 教师们对学校和学生的发展都有发言权。</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>At my school, teachers and administrators jointly decide how time is used and how the school is organized. 在我的学校中，教师和管理者共同决定时间是如何被利用的，以及学校是以何种方式被规划的。</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>At my school, teachers participate in mentoring or evaluating new faculty and/or staff. 在我的学校中，教师们参与指导或评估新入职的教职人员。</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>At my school, administrators seek my opinions and ideas. 在我的学校中，管理者会征求我的意见和想法。</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>Teachers and administrators make conversations and try to reach consensus before making important decisions. 在做出重要决定之前，教师与管理者会进行对话并努力达成共识。</td>
<td></td>
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</tr>
</tbody>
</table>

Dimension 6: Open Communication—Teachers and administrators share and receive opinions, feelings and information relevant to the effective development of students and the school in open, honest ways. Teachers feel informed about what is happening in the school. Teachers do not worry about making mistakes and are not blamed when things go wrong.

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<tbody>
<tr>
<td>26</td>
<td>Because teachers and administrators share ideas about our work, I stay aware of what is happening. 由于教师与管理者彼此会分享关于工作的看法和意见，所以我了解当前的工作状况。</td>
<td></td>
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</tr>
<tr>
<td>27</td>
<td>At my school everybody talks about their feelings, opinions and concerns, in free, open and honest ways. 在我的学校中，每一名教师都可以自由、开放且真诚地谈论他们的感受，意见和担忧。</td>
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</tr>
<tr>
<td><strong>28</strong></td>
<td>Teachers and administrators openly accept diversity of opinion. 教师和管理者都以开放的态度接受多种多样的意见。</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>29</strong></td>
<td>At my school, when things go wrong, we are not blamed and try not to blame, but find ways to do better the next time. 在我的学校中, 当工作出现失误时, 我们不会受到责备, 同时也尽量不去责备他人, 而是找到解决方法以便下次做得更好。</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>30</strong></td>
<td>Faculty meeting time is used for discussions and problem solving. 教职员工会议主要是用来讨论和解决问题。</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>31</strong></td>
<td>At my school, teachers are regarded as professionals, respected by administrators, parents and students. 在我的学校中, 教师被视为专业人士, 被领导, 家长和学生所尊重。</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>32</strong></td>
<td>Teachers at my school look forward to coming to work every day. 在我的学校中, 教师们对每天的工作都充满了期望。</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>33</strong></td>
<td>Teachers are satisfied with the working environment. 教师们对工作环境很满意。</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>34</strong></td>
<td>At my school, teachers and administrators work in partnership and as a team. 在我的学校中, 教师与管理者是合作关系, 大家重视团队合作。</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>35</strong></td>
<td>Teachers are positive to respond to our students’ needs. 教师会对学生的需求做出积极的回应。</td>
<td></td>
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</tbody>
</table>
Appendix I

Informed Consent for Participation in Research Activities

Teacher Leadership in the Context of Chinese Education

Participant ___________________________ HSC Approval Number ___________________

Investigators ______ Chudi Zhou, Qian Yang, Ying Dong, Xiaoying Wang ________

Phone Number _______ 1-314-665-9568 ________

Summary of the Study

This is a brief description of the project:

This study will explore the status of teacher leadership in Chinese junior-senior high schools. Attributes of Chinese teacher leadership will be constructed, thereby enriching the research on Chinese teacher leadership. In addition, this study will address the issue of the asynchrony between teacher leadership practice and knowledge in the Chinese context. Finally, we will explore the influence of school context on the development of teacher leadership. Based upon the research findings, ideally the school will provide more opportunities for the development of teacher leadership.

We invite you to participate in the research study entitled Teacher Leadership in the Context of Chinese Education. The data collection work may last for two months. We are currently Ed.D. candidates in the College of Education at the University of Missouri-St. Louis (USA). Your participation is voluntary. We will ensure your responses to questions / interviews will be confidential. Moreover, you may choose not to participate in this research study or withdraw your consent at any time. This study is a minimal risk study with non-sensitive questions being posed to the participants.

1. You are invited to participate in a research study conducted by Chudi Zhou, Qian Yang, Ying Dong, Xiaoying Wang and William C. Kyle (adviser). The purpose of this research is to investigate the attributes and development conditions of Chinese teacher leadership in Chinese junior and senior high schools.

2. Approximately 200 participants will take part in the survey and up to 45 participants will be selected to be interviewed.
   a) Your participation will involve
   
   ➢ The enclosed surveys, which were designed to collect information on the
Situation of Chinese Teacher Leadership Attribute and Opportunities for Teacher Leadership in School Context.

