The University of Nottingham

Teacher Leadership: An Investigation of Early-Career Teacher Leadership Development of Public Schools in Northwest China, Gansu Province

by

Li Lin

A thesis submitted in fulfillment of the requirements for the degree of Doctor of Philosophy in Education in the University of Nottingham Malaysia September 2021

Abstract

The strong advocacy and the quest for teacher leadership in the twenty-first century bear the premise that teacher leadership is an important ingredient in teacher professional development, student performance, and school effectiveness (Bush, 2016; Katzenmeyer and Moller, 2009; Wang and Ho, 2019). There is a paucity of the investigation of teacher leadership of young and early-career teachers, especially in Asian context where educational systems are highly centralised (Bush and Ng, 2019; Szeto, 2020). This study is to investigate teacher leadership development of early-career teachers in general and specifically on factors that facilitate as well as factors that impede teacher leadership development in public schools of Northwest China, Gansu Province. This study was underpinned by the constructivist theory (Lambert, 1998; 2003), distributed leadership theory (Muijs and Harris, 2006), and the social cognitive theory (Bandura, 1997) through an ecological lens (Bronfenbrenner, 2005).

Informed by the pragmatic research paradigm, this study has adopted an explanatory sequential mixed-methods design to answer the research questions and address the research gaps. Evidence shows that teacher leadership development of early-career teachers is a continuum, evolving from classrooms, groups, to school levels, orchestrated by the interplay of school culture, teacher leadership readiness, and leadership strategies or skills. School culture plays a significant and strong predictor of teacher leadership readiness of early-career teachers for their leadership development, especially from the perspectives of *professional development and recognition*. Early-career teachers practised more instructional leadership in their classrooms because of the cultural characteristics such as power distance, power relationship, and authority openness. The centrality of early-career teacher leadership development is capacity building and gaining recognition, which is the '*professional expertition*' proposed in this study.

Key words: teacher leadership; early-career teachers; school culture; teacher leadership readiness; professional learning and development

Acknowledgement

The journey of my doctoral thesis would be a 'mission impossible' without the support, care, and dedication of those people who have walked this journey with me.

I would like to sincerely thank my supervisor, Associate Professor. Dr. Ashley Ng Yoon Mooi AMN, for her constant support and guidance throughout my entire study. Her enormous patience with her constructive and detailed feedback made this journey bearable. Her belief in me, her care and life wisdom provided me with values that go beyond the academic achievement. On days when things were not going well, she encouraged me with inspiring anecdotes that were laced with interesting life experiences, which empowered me to go forward. Knowing that she was and is always be with me, in person and in spirit, I have gained high efficacy and aspiration to work on my thesis and in my future endeavours. As I plodded through years of my study, she has become more than a supervisor, she has become my life-long mentor.

I would like to express my special gratitude to the late Professor. Dr. Ganakumaran Subramaniam. I am appreciative of his insightful comments, positive attitude and charm that imbued encouragement and optimism. He will be dearly missed.

I would like to thank my friends who supported me during my entire doctoral journey. They were my critical friends and intrinsically motivated me. Sincere thanks are also given to the schools and participants who had taken part in my research, thus providing me with the rich data for this study.

Last but not the least, my deepest thanks and gratefulness to my dear parents for their unconditional love, care, understanding, sacrifices, and patience. They are my lighthouse and provided me with the means to pursue my dream life.

Table of Contents

List of Tables

List of Figures

Glossary of Terms

Autonomy: It is defined as that teachers take the initiatives in making innovation in teaching and improvements, and have an involvement in creating school vision and changes (Katzenmeyer and Moller, 2009).

Authority Openness: It indicated the degree of principals' open-mindedness to teachers' opinions and ideas (Wang, 2018; Wang and Ho, 2019).

Backbone Teachers: '*Backbone teachers*' *(gu gan jiao shi)*, who are officially recognised as teacher leaders in the Chinese context, have been stressed many times in the *Plan* (MoE, 2010; 2017, Chapter 8). In Mainland China, *Backbone teachers*, including subject leaders, teaching experts, excellent teachers would be identified as the key personnel who can promote the quality of teaching, learning and researching (Gu, 2009; MoE, 2001; 2010; Zhang and Pang, 2016a).

Banzhuren: The *Banzhuren* (similar to the home-classroom teacher) is the leader of teachers and the key person responsible for developing the whole community of students. In China, educators regard their work as class-rooming, similar to schooling or teaching but with different resources and methods (Gu et al., 2015; Liu et al., 2018).

Big Five Personality Traits: Arpacı-Somuncu (2016) argued that teachers who possess the Big Five personality traits (i.e. extroversion, agreeableness, conscientiousness, neuroticism, and openness to experience), especially the openness, have displayed that they can lead their classroom more efficiently than those with other traits.

Constructivist Theory: Proposed by Lambert (1998; 2003), constructivist theory believes that leadership and learning are co-constructed for all teachers, rather than innate to the limited individuals.

Confucianism: The ideology of Confucius is a dominant factor in Chinese culture and exerts an impact on leadership concept. There are four key Confucian features that have an influence on Chinese leadership, namely, paternalistic authoritarianism,

morality in action and self-cultivation, collectivism and inter-personal relationships, and humanism (Militello and Berger, 2010).

Continuing Professional Development (CPD): CPD refers to a professional learning experience from purposeful communication and collaboration with the specific context and contributes to a satisfied outcome to perceived changes in teachers' professional practice (Kennedy, 2005; Kelchtermans, 2004).

Collaboration: Extent to which school stakeholders work collectively to make decisions about the school processes (Katzenmeyer and Moller, 2009; Tschannen-Moran and Hoy, 2001).

Collegiality: Collaboration on instructional and student related issues such as discussion of teaching strategies, observation of peer teaching, and sharing materials (Katzenmeyer and Moller, 2009).

Developmental Focus: Learning and updating new knowledge and skills, and helping others learn by sharing ideas and strategies (Katzenmeyer and Moller, 2009).

Distributed Leadership: This theory describes a redistribution of power and authority within schools and appeals that 'all staff' (Harris and Muijs, 2005) should learn and lead in conjunction, disregarding their leadership positions and seniority.

Early-Career Teachers: Teachers at their early stage of career (0-3; 4-7). The outstanding features of the early-career teachers are the high levels of motivation and commitment to teaching accompanied by the overwhelming challenges from real classrooms and pupils, heavy workload and increasing responsibilities (Day and Gu, 2010; 2014a).

Ecological Framework: In accordance with the ecological framework (Bronfenbrenner, 2005; Chen, 2019), teacher interactions are subject to the complexity and interplay among micro (interactions in classrooms and homes), meso (connections with various stakeholders in schools), exo (rapport with outside school communities), and macro (societal, cultural, and political) factors.

Formal Teacher Leadership: Formal teacher leadership refers to those teachers who are assigned to formal positions such as heads of department, grade leaders, subject expert teachers, and mentors. These teacher leaders can act on either instructional or administrative roles, help teachers to grow and learn as individuals and leaders (Katzenmeyer and Moller, 2009; York-Barr and Duke, 2004).

Humanism: It involves the aim to love without distinction and discrimination, and encompasses courtesy, generosity, diligence and kindness. As such, a leader is advocated to instil gratefulness and individual compliance from followers in achieving their leaders' request and demands, even when such requests and demands are beyond their capability and capacity (Loden, 2006; Zhang, 2011).

Hybrid Teacher Leadership: Margolis (2012) and Harris (2013) explain that hybrid teacher leadership roles consist of both teaching and leading capacities for teachers, which is also reflected by Berry (2013, p.310) who has argued that hybrid teacher leaders are regarded as both expert teachers who conduct teaching and learning practices within classrooms, and teacher leaders who have the spare time, energy, and reward to share and expand their experiences with their colleagues, administrators, parents, and policy-makers.

Informal Teacher Leadership: Informal teacher leadership, on the contrary, emerges spontaneously and gradually from various stages of the career phases of teachers without a formally designated position (Harrison and Killion, 2007). Informal teacher leadership roles might be composed of mentoring and coaching their peers who seek for help, peer-reviewing other teachers' classes with constructive feedback, and initiating collaborative professional learning communities. Informal teacher leaders can be efficacious, passionate, influential to help others and share their expertise (Katzenmeyer and Moller, 2009).

Mentoring and Coaching: A senior and experienced teacher mentors a younger and junior teacher in the process of the professional development and career progression (Day and Gu, 2014a; Katzenmeyer and Moller, 2009). Mentoring is a learning relationship that includes both coaching and mentoring, while coaching is associated with improving individual performance between individuals, and also encompassing

support, counselling, career development and wider learning opportunities (Muijs et al., 2013; Ng et al., 2018; Rhodes, 2012b).

Open Communication: Opportunity to engage in two-way, open and honest conversations, being informed, and engaged in problem solving on school related issues (Katzenmeyer and Moller, 2009).

Participation: Active involvement in the decision making process, and the engagement and the freedom to make choices on teaching related issues (Katzenmeyer and Moller, 2009).

Positive Environment: Perception by teachers that the school supports them through leadership and they are generally satisfied with their work environment (Katzenmeyer and Moller, 2009).

Professional Career Phase: Teacher professional life phase is defined by Day and Gu (2014a) based on their large-scale VITAE research, and can be divided into three phases: early stage of career (0-3; 4-7); mid-stage of career (8-15; 16-23); and late stage of career (24-30; 31+).

Professional Development Community (PLC): Professional learning community is a learning venue and process in which teachers are facilitated to build capacity of learning updated knowledge and seeking approaches to changing their instructional strategies to improve student learning outcomes (Opfer and Pedder, 2011; Rhodes, 2013). In Chinese context, all teachers are required and need to participate in school-based communities of professional learning, such as Teaching and Researching Groups (TRGs, jiaoyanzu), Lesson Preparation Groups (LPGs, beikezu), and Grade Groups (GGs, nianjizu) (Gu and Day, 2013; Wang, 2016).

Power Distance: It has been defined as the power in organisations which is distributed unequally (Hofstede and Bond, 1988; Hofstede, 2010; Wang, 2018; Wang and Ho, 2019). The higher the power distance, the more power and authority that teachers have experienced (Hofstede, 2010; Wang, 2018).

Power Relationship: It has been defined as an unequal relationship with authority and hierarchy (Wang, 2018; Wang and Ho, 2019).

Recognition: Being recognized, valued and respected by peers and administrators for leadership and contributions (Katzenmeyer and Moller, 2009).

Social Cognitive Theory: Bandura (1997) proposed teachers' perceptions, behaviour, and contexts are mutually reciprocal and interactive in his social cognitive theory.

Servant Leadership: Servant leadership is practised through a humanist, ethical, moral, and philosophical stance, to establish positive relationships and influence on others (Bufalino, 2018; Crippen and Willows, 2019).

Teacher Efficacy: "People's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances" Bandura (1997, p.391). In the field of education, teacher efficacy is defined as a "teacher's belief in his or her own capability to organize and execute courses of action required to successfully accomplishing a specific teaching task in a particular context" (Tschannen-Moran, Woolfolk Hoy, and Hoy, 1998, p.233).

Trust: It was defined as a psychological state comprising the intention to accept emotional vulnerability based upon positive expectations of the intentions and behaviors of others (Bryk and Schneider, 2003; Hoy and Tschannen-Moran, 2003). Trust can reduce transaction costs, lower conflict, and promote progress toward shared organizational goals (Tschannen-Moran and Barr, 2004).

Teaching and Researching Groups (TRGs): TRGs are composed of teachers of the same subject across a school. TRGs involve lesson planning, classroom observation and feedback, and school-based action research (Gu and Day, 2013; Wang, 2016).

Teacher Leadership: Teacher leadership is a collaborative process which is initiated, organised, and led by teachers with the exclusive purpose to improve teaching practice and learning outcomes through involving all other teachers and stakeholders (Ng et al., 2018; Pang and Miao, 2017).

Teacher Leaders: Teachers lead within and beyond the classroom; identify with and contribute to a community of teacher learners and leaders; influence others toward improved educational practice; and accept responsibility for achieving the outcomes of their leadership (Katzenmeyer and Moller, 2009, p.6).

Teacher Leadership School Survey (*TLSS*): A survey measures and supports teacher leadership in terms of seven basic dimensions: *developmental focus, recognition, autonomy, collegiality, participation, open communication, and positive environment* (Katzenmeyer and Moller, 2009).

Teacher Leadership Readiness Instrument (*TLRI*): A survey measures teacher leadership readiness in terms of teachers' beliefs, awareness, competency, and confidence to lead as teacher leaders (Katzenmeyer and Moller, 2009).

Teacher Leadership Development Models: Developed by Katzenmeyer and Moller (2009), this model articulates how teachers develop as leaders by assessing *who they are* (teacher leadership self-assessment), identifying *where they are* (school culture in supporting teacher leadership), exploring *how they lead* (leading strategies), and planning for *action to lead* (action research).

Teacher Leadership Development for Growth: As Poekert et al. (2016) suggested, teachers grow as classroom teachers in making student-centred teaching instructions; grow as researchers who use classroom-based evidence and data to inform their teaching practices; and grow as leaders in taking on leadership roles and using their voices in decision-making.

Teacher Leadership Development for Identity Model: As revealed by Sinha and Hanuscin's model (2017), teacher leadership development is an alignment among teachers' leadership views, leadership practices, and leadership identity, which are influenced by their personal development priorities, school culture and contexts, and prior life and working experiences.

Teacher Leadership Development of Principal-Teacher Interactions Model: teacher leadership development is influenced by principals' establishing regular and constructive communications with teachers, and encouraging teachers' professional development. Under such principal-teacher interactions, there is an inspiring effect on sharing visions and being role models, an empowering effect on teacher professional development, and allowing autonomy to highly motivated teachers (Cheng and Szeto, 2016; Szeto and Cheng, 2018; Szeto, 2020).

Teacher Ownership: It refers to teachers' sense of belonging and the freedom to control over the work (Kyza and Georgiou, 2014; Ng et al., 2018)

Abbreviations

BERA: British Educational Research Association

CPD: Continuous professional development

CSA: Combined school in City A

CSB: Combined school in City B

EFA: Exploratory factor analysis

ICT: Information and communication technologies

KMO: Kaiser-Meyer-Olkin

MoE: The Ministry of Education

PLC: Professional learning communities

PSA: Primary school in City A

PCA: Principal component analysis

PSB: Primary school in City B

RQ: Research questions

RM: Research methods

SSA: Secondary school in City A

SSB: Secondary school in City B

SD: Standard deviations

TLSS: Teacher Leadership School Survey (Katzenmeyer and Moller, 2009)

TLRI: Teacher Leadership Readiness Instrument (Katzenmeyer and Moller, 2009)

Chapter One
Introduction

Overview

With the 'heightened expectations' (Kouhsari and Bush, 2020, p.1) on teaching and learning, the 'testing times' of the current education climate have led to urgent calls for effective school leadership for the improvement of schools (Day and Gu, 2014a, p.2; OECD, 2017). Prior research on school leadership has attached significant importance on the roles of school principals in driving school change (Bush, 2014, Bush and Ng, 2019; Hallinger and Huber, 2012). However, there is increasing recognition and awareness for the leadership of teachers as an effective model to compliment principal-ship or headship in the twenty-first century (Harris, 2010; Katzenmeyer and Moller, 2009; Ng et al., 2018; Wang and Ho, 2019).

The shift in the leadership paradigm can be attributed to three main reasons. Firstly, owing to the increasing accountability and diversity in education, the '*Great Man'* attributes (Cawthon, 1996) of school principals have been challenged with the argument that a single leader is unable to effectively lead the whole school (Choi and Tam, 2018). Secondly, the influence of school principals on students' performance has been argued to be the second only to classroom teaching, which is achieved through the indirect means of distributing leadership and empowering teachers (Harris and Jones, 2019; Leithwood, Harris and Hopkins, 2020). In this regard, distributed leadership and, by extension, teacher leadership has been increasingly proposed as a catalyst to drive the whole school effectiveness (Bush et al., 2016; Harris, Jones and Crick, 2020). In addition, leadership varies from different cultural and school contexts, and thus, there is no universal definition. As such, researching teacher leadership in Chinese school context adds cultural values and contextual variances.

In this chapter, the background of teacher leadership is introduced ranging from the international perspective to the regional perspective. Subsequently, drawing on the cultural and contextual characteristics, and current teacher leadership development in China, teacher leadership is positioned in the context of China. Finally, research problems and research questions are expounded, followed by a discussion on the

significance of the present study.

Background of the study

The seminal work of York-Barr and Duke (2004) on teacher leadership has been marked as a benchmark in introducing the definition and influence of teacher leadership and teacher leaders. Since the publication of the said work, the concept of teacher leadership has been investigated under numerous interpretations. Katzenmeyer and Moller (2009) defined teacher leaders as those who lead within or beyond classrooms, and make contributions and influence on others towards improved outcomes. After reviewing research from 2004 to 2013, Wenner and Campbell (2017) further explained that teacher leadership responsibilities were outside classrooms. A recent systematic review (2003-2017) from Nguyen et al. (2019) espoused broader dimensions of teacher leadership in integration classroom leadership, group level leadership, and school level leadership (Gu and Wu, 2014; Liao and Yuan, 2017; Webber and Nickel, 2021).

The popularity of teacher leadership is largely attributed to its benefits. Based on the international literature, teacher leadership is being increasingly regarded as a catalyst for school change and a critical element to sustain curriculum reform efforts (Hunzicker, 2012; Harris et al., 2020; Sinha and Hanuscin, 2017; Wenner and Campbell, 2017). Evidence from western countries such as the USA and UK (Dimmock and Walker, 2000; Katzenmeyer and Moller, 2009; Wenner and Campbell, 2017) has indicated that teacher leadership positively acts on initiating change to school-level improvement and effectiveness, bearing the premise that teacher leadership contributes to multi-level development at schools. At the same time, teacher leadership has been advocated to enhance group-level development, such as teacher professional learning communities (Hairon et al., 2015; Katzenmeyer and Moller, 2009; Liang and Wang, 2019; Poekert, 2012). For personal-level benefits, teacher leadership is considered to have positive influence on teacher efficacy (Bangs and Frost, 2015; Liu, Hallinger, and Feng, 2016), teacher commitment (Hulpia and Devos, 2010), and teacher resilience (Day and Gu, 2010; Papatraianou and Le Cornu, 2014; Szeto, 2020; Thien et al., 2021; Webber and Nickel, 2021).

However, since the effective leadership practices are limited by contextual and cultural differences, caution is advised when attempting to emulate in the apparent success of other countries (Bush, 2016; Cheng and Szeto, 2016). Research on teacher leadership in Asian contexts has recognised high power distance and collectivism (Hofstede, 2010; 2011) as cultural factors influencing the development of distributed leadership and teacher leadership at the school level (Hallinger, 2005). As respectively argued by Ho and Tikly (2012) from Hong Kong, Hairon and Dimmock (2012) from Singapore, and Javadi, Bush and Ng (2017) from Malaysia, existing studies (Dimmock and Walker, 2000; Hallinger, 2005) on teacher leadership have not identified the complexity of applying teacher leadership in policy driven, hierarchical, and collectivist cultural contexts, in which leadership opportunities for teachers in a broad dimension are restricted and limited (Bush and Ng, 2019).

Despite the aforementioned shortcomings of existing research, several recent studies in Asian contexts (Szeto, 2020; Lai and Cheung, 2015; Poekert, 2012) have provided evidence that teachers can practice teacher leadership either formally or informally under the circumstances of principal delegation and teacher initiation. Further, teachers can develop their leadership capacity when engaging in professional learning communities (PLCs) through teacher participation, teacher learning and teacher influence (Huang and Pang, 2018; Katzenmeyer and Moller, 2009). When principals inspire, encourage, and empower teachers to engage in leadership activities, this will encourage more inspiring, young and early-career teachers to develop as leaders with increased leadership aspiration and readiness (Szeto and Cheng, 2018; Szeto, 2020).

As aforementioned, teacher leadership has aroused considerable international and regional interest, and there has been an increasing body of studies on the benefits. Notably, the advocacy of teacher leadership in the context of China indicates that there is a contribution to teacher development and teacher quality.

Research context of the study

In China, attention has gradually shifted towards the inception of teacher leadership and the significance thereof in the improvement of teacher quality. Teacher quality and accountability have always been a dominant concern of the education department

and the Chinese government. With particular reference to *'Backbone teachers'* (*gu gan jiao shi*), the Chinese government has initiated a range of educational reforms (MoE, 2001; 2010; 2016; 2017). The term *'Backbone teachers'* refers to those who are officially recognised as formal teacher leaders that play an important role in improving teacher quality and nurturing young and early-career teachers in their early years of the teaching profession.

The Policies and Aspirations of the Chinese Government in Respect of the Teacher Leadership Development

Despite the term 'teacher leadership' not being explicitly documented in the Chinese education system, a range of Chinese educational policies and protocols initiated by the Chinese government have embodied the aspiration of teacher leadership development, focusing on formally designated leading teachers, such as grade leaders, subject leaders, and heads of departments (Gu, 2009; Zhang and Pang, 2016a). Areas that have been designated for improvement are the roles and responsibilities of teacher leaders in leading teaching and researching activities, mentoring novice teachers during their early stage of career, conducting peer observations, and participating in curriculum decision-making and publications.

As an example, in the *Long-and-Middle-Term Planning of National Education Reform and Development 2010-2020* (MoE, 2010), teachers are encouraged to enhance their capabilities and competencies of teaching and learning in meeting the expectations of stakeholders in the 21st century, which can be achieved with the support of *Backbone teachers (gu gan jiao shi)* and their professional knowledge and pedagogical skills (Zhang and Pang, 2016a). A similar aim is captured by *The 13th Five-Year Plan of National and Educational Development* (MoE, 2017). Here, the significance of teacher leaders (*'Backbone teachers'* who are subject leaders, teaching experts, excellent teachers, heads of department) has again been highlighted to nurture and mentor young and early-career teachers, so as to facilitate further development and improvement in professional teaching and learning (MoE, 2017, Chapter 8).

Similarly, teacher development in the western regions of China has been prioritised. In 2016, consistent with the aspirations of '*One Belt and One Road*', the MoE in China initiated and promoted *The Plan* to realise the sustainable development of education in the western regions. The main aims of *The Plan* (MoE, 2016) included balancing the education resource allocation, providing financial and technology support to the western regions, building up a national education community, promoting education equality, narrowing the urban-rural gap in educational development, and encouraging teacher leaders to adopt leadership roles in developing and nurturing young teachers. Notably, the development of western economy cannot be separated from education development and teacher quality, and the reasonable and balanced allocation of education resources is a significant factor for development in education (OECD, 2017; Peng et al., 2014).

The Chinese Education System

Teacher quality and leadership development largely depend on the nation's education system. With approximately 512,000 schools, 260 million students, and over 15 million teachers (National Bureau of Statistics of China, 2019), China has the largest education system in the world, which is not only immense but also diverse. The Chinese education system has a considerably centralised structure and is supervised by the MoE. All facets of the education system from basic education to higher education are regulated by the MoE, as the dominant agency of the State Council of Mainland China.

At present, the MoE generates education reforms and policies, manages resource allocation, public services and administrative means (The National Centre for Education Development Research). Under the State Council, there are three levels of administration: provincial level, county level and township level. Provincial-level decisions are directly administered by the central government and, under the regulations of the central government, provincial governments have the right to practice their own management policies. Additionally, provincial-level decisions are divided into further subordinates like county-level and township levels (National Bureau of Statistics of China, 2017; OECD, 2017).

Drawing on the aforementioned overview of the Chinese education system, the education system in China evidently displays a top-down and centralised structure, and the administrative structures are also organised in bureaucratic layers and hierarchical levels. Accordingly, within the nature of the highly centralised educational system structure, teachers in general should follow the standard national curriculum fixed by the MoE and adhere to formally compiled textbooks and teaching plans. In this way, teachers under the centralised educational system have less initiative, flexibility and autonomy to develop new forms of capacities and skills. At the same time, individual expectations are often underestimated because teachers have to engage in an on-going process of learning the national policy to meet the requirements and standards of the curriculum (Walker and Qian, 2015). In the context of China, the aforementioned factors could potentially impede the development of teacher leadership, especially for the autonomy and participation dimensions of teacher leadership (Katzenmeyer and Moller, 2009).