➢ The interview, which was designed to collect information on Opportunity for Teacher Leadership in School Context.

b) The amount of time involved in your participation will be approximately fifty minutes for the survey and approximately one hour for those selected to be interviewed.

3. This is a minimal risk study to participants. In the survey part, there are some personal identity questions about subjects’ genders, position titles, years of working experiences and current working schools. To minimize the risk of privacy, we will use participant codes to label data to be confidential and keep a separate list of code-to-name match-ups instead of using names. In the interview part, we will record the interviews, and then will transfer the videos or audios into transcripts, which will help us analyze the data. Moreover, we will only use the participant’s pseudonym when recording or publishing data in order to be confidential. We will not publish private information of subjects and will keep the subjects’ identities confidential. In addition, in our study, we will keep the data confidential by ways of setting password for digital files and saving on password protected computer. Only members of the research team will have the access to the data.

4. There are no direct benefits for you participating in this study.

5. Your participation is voluntary and you may choose not to participate in this research study or withdraw your consent at any time. You will NOT be penalized in any way should you choose not to participate or withdraw.

6. We will do everything we can to protect your privacy. As part of this effort, your identity will not be revealed in any publication that may result from this study. In rare instances, a researcher’s study must undergo an audit or program evaluation by an oversight agency (such as the Office for Human Research Protection) that would lead to disclosure of your data as well as any other information collected by the researcher.

7. If you have any questions or concerns regarding this study, or if any problems arise, you may contact the investigators according to the information in the contact list. You may also ask questions or state concerns regarding your rights as a research participant to the Office of Research at the University of Missouri – St. Louis, at 1-314-516-5897.
Appendix J

Recruitment Statement for Research Participation

Teacher Leadership in the Context of Chinese Education

Participant ___________________________       HSC Approval Number _____________

Investigators __Chudi Zhou, Qian Yang, Ying Dong, Xiaoying Wang_________.

Phone Number _______________ 1-314-665-9568 _______________

Dear participants,

We are writing to request your participation in our dissertation research on teacher leadership in the context of Chinese education. We are doctoral candidates in the College of Education at the University of Missouri-St. Louis (UMSL), USA.

The title of our study is Teacher Leadership in the Context of Chinese Education. This study will explore the status of teacher leadership in Chinese junior-senior high schools and construct attributes of Chinese teacher leadership, thereby enriching the research on Chinese teacher leadership. In addition, this study will address the issue of the asynchrony between teacher leadership practice and knowledge in the Chinese context. Finally, we will explore the influence of school context on the development of teacher leadership. Based upon the research findings, ideally the school will provide more opportunities for the development of teacher leadership. We emphasize the importance of teacher leadership for all teachers’ professional quality and students’ learning achievement.

There will be 200 teachers recruited to complete the survey and up to 45 volunteers from these 200 teachers will be interviewed. Teachers will be selected according to actual ratio of the teacher leaders to normal teachers without any leadership position in your school. You have been asked to participate in this study because you are a junior high school teacher or a senior high school teacher; you could be a/an administrator, department chair, grader leader, master leader, mentor, program facilitator, curriculum developer, staff development, coordinator, coach, excellent teacher, backbone teacher, expert teacher, head teacher or normal classroom teacher. You could be a new teacher or an experienced teacher. Finally, you could teach in northern China or southern China.
We will distribute the survey to you through your schools that you are working in and get your reply via email, Wechat or Sojump Online survey, and we will conduct the interview via Wechat or VooV Meeting. Your participation is voluntary and not likely to adversely impact the assessment and the career development of participants who provide the data. Participants remain confidential in both the survey and interview. For the survey part, your demographic information will be confidential; if you participate in the interview part, we will use a pseudonym for each participant. In addition, we will not publish information that would enable the participant to be identified. Therefore, participants’ identity of the human subjects can be protected. Finally, in our project, any disclosure of the human subjects’ responses outside the research will not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects’ financial standing, employability, educational advancement, or reputation.

Your participation will help us explore the status of teacher leadership in Chinese junior-senior high schools and influence of school context on the development of teacher leadership, thereby enriching the research on Chinese teacher leadership and improving the development of teacher leadership. Again, we greatly appreciate your assistance. If you have any questions about this research study, please feel free to contact us according to the information in the contact list.

Sincerely,

Chudi Zhou,
Qian Yang,
Ying Dong,
Xiaoying Wang
Contact List

If you have any questions about this research, please feel free to contact us. The following form includes investigators’ names, our email address and WeChat account.

<table>
<thead>
<tr>
<th>Name</th>
<th>Email Address</th>
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