Confucianism and Education in China

In Mainland China, the teacher and leadership development are indispensable from Chinese cultural influence. Presently, despite the introduction of certain features of western culture, such as the more democratic tendency of individualism, Chinese leadership is still influenced and shaped by 'hybrid' cultural characteristics (Bush and Qiang, 2002). Said characteristics comprise traditional cultural values (Confucianism and Taoism heritage), and the social, political, and economic environments (Wang, 2007; Yin et al., 2014; Szeto, 2020). With reference to the traditional cultural values, several researchers (Hochstetler, 2014; Zhu and Xu, 2005) identified the co-existence of Confucianism and Taoism in shaping the moral thoughts and behaviours of Chinese people. However, there is a consensus that Confucian values are the core values that influence the Chinese people's way of life and education system (Dimmock et al., 2020; Qian and Walker, 2013).

According to Militello and Berger (2010), the ideology of Confucianism is a dominant factor in Chinese culture and exerts an impact on leadership concept. There are four key Confucian features that have an influence on Chinese leadership, namely, paternalistic authoritarianism, morality in action and self-cultivation, collectivism and

inter-personal relationships, and humanism (Militello and Berger, 2010; Zheng et al., 2020). Firstly, under the Chinese hierarchical and Confucian oriented society, relationship is characterised by high power distance, indicating that a leader has the power and authority to command and control the followers with less challenges and questions. (Hofstede and Bond, 1988; Yin et al., 2014). In addition, the Chinese cultural traits of strong discipline and authoritarianism, benevolence and high morality translate into a leadership style that characterises leaders as unchallengeable and unquestionable, individualised and holistic, and self-disciplined and unselfish (Farh and Cheng, 2000; Militello and Berger, 2010).

Secondly, with respect to the morality in action and self-cultivation of a Confucian-based leadership, Confucius emphasised the significance of individual moral as a collective and personal responsibility. Here, one should not be extrinsically motivated by fame and benefits, but driven by altruistic motivation that is selfless and emphasises good deeds (Loden, 2006). Under such altruistic motivational drive, noble and enlightened leaders always think of others and display a moral, self-cultivated and virtuous leadership style, as well as the ability to distinguish right from wrong (Liu et al., 2018; Loden, 2006).

Thirdly, as to collectivism and inter-personal relationships, the view of Confucius was that the individual is minimised, but interpersonal relationships are highly valued. By illustration, in Chinese collective culture, the success will be fulfilled in organisations and families, and promotion and incentives will be offered collectively, while self-contribution should be left up to the whole group (Hofstede and Bond, 1998; Zhang and Yin, 2019). In such a collective culture, where importance is given to the loyalty, harmony and trust, interpersonal relationships are positively encouraged (Zhang and Yin, 2019). The interpersonal relationship, commonly referred to as *guanxi* in Chinese, evolves into an ever-expanding network of relationships and differs from the performance-based relationship in western context. A loyal and trustworthy interpersonal relationship with superior leaders facilitates better possibilities and opportunities to get promoted (Zheng et al., 2018).

Humanism, as the fourth key feature of Confucius, involves the aim to love without distinction and discrimination, and encompasses courtesy, generosity, diligence and kindness. As such, a leader is advocated to instil gratefulness and individual compliance from followers in achieving their leaders' request and demands, even when such requests and demands are beyond their capability and capacity (Loden, 2006; Zhang, 2011).

In summary, the ideology of Confucianism serves as both fostering and impeding to teacher leadership development in China. In one aspect, a Confucian-based leadership is beneficial to building a collective and collaborative environment to devote and contribute as groups and organisations. Humanism is about exploiting one's potential and diligence to perform the task, and maintenance of a harmonious inter-personal relationship as the pathway to collective achievement. On the other hand, the high-power distance and command-and-control leadership style of authoritarianism impedes the motivation and autonomy to participate and initiate tasks and partake in decision-makings, possibly causing barriers to teacher leadership development, especially to young and early-career teachers who are less experienced and without formally designated leadership positions (Bush and Ng, 2019; Loden, 2006; Militello and Berger, 2010; Szeto and Cheng, 2018; Szeto, 2020; Wang, 2007; Yin et al., 2014).

Education in Gansu Province

The present study focuses on the Western region of China, Gansu Province (refer to the maps provided below). Generally, in a country as vast as China, the immensity and diversity in culture, various educational systems, and school contexts serve an imperative role in overall education quality, teacher quality, training programmes and professional development (OECD, 2017). At present, there is an emerging issue of education inequity and unequal distribution of resources between regions with a marked scarcity, especially in the Western regions, and a lack of resources and insufficient training are considered as the predominant hindrances in improving teacher quality and professional learning (Peng at al., 2014).

Using Gansu Province as an example, it is located at the *Hexi* corridor and along the silk road in Western China, which serves a critical role historically and geographically, and it possesses a government schooling system that is not only large in number but also comprised of different types. In accordance with year statistics from the Ministry of Education (National Bureau of Statistics of China, 2019), there are 376 senior secondary schools, 1465 junior secondary schools, and 5444 primary schools in Gansu Province. With such a substantial population of school types and numbers, it suffers from the consequences of insufficiently qualified and well-trained teachers (Militello and Berger, 2010).

As documented in the statistics from the year report of the Ministry of Education (National Bureau of Statistics of China, 2019), in Gansu Province, the majority of teachers from government schools in basic education level are bachelor's degree holders; only a few hold postgraduate degrees (Master and PhD holders), indicating that teachers with bachelor degrees are the '*backbone*' teaching powers in government schools (National Bureau of Statistics of China, 2019). Predicated on these statistics, teachers' skills ranged from a novice level to a trained teacher level in Gansu Province. Such a situation could create an imbalance in teacher quality and teacher leadership development since teacher leaders should be competent and proficient in their professional knowledge and skills in the first place (Katzenmeyer and Moller, 2009).

To summarise, the teacher leadership in Gansu Province faces a range of opportunities and challenges. Under the top-down and centralised education system, Confucianism heritage influence, imbalanced teacher qualifications, and the policies and initiatives

to nurture young and early-career teacher quality, the teacher leadership development of young and early-career teachers in the public schools of Gansu Province needs to be investigated.

Problem statement of the study

As articulated from previous investigations of teacher leadership, a range of problems have been identified regarding teacher leadership development in the context of China, encompassing a contextual gap, literature gap, and methodological gap.

The contextual gap

Prior research contexts of teacher leadership development are predominantly conducted in the Western contexts, especially in North America and Europe (Wenner and Campbell, 2017). Despite an increasing body of studies in Asia, the volume of empirical evidence regarding various levels of cultural differences is still scarce (Nguyen et al., 2019). As advocated by Western contexts, teacher leadership is supported within a democratic, collaborative and collegial culture for teacher collaboration and participation in decision-making (Katzenmeyer and Moller, 2009; Wang, 2015). Although, in Chinese culture, which has long been influenced by Confucianism, paternalistic authority, collectivism and interpersonal relationships, and humanism, the degree of genuine collaboration and collegiality among teachers might be sacrificed for the sake of the maintenance of harmony. In this respect, these cultural factors should be taken into great considerations when introducing and examining teacher leadership development in the context of China (Cheng and Szeto, 2016; Ho and Tikly, 2012; Militello and Berger, 2010; Szeto, 2020).

The literature gap

Previous research on the teacher leadership concept has failed to establish an agreed definition as this concept is contextually and culturally situated (Gu and Wu, 2014; Liao and Yuan, 2017). Nguyen et al.'s (2019) reviews embraced a broader dimension of teacher leadership within and beyond classrooms, encompassing any stages of teachers. For instance, young and early-career teachers who are in their first few years

of teaching. Despite this, the most recent large body of research (Javadi et al., 2017; Harris et al., 2020; Pang and Miao, 2017) examined formal leadership roles of experienced teachers, such as middle leaders, thus neglecting the leadership of young and early-career teachers who are inexperienced and might not hold leadership positions. It should be highlighted that young and early-career teachers exist as important teaching and learning power forces especially in introducing new ideas and innovative skills (Allen, 2016; Cheng and Szeto, 2016; Szeto, 2020). The literature suggests that early-career teachers can develop as leaders with supportive school cultures, high leadership aspiration and readiness, and essential leadership skills (Hairon et al., 2015; Katzenmeyer and Moller, 2009; Poekert, 2012; Szeto, 2020; Wang, 2018). From this perspective, it is pivotal to investigate teacher leadership development of early-career teachers in Chinese school settings.

The methodological gap

Prior research on the teacher leadership development is predominantly qualitative and less quantitative and mixed-methods, although, the volume is slightly increasing (Liang and Wang, 2019). In a qualitative research design, interviews are utilised as the primary method of data collection, while in quantitative research design, questionnaires are employed as the single data source (Nguyen et al., 2019; Wang and Ho, 2019). Consequently, a wider range of evidence and deeper insights into teacher leadership development are recommended, an example being the utilisation of a mixed-methods design study.

As highlighted by the aforementioned issues, it is crucial to investigate the teacher leadership development of young and early-career teachers in Chinese school contexts under multi-dimensional cultural factors. Consequently, the present study is the first that aims to fill in the identified gaps of the teacher leadership development of early-career teachers in Chinese school contexts, utilising an explanatory sequential mixed-methods design.

Research aim and objectives

The present investigation aims to investigate teacher leadership development of early-career teachers of public schools in Northwest China, Gansu Province. The following objectives are also explored:

1. To investigate the school culture in supporting teacher leadership development.
2. To ascertain the teacher leadership readiness of early-career teachers for their leadership development.
3. To explore the relationship between school culture and teacher leadership readiness for teacher leadership development of early-career teachers.
4. To examine the leadership strategies or skills of early-career teachers to build relationships with various stakeholders for their teacher leadership development.
5. To identify the influential factors that facilitate or hinder the development of teacher leadership among early-career teachers of schools in China's Gansu Province.

Research questions

The present study adheres to the following research questions.

RQ1: What are the teachers' perceptions on their school culture in supporting teacher leadership (teachers' perceptions in general, and early-career teachers' perceptions in specific)?

RQ2: What are the early-career teachers' perceptions on teacher leadership readiness?

RQ3: What is the relationship between school culture and teacher leadership readiness of early-career teachers?

RQ4: What are the leadership strategies or skills of early-career teachers to build relationships with various stakeholders?

RQ5: What are the influential factors that facilitate or impede early-career teacher leadership development?

The rationale of each research question is articulated below.

RQ1: What are the teachers' perceptions on school culture in supporting teacher leadership in the selected public schools in Gansu Province?

Rationale: Despite a variety of studies (Liang and Wang, 2019; Nguyen et al., 2019) having examined teacher leadership, researchers were inattentive to teachers' perceptions, especially for early-career teachers in terms of their school culture in supporting teacher leadership development in the context of China. The centralised power and authority play a significant role in China's school structures, imposing challenges for teachers to initiate teacher development when compared with their Western counterparts (Cheng and Szeto, 2016; Szeto, 2020). Due to the current lack of understanding and knowledge of teacher leadership development in China, it is critical to investigate how teachers, particular early-career teachers perceive teacher leadership and leadership development in the context of China. This question functions to investigate teachers' perception of teacher leadership supported in their school culture in general by providing an overall view, and in specific from the early-career teachers' perceptions and experience.

Data source: Questionnaire *Teacher Leadership School Survey (TLSS)* by
Katzenmeyer and Moller (2009); semi-structured interviews;
observational field-notes; and available documents

RQ2: What are the early-career teachers' perceptions on their teacher leadership readiness in the selected public schools in Gansu Province?

Rationale: Even though numerous studies (Cheng and Szeto, 2016; Szeto and Cheng, 2018; Szeto, 2020) have suggested that early-career teachers can develop as leaders when supported by a conducive school culture and supportive principals, there was still a lack of research on teacher leadership readiness conducted by themselves. This question intends to investigate the teacher leadership readiness of early-career teachers and seeks to validate the literature (Katzenmeyer and Moller, 2009) with the argument that when early-career teachers feel competent and proficient enough, they have more confidence, courage, motivation and aspirations to adopt leadership roles

either formally or informally when assigned small leading tasks, and in some circumstances, they may initiate leading assignments and act on the leadership roles by personal power influences.

Data source: Questionnaire: *Teacher Leadership Readiness Instrument (TLRI)* by Katzenmeyer and Moller (2009); semi-structured interviews; and observational field-notes

RQ3: What is the relationship between the school culture and teacher leadership readiness of early-career teachers in the selected public schools in Gansu Province?

Rationale: Although several qualitative studies (Szeto and Cheng, 2018; Szeto, 2020; Woodhouse and Pedder, 2016) implied that teacher leadership development of early-career teachers was dependent on the interplay of school culture and teacher leadership readiness, currently, there is no quantitative studies examining such a relationship in Chinese school settings. This question aims to examine the relationship between school culture and teacher leadership readiness for early-career teacher leadership development. Furthermore, the predicting effect of school culture on teacher leadership readiness of early-career teachers is also explored.

Data source: Questionnaires: *Teacher Leadership School Survey (TLSS); Teacher Leadership Readiness Instrument (TLRI)* by Katzenmeyer and Moller (2009); semi-structured interviews; observational field-notes; and available documents

RQ4: What are the leadership strategies or skills of early-career teachers in building relationships with colleagues, students, and parents?

Rationale: In accordance with the teacher leadership developmental model (Katzenmeyer and Moller, 2009), teachers must master essential leadership strategies or skills to exert leadership influence among various stakeholders in their schools. This question serves to identify a set of teacher leadership strategies or skills of early-career teachers in building relationships with various stakeholders of the school:

colleagues, students, and their parents.

Data source: semi-structured interviews; and observational field-notes

RQ5: What are the influential factors that foster or impede early-career teacher leadership development in the selected schools?

Rationale: This question explores the underlying multi-faceted cultural and contextual factors that encourage or impede teacher leadership development of early-career teachers in the Chinese context.

Data source: Questionnaires (*TLSS* and *TLRI*); semi-structured interviews; observational field-notes; and available documents

Conceptual framework of the study

The present study is conceptually framed predicated on three overarching leadership theories: constructivist theory (Lambert, 1998), distributed leadership theory (Muijs and Harris, 2006), and the social cognitive theory (Bandura, 1997). Concurrently, this conceptual framework is observed through a sociocultural or ecological lens, located in a Chinese cultural context with multi layers (Bronfenbrenner, 2005; Chen, 2019), as shown in Figure 1.1 below.

Figure 1.1

Conceptual Framework of the Teacher Leadership Development of Early-Career Teachers in Public Schools in Northwest China, Gansu Province
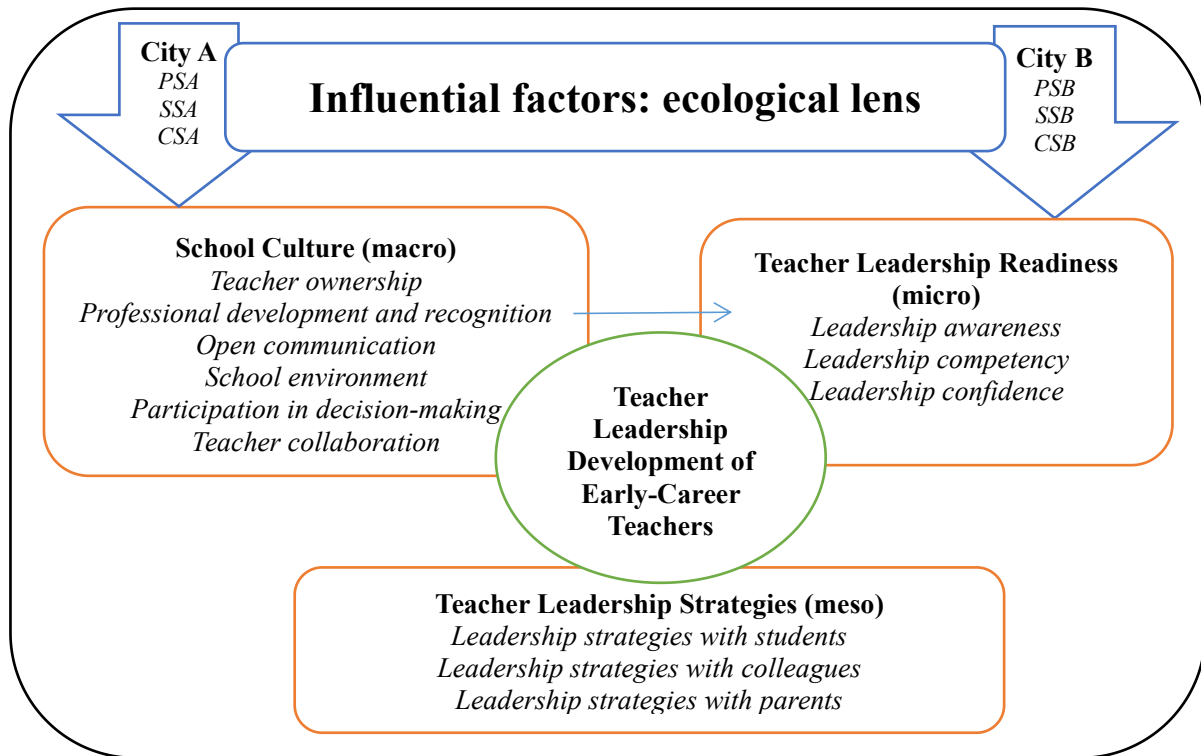
As the above conceptual framework exhibits (Figure 1.1), five components exist in the investigation of teacher leadership development of early-career teachers, including the school culture in supporting teacher leadership (organisational culture at the macro-level), teacher leadership readiness of early-career teachers (self-culture at the micro-level), the relationship between school culture and teacher leadership readiness of early-career teachers (interplay of macro and micro culture), leadership strategies with others (relational culture at the meso-level), and influential factors that foster or hinder teacher leadership development of early-career teachers (ecological culture).

With regard to the macro level, the school culture in which teachers work should be understood at the first place. As proposed by the constructivist theory, distributed leadership theory, and the social cognitive theory, schools should be professional learning communities in which leadership is constructed and developed through collaboration and collegiality among multiple sources of leaders (Bandura, 1997;

Katzenmeyer and Moller, 2009; Lambert, 1998; Muijs and Harris, 2007). On the other hand, regarding the micro level, teachers themselves must be ready and prepared in their awareness, competency, and confidence to lead for their teacher leadership development (Katzenmeyer and Moller, 2009). Furthermore, a linear relationship between school culture and personal teacher leadership readiness for leadership development may exist (Katzenmeyer and Moller, 2009). Meanwhile, teachers should be equipped with leadership strategies or skills to exert meso-level or relational-level influence, such as relationship building skills to establish strong professional and interpersonal relationships with colleagues, school principals, students, and parents (Katzenmeyer and Moller, 2009; Wang, 2018). Essentially, considerable attention should be paid to a multitude of factors of teacher leadership development, to illustrate, societal culture or social economic status will potentially affect the school culture where teachers lead (Katzenmeyer and Moller, 2009; Sinha and Hanuscin, 2017).

Consequently, this framework provides a visual presentation of the connections of various factors influencing early-career teacher leadership development in China's school context of this study.

Significance of the study

The aim of the present study is to fill in the gaps concerning the concept of teacher leadership. The first aim is to fill in the literature gap by redefining the concept of teacher leadership in an Asian cultural context, specifically in Mainland China. By testing the school culture (measured by *TLSS*) and teacher leadership readiness (measured by *TLRI*), and exploring the underlying factors of these two leadership measurements (*TLSS* and *TLRI*), the research findings will re-contextualise the definition and factors of teacher leadership in a Chinese school context. Secondly, a further aim of the present study is to validate the assumption established from the literature that early-career teachers can develop their leadership capacity and competency with organisational support and self-readiness.

Thirdly, the intention of the present study is to fill the research gap in teacher leadership by employing the conceptualised teacher leadership development model, drawing on the sequential explanatory mixed-method research design. At present, prior studies on teacher leadership development of teachers either apply quantitative methods to measure the school culture by employing *TLSS*, or draw on purely qualitative research to obtain in-depth perspectives of teacher leadership development of early-career teachers. A mixed-methods research design is employed to compensate for the drawbacks of previous research and to provide comprehensive understanding of teacher leadership development of early-career teachers in Mainland China's school context.

Most notably, the present study yields practical implications in setting out to establish a strong awareness of the concept of teacher leadership among various stakeholders, encompassing the government, the MoE, policy makers, school principals, teachers throughout their professional life phases, and students and their parents in Mainland China. In respect to the macro-level significance, the teacher leadership study aimed to convince the local government and policy-makers to integrate teacher leadership into teacher professional development programmes, as engaging and participating in professional learning activities with clear leadership awareness enhances teachers' professional knowledge, skills, leadership capacity, and influence.

For school-based significance, the present study contributes to the teacher leadership development in schools. The principals are encouraged to promote teacher leadership and empower all teachers to become potential teacher leaders. Findings can aid principals in identifying the school culture and teacher leadership readiness of their teachers, and design plans for their teachers' professional and leadership development. Moreover, the present study attempts to enhance teachers' professionalism and efficacy in enhancing their professional knowledge and skills, instructional techniques in teaching and learning, leadership competency and capacity within and beyond their classroom boundaries, along with their values and beliefs to improve students' performance and achievements.

Young and early-career teachers are encouraged and driven to be efficacious and resilient to develop as teacher leaders by awakening these *sleeping giants* (Katzenmeyer and Moller, 2009) with teacher leadership awareness, competency, and confidence. As a result, young and early-career teachers are encouraged to master essential leadership strategies or skills to lead effectively within and beyond their classrooms. Thusly, the advocacy of teacher leadership will contribute to the teacher development and teacher quality in Chinese school settings.

Hence, by drawing on the explanatory sequential mixed-methods research design, the present study has a strong purpose in filling the existing gaps of teacher leadership and early-career teacher leadership development in Gansu Province, Mainland China. Further, a new definition of the teacher leadership and teacher leadership development model for early-career teachers is established, specifically for the cultural context of Asian schools.

Summary

In this introductory chapter, the background of teacher leadership with highlights on benefits of teacher leadership in bringing about multi-dimensional development was discussed. Teacher leadership is also conceptualised in a Chinese setting with cultural and contextual characteristics and features.

The following chapters depict the review of the literature with relevant theoretical arguments and empirical evidence in Chapter Two, and methodological choice in addressing research problem and questions in Chapter Three. The mixed findings are presented in three chapters: Chapter Four on quantitative results, and Chapter Five and Six on qualitative findings. Afterwards, Chapter Seven elaborates and discusses the mixed findings drawing on the relevant studies from the literature. The concluding remark is provided in the last Chapter Eight, in answering the research questions, providing theoretical models, implications, and recommendations for future studies.

Chapter Two
Literature Review

Overview

In this chapter, the literature on teacher leadership is critically reviewed under three perspectives. To begin with, the concepts of teacher leadership and teacher leaders are elaborated regarding definitions, roles, characteristics, influencing strategies, and benefits. Next, using an ecological lens, the theoretical underpinning of teacher leadership development is foregrounded through three overarching theories: constructivist theory, distributed leadership theory, and the social cognitive theory. Finally, the multi-dimensional factors are articulated to shed light on the facilitating and impeding factors on teacher leadership development.

Concepts of teacher leadership and teacher leaders
Definitions of teacher leadership and teacher leaders

The timely emergence of the teacher leadership concept in response to the changing educational landscape and the era of accountability in education (Ali, 2014; Berry, 2013; Day and Gu, 2010, 2014a; Katzenmeyer and Moller, 2009; Li and Liu, 2020; Muijs and Harris, 2007; Mangin and Stoelinga, 2008; Pang and Wang, 2016) served as the catalyst for the surge in popularity of teacher leadership. Over the years, a plethora of research has interpreted the definition of teacher leadership differently (Fullan, 2004; Johnson, 2019; Muijs and Harris, 2007; Neumerski, 2013; Nolan and Palazzolo, 2011; Wenner and Campbell, 2017). Since 1980, there have been four systematic reviews conducted by York-Barr and Duke (2004), Wenner and Campbell (2017), Nguyen et al. (2019), and Wang and Ho (2019), with different notions of teacher leadership being articulated by all four, as exhibited in Table 2.1.

Table 2.1

Four Systematic Reviews of Teacher Leadership

Time frame	Authors	Definitions of teacher leadership
Period 1: 1980-2000	York-Barr and Duke (2004)	A process by individual or collective teachers with influence on various stakeholders for students' learning and development.
Period 2: 2004-2013	Wenner and Campbell (2017)	Leadership responsibilities outside classrooms in supporting professional learning communities and school development.
Period 3: 2003-2017	Nguyen et al. (2019)	Leadership is practised within or beyond classrooms, not necessarily with formal leadership positions.
Period 4: 2000-2018	Wang and Ho (2019)	Leadership is an influence to lead with others, lead collaborative relationships, and lead teaching and learning.

Between 1980 and 2000, York-Barr and Duke's (2004) work was regarded as the most influential and was widely cited as the primary reference for teacher leadership. York-Barr and Duke defined teacher leadership as a process conducted by individual or collective teachers to influence various stakeholders in school communities, and to increase teaching and learning practices, thereby ultimately enhancing students' learning and performances. Katzenmeyer and Moller (2009) expanded this concept of teacher leadership through the discussion of the roles of teacher leaders: who lead within or beyond classrooms, make contributions, and guide others towards improved outcomes. This view was also expressed by Grant (2006), who claimed that teacher leaders can adopt either formal or informal roles, lead within and beyond classrooms, and contribute to the development of the whole school community. As observed from the aforementioned perspectives, the concept of teacher leadership has been defined as individual or collective, formal or informal, and within or beyond classrooms.

Wenner and Campbell (2017) conducted a systematic review of teacher leadership literature from 2004 to 2013, elucidated teacher leadership roles and responsibilities as primarily practised outside classrooms, believed teacher leaders' roles mainly functioned to support professional learning communities and participated in making decisions at school-levels. Adopting such perspective, teacher leadership was practised exclusively by those in formal leadership roles, leaving little opportunity for teachers who are inexperienced and not vested with official titles.

A more recent review of literature from 2003 to 2017 by Nguyen et al. (2019) contradicted this narrow scope of teacher leadership and espoused broader dimensions, defining teacher leadership as the influence within or beyond classrooms rather than role descriptions and formal authorities. In this standpoint, the concept of teacher leadership is inclusive of all teachers with broader domains of leadership influence (Crowther et al. 2009; Grant, 2006; Harris and Muijis, 2005; Katzenmeyer and Moller, 2009; Leithwood and Mascall, 2008; Ng et al., 2018; Wenner and Campbell, 2017; Ware and Kitsantas, 2007; Wang, 2018; York-Barr and Duke, 2004).

Wang and Ho's (2019) review of literature from 2000 to 2018 defined teacher leadership as the teacher leader's influence on others through establishing collaborative relationships. This is reflected in Pang and Miao's (2017, p.94) work in China that defined teacher leadership as 'a collaborative process which is initiated, organised, and led by teachers with the exclusive purpose to improve teaching practice and learning outcomes through involving all other teachers and stakeholders'.

Predicated on the aforementioned definitions of teacher leadership, all teachers can assume leadership roles, practise leadership individually or collectively, and exert leadership influence within and beyond classrooms (Donaldson et al., 2008; Frost, 2008; Nolan and Palazzolo, 2011; Stone-Johnson, 2014; Taylor et al., 2011). Consequently, teacher leadership is a lifelong learning opportunity for teachers to develop as leaders from the onset of their career to the mid and late stage (Day and Gu, 2014a; Katzenmeyer and Moller, 2009; Tricarico et al., 2015).

Professional life phases and teacher leadership

As described by Day and Gu (2014a), the professional life of teachers is the most overlooked aspect in the entire teaching profession. On the basis of large-scale VITAE research, they divided the professional life of teachers into three phases: early stage of the career (0-3; 4-7); middle stage of the career (8-15; 16-23); and late stage of the career (24-30; 31+), with each stage possessing distinctive characteristics for teacher leadership development.

For teachers in their early-career stage, the distinguishing features are the high levels of motivation and commitment to the teaching profession despite having to face challenges from real classrooms, pupils, heavy workload, and increasing responsibilities. During this stage, early-career teachers are encouraged to develop their leadership capacity through organisational support, recognition of their efforts, professional learning, leadership opportunities, and supportive school cultures (Harris and Jones, 2019; Katzenmeyer and Moller, 2009; Papatraianou and Le Cornu, 2014; Webber and Nickel, 2021). Regarding teachers in their mid and late career stages, though suffering overloaded work and conflicts of work-life balance, experienced teachers have a substantial level of self-efficacy and commitment to classroom teaching and student achievements. Furthermore, teachers also possess professional expertise in mentoring young and early-career teachers (Day and Gu, 2014a). In this regard, mid and late career teachers serve as valuable resources in developing young and early-career teachers and enhancing their professionalism, confidence, and courage to be potential leaders (Chen and Lu, 2010b; Gul et al., 2019; Katzenmeyer and Moller, 2009; Liang and Wang, 2019; Ma and Trevethan, 2020; Ng et al., 2018; Ponte and Twomey, 2014; Wang, 2013; Wan et al., 2020).

Aspirations of teacher leadership influence teachers throughout their professional life phase (Day and Gu, 2014a; Katzenmeyer and Moller, 2009). Despite this, two critical questions cannot be answered: '*who are teacher leaders?*' and '*how do teacher leaders make a difference?*' (Wang and Ho, 2019), thus making the teacher leadership concept and aspiration somewhat ideally and romantically interpreted. Consequently, numerous approaches have been proposed for differentiating and identifying teacher leadership and teacher leaders, such as roles, characteristics, and influencing strategies that teacher leaders employ when building working relationships with various stakeholders in schools.

<u>Roles, characteristics, and influencing strategies of teacher leaders</u>
Formal, informal, and hybrid roles

One approach to identify teacher leaders is to inspect the roles that teacher leaders hold. As illustrated in Figure 2.2, the roles of teacher leaders are evolving in accordance with the continuum of teacher leadership development, ranging from a

positional or hierarchical model to a horizontal process that focuses on collaboration and influence.

Figure 2.2

Teacher Leadership Development Continuum
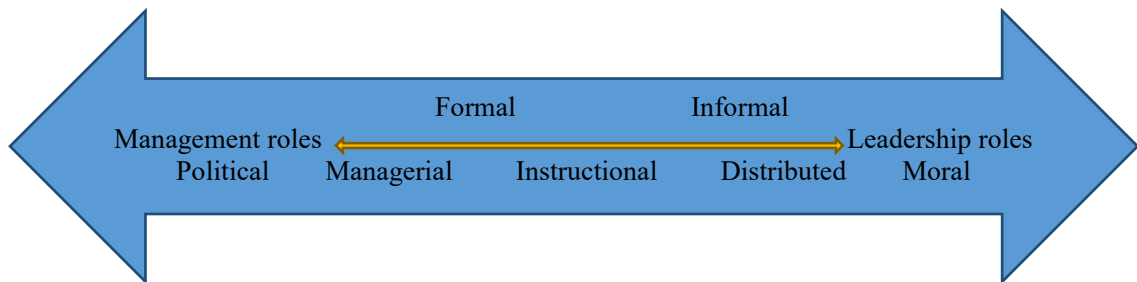
Note. Adapted from Bush (2007).

From the positional model, teacher leaders are managerial, political, and instructional leaders mainly espoused by solo leaders (Bush, 2007; Bush and Ng, 2019; Hunzicker, 2012; Singh, 2020). Yet, when developed into a horizontal scope, teacher leaders share, distribute, and participate in leadership tasks and practices in a collaborative and ethical manner (Bush, 2018; Brown and Treviño, 2006; Katzenmeyer and Moller, 2009; Muijs and Harris, 2007; Mansor et al., 2019; Vikaraman et al., 2020).

Subsequently, according to the different roles that teachers serve, three categories of teacher leaders can be defined: formal, informal, and hybrid (Bush, 2011; Hunzicker, 2012; Margolis, 2012; Muijs and Harris, 2007; Ng et al., 2018). Formal teacher leaders are assigned formal positions, encompassing senior leaders and middle leaders (i.e., principals, deputy principals, heads of departments, grade leaders, subject leaders, and expert teachers). Through adopting formal leadership roles, resources, and legitimacy, these teacher leaders are more prone to engage in group-level and school-level communication, collaboration, and decision-making. Additionally, teacher leaders can also act on either managerial, instructional, distributed, or allocative leadership (Avidov-Ungar et al., 2014; Bush and Ng, 2019; Bush, 2014; Mansor et al., 2021; Ng et al., 2018; York-Barr and Duke, 2004). For instance, middle leaders such as the head of departments in Malaysia are perceived as managerial and instructional teacher leaders at the middle ground of administration and teaching (Javadi et al., 2017; Javadi, 2017); in China, middle leaders such as *Backbone*

teachers (*gu gan jiao shi*) and home classroom teachers (*Banzhurens*) are regarded as instructional or pedagogical teacher leaders that guide the professional development of teachers, students' comprehensive development, and school community relationships (Li, 2006; Pang and Miao, 2017; Wang, 2018).

To further elaborate upon middle leaders in China's schools, *Backbone teachers* (*gu gan jiao shi*) serve as the imperative leading forces with designated leadership positions and honorable titles, such as teaching and researching group leaders (Chen and Lu, 2010b; Wang, 2013). Such exemplar teachers are treated as the *Backbones* of a school system and are viewed as pivotal to enhance teacher quality and school effectiveness. Research (Liang and Wang, 2019, Loden, 2006; Wang, 2013) on *Backbone teachers* in the context of China has suggested that *backbone teacher* leadership may improve instructional leadership, teacher professional development, collective teacher efficacy, and collaborative school culture.

Similarly, another category of formal teacher leaders, known as '*Banzhuren*'*,* is considered as having a unique position in Chinese school systems. Firstly, *Banzhuren* refers to the leader of students in classroom instructions, and students' moral education and holistic development. Secondly, *Banzhuren* is the predominant force in building school community relationships with colleagues, principals, and parents. Studies (Gu et al., 2015; Liu et al., 2018; Wang, 2008; Yin et al., 2014; Zheng et al., 2020) concerning *Banzhuren* in Chinese school contexts, although scarce, have indicated that *Banzhuren* yields a direct and positive influence on students' development and relationship building with various stakeholders in schools.

Differing from formal teacher leadership, informal teacher leadership emerges spontaneously and gradually from any stage of teachers' career trajectory. Informal teacher leaders possess no official titles or formal positions. Contrastingly, their leadership influence stems from their recognition and respect from others. As articulated by Harrison and Killion (2007), the roles of informal teacher leaders may consist of mentoring and coaching their peers who seek assistance, peer-reviewing other teachers' classes with constructive feedback, and initiating collaborative professional learning activities (Ng et al., 2018). On the other hand, according to Anderson (2004), informal teacher leaders performed more classroom-related

leadership activities, such as instructional or pedagogical leadership, managing and regulating students' activities, and supervising the learning and development of students. From this aspect, young and early-career teachers have more opportunities to be informal teacher leaders and practise instructional leadership for their students. This was further echoed by Wang (2018) who observed that China's classroom teachers are informal teacher leaders that lead curriculum designing and innovations, and extra-curricular activities for the holistic development of students.

Besides formal and informal teacher leadership roles, 'hybrid' teacher leadership roles have been further advocated (Hunzicker, 2012; Margolis, 2012). As detailed by Margolis (2012), hybrid teacher leadership roles require both teaching and leading capacities. Berry (2013) also supported this view by arguing that the hybrid teacher leaders are regarded as expert teachers who conduct teaching and leading practices within their schools, and also have the spare time and energy to share and expand their expertise outside the schools. To illustrate, master teachers in China, who are appointed to the formal leadership positions, are perceived as hybrid teacher leaders with both teaching and leading roles in their own schools. One of the major responsibilities of hybrid teacher leaders is promoting the professional development of teachers in *'Master Teacher Studios' (ming shi gong zuo shi)* in district or provincial levels (Zheng et al., 2019). Despite this, Spillane and Healey (2010) believed that the hybrid roles in both teaching and leading might reduce the time and space to mentor and support other teachers in their own school communities due to the overwhelming responsibilities.

Characteristics of teacher leaders

Certain characteristics are key to identifying teacher leaders (Gu and Day, 2007; Katzenmeyer and Moller, 2009; Militello and Berger, 2010). Teacher leaders are respected by others for their professional pedagogical skills, content knowledge, connections with others through building constructive relationships, and the support they provide to other teachers (Hunzicker, 2017; Hairon et al., 2015; Hairon and Dimmock, 2012; Wang and Zepeda, 2013; Webber, 2018; Xiao, 2016). As a result, teacher leadership is recognised by professional role modeling with a developmental focus. For instance, *Backbone teachers* (*gu gan jiao shi*) in China are recognised as

key personnel and role models due to their expertise in professional knowledge and skills, teaching and researching abilities, and mentoring young and early-career teachers (Li, 2005; Wang, 2013; Zhang, 2011).

Actions that result in teacher leaders being acknowledged are: devoting themselves to persistent professional learning, updating their professional knowledge and skills, and transferring innovative knowledge to classroom instructions. The current young and early-career teachers are classified as generation Y - people born between 1980 and 1997 (Bencsik and Machova, 2016; Katzenmeyer and Moller, 2009). Being described as the Net Generation, these young and early-career teachers are recognised for their proficient application of ICT technologies, flexible and creative ideas, and innovative teaching practices (Li et al., 2015; Morris, 2012).

Teacher leaders possess certain personal virtues and traits, such as hardworking, ethical, passionate, open-minded, extroverted, self-regulated, and proactive (Li, 2005; Vikaraman et al., 2020; Wang, 2013). For that reason, China's elder generations - senior and *Backbone teachers* - are recognised by their exceptional work ethics and moral values (Wang, 2018). On the other hand, the cohort of generation Y (young and early-career teachers) has been criticised as ego-centric, short-term-oriented, reward-driven, and lacking work ethics, moral obligations, and initiative attitudes (Wahyu et al., 2021). However, Arpacı-Somuncu (2016) argued that teachers who display the Big Five personality traits (that is, extroversion, agreeableness, conscientiousness, neuroticism, and openness to experience), especially openness, have displayed that they can lead their classroom more efficiently than those with other traits.

Teacher leaders are easy to identify with when they are visible and approachable to others, for instance, when they actively engage in the decision-making, collaboration, and communication process both in their classrooms and wider in school-levels. (Katzenmeyer and Moller, 2009). However, there are some teachers, though competent and proficient experts, that tend to work and learn individually. Consequently, they are less autonomous and willing to participate in teacher collaboration and cooperation, thus hindering leadership influence on collaborative learning activities, such as professional learning communities (Katzenmeyer and Moller, 2009; Szeto, 2020; Wang, 2018; Webber and Nickel, 2021).

Similar to the typical leadership roles, teacher leadership is perceived as an influence on others, and teacher leaders are defined by their effective influencing strategies or skills in building working relationships with various stakeholders (Katzenmeyer and Moller, 2009). To illustrate, employing listening and communicative skills with their colleagues (Katzenmeyer and Moller, 2009; Zhang, 2011), showing care, empathy, creating emotional bonds with their students and colleagues (Bowman, 2005; Liu et al., 2018; Li and Liu, 2020; Katzenmeyer and Moller, 2009; Zhang, 2011), and employing persuasion and problem-solving skills to establish cooperative relationships with parents (Harris and Muijs, 2005) are significant strategies that teacher leaders should know and master. Crippen and Willows (2019) strongly advocate these teacher leadership strategies when closely aligning teacher leadership characteristics with servant leadership, as exhibited in Table 2.3 (Bufalino, 2018).

Table 2.3

Ten Characteristics Shared by Servant Leadership and Teacher Leadership

Ten characteristics	Servant leadership	Teacher leadership
Listening	Servant leaders listen first, deeply, and reflectively, with respect and warmth (Greenleaf, 2003).	Effective listening skills in building a relationship with respect and trust (Katzenmeyer and Moller, 2009).
Empathy	Servant leaders fully understand others' circumstances and challenges.	Teacher leaders think about others to win trust and respect (Supovitz, 2018).
Healing	Servant leaders have the potential to heal themselves and others (Crippen, 2010).	Teacher leaders are healing and resilient in building professional and collaborative relationships (Supovitz, 2018).
Awareness	Servant leaders have strong self-awareness to fully perceive intricacies at play (Greenleaf, 2003).	Teacher leaders are very aware of their leadership roles in building working relationships (York-Barr and Duke, 2004).
Persuasion	Servant leaders use no authority but convince others with influence (Greenleaf, 2003).	Teacher leaders use encouraging and communicating skills to build collegial relationship (Harris and Muijs, 2005).
Conceptualisation	Servant leaders require creativity to look at problems from a wider perspective (Greenleaf, 2003).	Teacher leaders encourage others to build a shared vision for the school (York-Barr and Duke, 2004).

Foresight	Servant leaders can use information to reflect on and predict happenings in the future (Greenleaf, 2003).	Teacher leaders are able to drive school change forward (Harris and Muijs, 2005).
Stewardship	Servant leaders take service as central to contribute to the society (Greenleaf, 2003).	Teacher leaders act as stewards to positively influence communities and students (Harris and Muijs, 2005).
Commitment to growth	Servant leaders are committed to grow others (Greenleaf, 2003).	Teacher leaders are committed to the professional development of teachers (Harris and Muijs, 2005).
Community building	Servant leaders find ways to build communities and relationships (Greenleaf, 2003).	Teacher leaders aim for building professional communities for teacher development (Harris and Muijs, 2005).

Note. Adapted from Crippen and Willows (2019, p.177).

In such a case, as indicated by the 10 shared similarities of servant leadership and teacher leadership, teachers functioning as leaders and leading as servants are strongly recommended, through a humanist, ethical, moral, and philosophical stance, to establish positive relationships and influence others (Bufalino, 2018; Crippen and Willows, 2019; Vikaraman et al., 2020). Research by Fried et al. (2015) and Noland and Richards (2015) evidenced that the aforementioned characteristics positively influence student performance and school culture. In Mainland China, teacher education promotes a moral purpose (*de yu*) with civic and ethical virtues and values (Zhu and Xu, 2005). Thus, the integration of servant leadership into teacher leadership may yield more applications in the context of China. Despite the criticisms that the generation Y lacks exceptional work ethics and moral values, Wahyu et al. (2021) evidenced that there is a significant and positive influence of servant leadership on the organisational behaviour of generation Y employees. Furthermore, there is a significant difference for higher servant leadership of generation Y than generation X. Consequently, the recognition of teacher leadership and teacher leaders should not be predicated on the experience and generational stereotypes, but rather, on teacher leadership practices and positive influence (Katzenmeyer and Moller, 2009; Ng et al., 2018).

Benefits of teacher leadership and teacher leaders

Teacher leadership and teacher leaders are perceived as beneficial to schools, students, and most prominently, to teachers themselves (Anderson, 2004; Katzenmeyer and Moller, 2009; Murphy, 2005; York-Barr and Duke, 2004). Regarding the school-level benefits, teacher leadership is viewed as a driving force and catalyst in leading the school change and school effectiveness, improving organisational capacity, empowering teachers for joint leadership efforts to school improvement, and in reducing managerial responsibilities of principals to be instructional leaders, thus emphasising more on teacher professional development and student learning (Nappi, 2014; Wang and Ho, 2019). With regard to teacher community-level benefits, through building collaborative and professional relationships, collective teacher learning and researching, and the change in classroom teaching instructions, teacher leadership significantly contributes to the professional development of teachers and collective efficacy (Hairon et al., 2015; Liu, 2021; Liu and Watson, 2020; Mohamed et al., 2018; Reeves and Lowenhaupt, 2016; Tsai, 2011).

When discussing the benefits of teacher leadership for students, York-Barr and Duke (2004) proposed a framework on *Teacher Leadership and Student Learning* and viewed teacher leaders as the ones who bridge the achievement gap between the increasing accountability imposed on schools and the actual school status in teaching and learning. When establishing who teacher leaders are, what teacher leaders do, what conditions support teacher leaders, and what benefits and influence teacher leaders provide, this framework contributes to further research and studies on the concept of teacher leadership and its contributions to student learning and outcomes. Furthermore, the *Teacher Leadership for Student Leaning* model was further developed by Fairman and Mackenzie (2012) utilising York-Barr and Duke's (2004) seminal framework. Utilising the S*pheres of Teacher Leadership for Student Learning*, Fairman and Mackenzie (2012) realised that rather than school principals, it is experienced teachers who drive and initiate teacher leadership. This finding supported York-Barr and Duke's (2004) definitions of teacher leadership, in which teacher leaders can drive the organisational improvements from a limited scope to a wider range of influence, ultimately contributing to students' achievement and development.

Teacher leadership benefits teachers themselves, especially in their professional development and enhancement of their leadership capacity. When teachers perceive themselves as leaders and are offered with opportunities to lead, they are more prone to experience professional development. Believing that they can improve their students' learning outcomes, they enact their instructional strategies to achieve the desired purposes (Frost, 2012; Mansor et al., 2021; Poekert, 2012; Wang and Ho, 2019). Teacher leadership contributes to growing teacher efficacy and resilience, a sense of ownership to the teaching instructions, commitment to the teaching profession, and expanding their career pathways (Van Driel and Berry, 2012; Mullen and Browne-Ferrigno, 2018; Zheng et al., 2019).

Consequently, developing teacher leadership is critical for all teachers (Ng et al., 2018; Szeto, 2020; Wenner and Campbell, 2017; Wang and Ho, 2019), especially for young and early-career teachers during their initial phase of developing professional and leadership identities and capacities (Day and Gu, 2010; 2014a). Despite this, to date, most studies have investigated the teacher leadership of experienced or formal teacher leaders, thus neglecting the critical roles and possibilities of the leadership development of young and early-career teachers (Cheng and Szeto, 2016; Szeto and Cheng, 2018; Szeto, 2020). Therefore, investigating the development of teacher leadership in young and early-career teachers provides a wider perspective on the current knowledge and empirical base of teacher leadership in context of China.

Theoretical underpinning of teacher leadership development

The present study has been framed utilising three overarching theories through an ecological lens - constructivist theory (Lambert, 1998; 2003), distributed leadership theory (Harris and Muijs, 2005), and the social cognitive theory (Bandura, 1997). The rationales of such choices are delineated as follows.

First, the constructivist theory, proposed by Lambert (1998; 2003), bears the premise that 'leadership can be developed'. Constructivist theory believes that leadership and learning are co-constructed for all teachers, rather than innate to the limited individuals. Employing this perspective, the teacher leadership of early-career teachers can be enhanced through professional learning and development (Angelle

and Teague, 2014; Hallinger and Liu, 2016; Harris and Muijs, 2005; Thien et al., 2021). Second, the distributed leadership theory was adopted in the present study due to its belief that 'leadership can be shared and distributed' (Harris and Muijs, 2005). For instance, this model describes a redistribution of power and authority within schools and appeals that 'all staff' (Harris and Muijs, 2005; Spillane, 2005; Smylie and Eckert, 2018) should learn and lead in conjunction, disregarding their leadership positions and seniority. That being the case, young and early-career teachers can adopt leadership roles and exert leadership influence through their participation in collaborative learning activities (Boylan, 2018; Day et al., 2000; Harris, 2013; Vangrieken et al., 2015). Thirdly, as detailed by the social cognitive theory (Bandura, 1997), teachers' perceptions, behaviour, and contexts are mutually reciprocal and interactive. In this regard, the investigation of early-career teachers' perceptions of their school culture and their teacher leadership readiness may serve as predictors for their choices of teacher leadership development.

In the present study, an ecological framework was followed (Bronfenbrenner, 2005) to investigate the multi-level factors that influence teacher leadership development. In accordance with said framework (Bronfenbrenner, 2005; Chen, 2019; Tissington, 2008), teacher interactions are subject to the complexity and interplay among micro (interactions in classrooms and homes), meso (connections with various stakeholders in schools), exo (rapport with outside school communities), and macro (societal, cultural, and political) factors (Tissington, 2008). In this respect, adapted from an ecological framework, macro-level (external), micro-level (internal), and meso-level (relationship with various stakeholders) factors that influence the leadership development of early-career teachers are explored in the present study. Subsequently, informed by the aforementioned theoretical underpinning, numerous developmental models of teacher leadership are introduced.

Teacher leadership development models

The core theoretical foundation of the present study is one of the teacher leadership development models developed by Katzenmeyer and Moller (2009). The model, illustrated in Figure 2.4, articulates how teachers develop as leaders by assessing *who they are* (teacher leadership self-assessment for their readiness), identifying *where*

they are (school culture in supporting teacher leadership), exploring *how they lead* (leadership strategies or skills), and planning for *action to lead* (action research). As observed in this model, teacher leader development might be not only linear but also synergistic, involving all teachers who have the potential to lead.

Figure 2.4

Leadership Development for Teachers Model
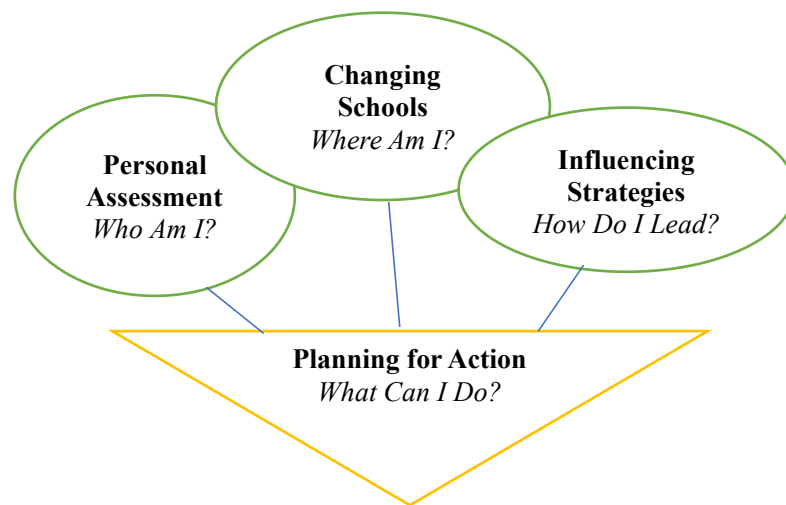
Note. Source: Katzenmeyer and Moller (2009, p.58).

Specifically, as suggested in the teacher leadership development model, there are four components, including encompassing personal assessment, changing schools, influencing strategies, and planning leadership actions. Firstly, as the individual, internal, and psychological stance of teacher leadership, teachers need to evaluate their own leadership readiness of teacher leadership, which indicates that teachers must be conscious about their leadership awareness, professional competency and proficiency to lead, because how teachers aware of teacher leadership might influence how they enact leadership practices (Bandura, 1997; Katzenmeyer and Moller, 2009). Subsequently, teachers as professionals with the gained expertise and skills will win recognition from other colleagues through their professional credibility, and become able to make teacher leadership benefits and exert influence on other teachers, such as mentoring new teachers, coaching with peers, and supporting professional learning activities. Accordingly, as part of a mutually beneficial process, teachers will gain and seek for the support from teacher leadership to build their professionalism, win

recognition, and then bear the confidence to be leaders and continue influencing others within and beyond classrooms, that is, the approach-ability in wider scope of communities to positively influence various stakeholders (Grant, 2006; Katzenmeyer and Moller, 2009).

At the same time, teacher leaders should understand the culture of the school in which they work. A supportive school culture is essential for teacher leadership to develop and flourish (Katzenmeyer and Moller, 2009). A seven dimensional school culture in supporting teacher leadership was proposed by Katzenmeyer and Moller (2009), with the seven dimensions including developmental focus, recognition, autonomy, collegiality, participation, open communication, and positive environment, as illustrated in Table 2.5.

Table 2.5

Seven Dimensions of School Culture in Supporting Teacher Leadership

Dimensions	Definitions
Developmental focus	Teachers engage in gaining new professional knowledge and skills, and are supported by school administrators.
Recognition	Teachers are recognised by the roles they take, and contributions they make. Teachers have a sense of respect and mutual caring.
Autonomy	Teachers are encouraged to make adjustments and innovations for their students and school development.
Collegiality	Teachers collaborate with teaching and student-related issues, such as classroom observations.
Participation	Teachers actively take part in decision-making. Teachers' opinions and ideas are sought by school administrators.
Open communication	Teachers can openly share and talk about their experience and problems. Teachers are kept well informed.
Positive environment	Teachers have a general satisfaction with the school environment, leadership of school administrators, and feel positive and respected by others.

Note. Adapted from Katzenmeyer and Moller (2009).

As revealed by the seven dimensions, teacher leadership will develop when schools promote teacher professional learning and development, recognise teachers as professionals and their teacher leadership efforts, create a collaborative environment for teacher communication and interaction, and encourage teachers' ownership and participation in decision-making (Katzenmeyer and Moller, 2009). Through collaboration and supporting each other, teachers can build essential working relationships with their colleagues. Notably, although teacher leaders drive the change, they also need the support from their colleagues and principals who play a determining role in their leadership success. Hence, organisational support is critical in shaping the transformation of teacher leadership (Katzenmeyer and Moller, 2009).

Poekert et al. (2016) proposed a model of teacher leadership development focusing on the personal growth of teachers (Figure 2.6).

Figure 2.6

Theory of Teacher Leadership Development (Poekert et al., 2016)
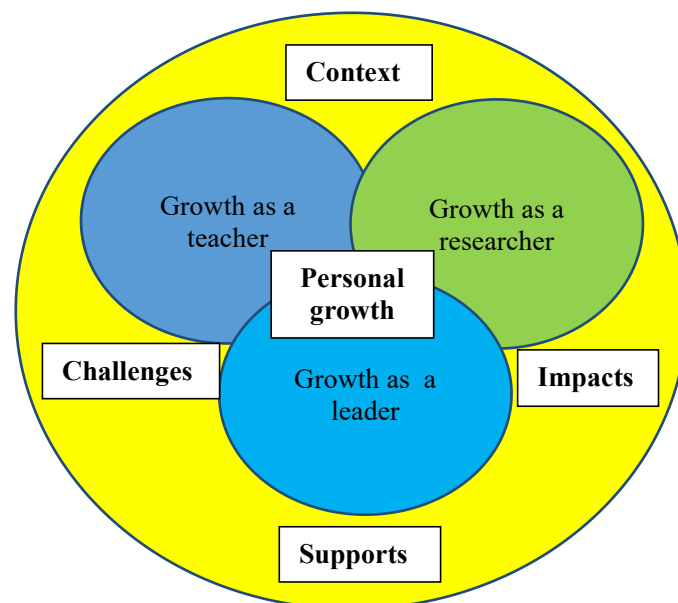
As Poekert et al. (2016) suggested, teachers grow as classroom teachers in making student-centred teaching instructions; grow as researchers who use classroom-based evidence and data to inform their teaching practices; and grow as leaders in taking on leadership roles and using their voices in the decision-making. Such teacher

leadership development builds teachers' confidence for engaging in professional development and building collaborative relationships with others. The said model also highlights the influence of the school contexts where the teachers work on teacher leadership development, such as opportunities to interact and lead, and received feedback to gain self-confidence.

Notably, the individual perspective of teacher leadership development cannot be neglected from teachers' identities. As revealed by Sinha and Hanuscin's model (2017), teacher leadership development is an alignment among teachers' leadership views, leadership practices, and leadership identity, which are influenced by their personal development priorities, school culture and contexts, and prior life and working experiences (see Figure 2.7)

Figure 2.7

Teacher Leadership Development (Sinha and Hanuscin, 2017)
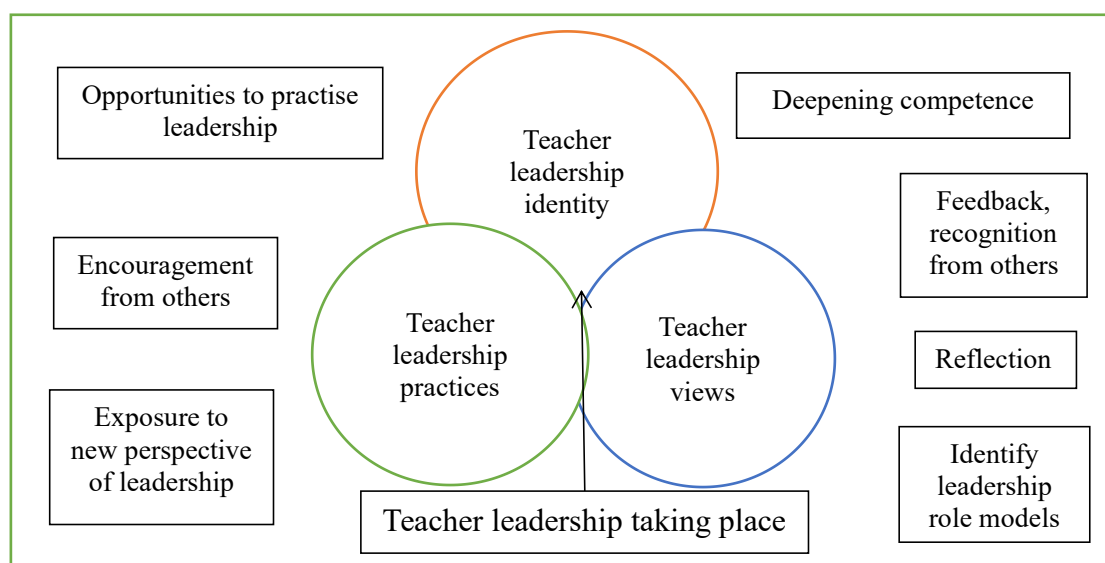
According to Sinha and Hanuscin's (2017) leadership identity development model (Figure 2.7), through reflection and identification of leadership role models when exposed to leadership opportunities and encouragement from others, teachers redefine and broaden their views of teacher leadership. This can be attributed to the teacher leadership identity being formulated by deepening professional competency and receiving recognition from others. Such development is synergistic and interactive,

and still under the influence of contextual circumstances (Sinha and Hanuscin, 2017).

A more recent model by Szeto and Cheng (2018) is closely aligned with teacher leadership development for novice and early-career teachers. In said model, young and early-career teachers develop as leaders through principal-teacher interaction when school principals allow them to participate in leadership activities, empower them to become leaders, and inspire them to assume leadership positions (Figure 2.8).

Figure 2.8

Framework of Principal–Teacher Interaction Effects on Leadership Development
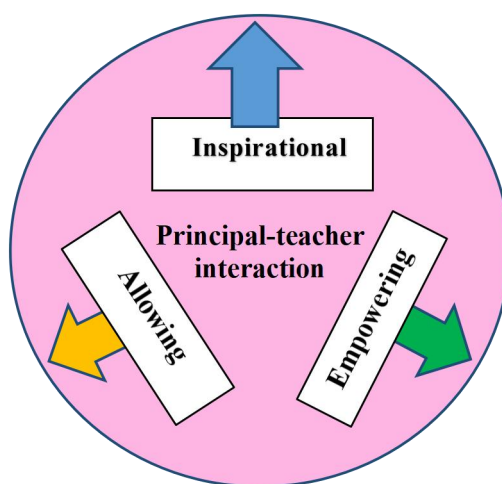
As indicated by the model (Figure 2.8), teacher leadership development is influenced by principals' establishing regular and constructive communications with teachers, and encouraging teachers' professional development. Under such principal-teacher interactions, there is an inspiring effect on sharing visions and being role models, an empowering effect on teacher professional development, and allowing autonomy to highly motivated teachers. As such, early-career teacher leadership development is closely associated with principals' leadership practices (Cheng and Szeto, 2016; Szeto and Cheng, 2018; Szeto, 2020).

In terms of the stages of teacher leadership development, numerous scholars (Brooks et al., 2004; Grant, 2006) have highlighted different models. Grant (2006) proposed a four-level teacher leadership development model, with each level being based on the previous one. According to the said model, teacher leadership emerges within the

classroom in providing teaching instructions and motivating learners, and working with other teachers through collaboration and cooperation, as part of the whole school development to build future visions and policy-making, and as an extension beyond the school to expand their expertise in broader communities (Grant, 2006, p. 519). Brooks et al., (2004) provided similar domains of teacher leadership development with three levels within schools: classroom teacher leaders, departmental teacher leaders, and whole-school teacher leaders. Said model suggests that teacher leadership responsibilities are focused within classrooms in teaching and learning, departmental collaboration for teacher professional development, and school-wide development of vision and direction (Wang, 2016; 2018).

In summary, under certain contexts, teacher leadership development is multi-faceted with the joint efforts of personal and organisational factors. In this perspective, this development is situational and ecological, but also interactive and dynamic (Katzenmeyer and Moller, 2009; Wang and Ho, 2019; Wang, 2018). Meanwhile, such development may follow certain steps of domains within and beyond classrooms. However, for young and early-career teachers, this development might not be fixed. Teachers could firstly start leading step-by-step in the classroom, before leading outside of the classroom and collaborating with others (Grant, 2006), or assuming leadership roles formally or informally, within or beyond classrooms concurrently (Katzenmeyer and Moller, 2009; Szeto and Cheng, 2018; Szeto, 2020; Wang, 2018).

Factors that foster or impede teacher leadership development

Teacher leadership development is influenced by a multitude of external (macro-level), internal (micro-level), and relational (meso-level) factors. In the following sections, potential factors that facilitate and those that impede the teacher leadership development of early-career teachers are examined.

<u>School culture and teacher leadership development</u>

The importance of school culture in facilitating teacher leadership development cannot be over emphasised (AL-OMARI, 2013; Aliakbari and Sadeghi, 2014; Berry et al., 2010; Jurasaite-Harbison and Rex, 2010; Katzenmeyer and Moller, 2009; Kyza

and Georgiou, 2014; Ng et al., 2018; Wang and Zepeda, 2013; Yusof et al., 2016). As recalled by Wang and Zepeda (2013), a conducive and healthy school culture is imperative for teachers to exert their teacher leadership influence with a positive impact. This was reinforced by a bulk of empirical studies (Lieberman, 2015; Murphy and Torres, 2014; Mansor et al., 2017; Tan and Liu, 2018; Yusof et al., 2016) which indicated that the school culture has a strong influence on the teacher leadership, in particular in the factor of teacher professionalism or teacher professional development.

Conversely, teachers will not be effective at teaching or leading in an unhealthy and negative school culture (Hofstede and Bond, 1988; Woodhouse and Pedder, 2016; Wang and Zepeda, 2013). To expand further, studies (Hudson, 2012; Klassen and Chiu, 2011; Woodhouse and Pedder, 2016) have evidenced that a less supportive and toxic school culture contributed to teacher attrition as early as the first few years of teaching. In such cases, for young and early-career teachers in particular, the role of school culture acts as a pre-requisite in developing teacher leadership (Ho and Tikly, 2012; Wang, 2016). Accordingly, the features and influence of the school culture have been investigated by numerous researchers (AL-OMARI, 2013; Chow, 2016; Carpenter, 2015; Fruehauf et al., 2015). Bolman and Deal's Four Frame Model (2008) was employed to identify the characteristics of schools, with four types of school culture: structural factory, family, political jungle, and symbolic theatre. To further elaborate on these four types of school culture: a structural factory culture focuses on roles, rules, policies, and regulations; a culture as a family puts emphasis on needs, skills, relationships and empowerment; a political jungle culture is marked with power, conflict, and competition; and in a symbolic theatre culture, the foci is on meaning, ritual, ceremony, and inspiration. Under such frameworks, school culture is identified as either encouraging or impeding the development of teacher leadership.

Additionally, the norms and values found in the school culture influence teachers' attitudes and practices, and teachers' perceptions of their school culture might be a reason for them assuming leadership roles and positions (Dimmock and Walker, 2000; Tsai, 2015; Wang, 2018; Yost et al., 2009). To illustrate, in fear of risking inter-personal relationships with colleagues, especially senior ones, teachers in a culture supporting egalitarian principles might discourage young and early-career teachers in taking up formal leadership roles. As such, for young and early-career teachers who

do not have leadership positions, they are reluctant to lead and influence more experienced or senior teachers, thereby restricting their leadership within the classroom (Johnson, 2004; Wang, 2018; Wang and Ho, 2019). Such circumstances can lead to the balkanisation of school culture, in which teachers are prone to stay isolated in their own classrooms, and fail to engage in an open communication and exchange through peer observations and professional learning communities (Szeto and Cheng, 2018; Szeto, 2020). Consequently, their teacher leadership development is restricted in narrower scopes without authentic collegiality (Bauman, 2015; Cheng et al., 2021; Hong, 2012; Wang, 2015).

School principals and teacher leadership development

Notably, the school culture has been shown to have a strong correlation with the principals' leadership behaviour (Fred and Singh, 2021; Hallinger et al., 2017; Liu et al., 2017; Ng et al., 2018; Wang, 2018; Webber and Nickel, 2021). School principals contribute and facilitate teacher leadership development in a multitude of ways (Price, 2012; Qian et al., 2016; York-Barr and Duke, 2004; Stein, 2014). As noted by a number of researchers (Mangin, 2007; Muijs and Harris, 2006, 2007), school principals as the main gate keepers imposed the direct influences on the creation or establishment of the school environment which embraced a culture of teacher collaboration, close collegial relationship among peers, and teachers' awareness of roles of teacher leadership. School principals can also be actively involved and interact with teacher leaders. Mangin (2007) reported that teacher leadership can be facilitated and enhanced when the principal shares anticipation for teachers' improvement, and positively evaluates teacher leaders as rich contributors for school improvement. Angelle and Teague (2014) further highlighted that, in developing teacher leadership capacities, principals' vision of sharing and integrating teachers' opinions when making decisions were also constructive. Notably, teacher leadership is unlikely to thrive if principals are reluctant and hesitant in distributing their power and leadership responsibilities, and are unwilling to empower teachers in decision-making with low openness (Harris, 2003; 2013; Katzenmeyer and Moller, 2009; Lu and Chen, 2007; McKenzie and Locke, 2014; Wang, 2018; Wan et al., 2018). From this perspective, school principals are responsible for setting the basic tone for teacher leadership to flourish (Bush and Ng, 2019; Leithwood, et al., 2012; Limon et al., 2021;

Ng, 2017; Ng et al., 2018; Qian and Walker, 2019).

Studies on principals in teacher leadership development have suggested a learning-centred leadership of principals directly influenced teacher leadership in terms of participating in decisions and undertaking leadership practices (Bellibaş et al., 2020; Hui and Singh, 2020; Park and Ham, 2016; Wahab et al., 2020; Wang et al., 2017); distributed leadership of principals influenced teacher leadership in terms of professional learning and development (Hallinger, 2005; Polatcan, 2021; Spillane et al., 2006; Zhao, 2012); and transformational leadership influenced teacher leadership in terms of teacher efficacy (Ponomarenko, 2020; Ponder, 2006; Zhang, 2011). Studies in the context of China (Jin, 2007; Liu et al., 2016; Szeto and Cheng, 2018; Szeto, 2020; Zheng et al., 2013; Zhang, 2011) have revealed that teachers develop as leaders based on principal leadership delegation, provision of leadership opportunities, and instructional engagement in developing teacher professionalism. Yet, if the principal shows their leadership in a directive and autocratic manner, teachers tend to display reduced efficacy and resilience, lack of commitment, and burnout (Day and Gu, 2014a; Lord and Hall, 2005; Wang, 2018).

Trust and teacher leadership development

As reinforced by a number of scholars (Burke et al., 2007; Bryk and Schneider, 2003; Demir, 2015; Hoy and Tschannen-Moran, 2003; Hallinger and Liu, 2016; Lewicki and Tomlinson, 2003; Ng et al., 2018), trust among school leaders, teacher leaders and other teaching members is conducive to building a harmonious working environment, teacher efficacy, and wholesome leader-follower relationships. For instance, teachers' trust in their principals is established by their personal willingness to rely on their principals, who are perceived as reliable gate keepers. Liu et al. (2016) conducted a study in Chinese schools, which indicated that the trust is a significant mediator between the principal instructional leadership and teacher participation in professional learning and development. This was resonated by Bush and Ng (2019) who evidenced that the key to the distributed leadership from school principals in Malaysia is the trust in teachers' professional expertise.

By the same note, trust among teacher colleagues enhances teachers' self-efficacy or collective efficacy, which in turn impacts on the teachers' sense of ownership and empowerment (Katzenmeyer and Moller, 2009; Le Cornu, 2013). In accordance with this, teacher empowerment is beneficial to teachers' autonomy and personal willingness to proactively participate in making decisions for schools. Furthermore, as claimed by numerous scholars (Le Cornu, 2013; Ng et al., 2018; Zheng et al., 2020), trust among colleagues helps maintain positive relationships, and such trust establishes a sense of belonging, emotional or social bonds among teachers, which is imperative for young and early-career teachers' leadership development (Bush and Ng, 2019; Katzenmeyer and Moller, 2009). A group of early-career teachers in Le Cornu's (2013) study reported that they felt more confident and enjoyed a higher level of self-respect and recognition when they had support from other teachers. The support from other teachers contributed to the willingness of early-career teachers to share their ideas and feedback when they engaged in professional learning activities, and was considerably significant to their initial teacher leadership development (Gu and Day, 2013; Ng et al., 2018). Notably, Hallam et al. (2012) warned that the absence of trust can lead to higher teacher turnover.

Continuous professional development and teacher leadership development

The capacity of teacher leadership can be developed and nurtured by participating in continuous professional learning and development (Kennedy, 2005; Katzenmeyer and Moller, 2009; Mansor et al., 2017; Ng et al., 2018; York-Barr and Duke, 2004). As claimed by a number of scholars (Kelchtermans, 2004; Katzenmeyer and Moller, 2009; Mansour, et al., 2014; Ng et al., 2018; Opfer and Pedder, 2011; Rhodes, 2013; Van den Bergh et al., 2014; Wang and Ho, 2019), continuous professional development and learning (CPD) is beneficial to the teachers' confidence and change in their professional knowledge and skills to lead, and it exerts a long-term influence on teachers who are actively participated.

On the one hand, continuous professional development (CPD) has been suggested to be strongly linked to the teacher leadership development (Huerta et al. 2008; Tahir et al., 2020; Watt et al. 2010; Wang, 2018), and is considered to be both a cause and an outcome of teacher leadership, as explained by Poekert (2012). As an example,

continuous learning is a process in which teachers are facilitated to build their capacity of learning updated knowledge and skills, and seeking approaches to changing their instructional strategies to lead improved students' outcomes (DuFour and Marzano (2011). On the other hand, teachers' acquired professional knowledge and skills from CPD assists both teachers and schools in developing more constructive assessments, proposing more insightful curriculum standards, and informing more feasible school improvement plans. Numerous studies (Evans, 2014; Hallinger and Liu, 2016; He and Ho, 2017; Pang and Miao, 2017; Wan, 2011; Wang, 2016; Zhang and Pang, 2016a) in Chinese schools have revealed that teacher leadership facilitates school improvement and student performance by supporting professional learning, leading curriculum development, and encouraging teacher collaboration and cooperation.

In this regard, CPD effectively contributes to teacher leadership development in leading school effectiveness (Murphy, 2005; Mohamed et al., 2018; Wan, 2011). The nature of CPD is continuous, professional, and developmental, which conveys the message to teachers that leadership can be developed and embedded in their daily practices without neglecting their teaching responsibility (Kennedy, 2005; Mansor et al., 2017). At present, in the general context of Chinese schools, three models of CPD are organised as norms for teacher professional learning and leadership development, and include teacher training, professional learning communities (PLCs), and mentoring and coaching. Despite being perceived as time-consuming, theoretical, and irreverent (Opfer and Pedder, 2011; Rhodes, 2013; Van den Bergh et al., 2014), the training models are still regarded as one of the most effective ways to develop teachers' professional capacity to lead (Hoban, 2002; Webber and Nickel, 2021). In a similar vein, PLCs, either formally or informally, in which teachers gather together to draw on discussion, assessment, and reflection in their activities, encourage professional learning and leadership development of teachers (Wong, 2010).

By the same token, as remarked by a group of scholars (Muijs et al., 2013; Ng et al., 2018; Rhodes, 2012b; Wang, 2013), teacher leaders play an imperative role during mentoring and coaching, both in teachers' professional learning and in their leadership development. Mentoring is a learning relationship encompassing both mentoring and coaching (Muijs et al., 2013; Rhodes, 2012b). Whereas coaching is related to

improving performance between or among individuals, coupled with the support, counselling, and career development and wider learning opportunities (Rhodes, 2012b, p.243). Accordingly, teachers' leadership formation, teacher aspiration and motivation, and teacher self-efficacy are largely supported and encouraged through effective mentoring and coaching (Rhodes, 2013). Literature on the mentor-mentee system (Hobson et al., 2009) has highlighted that teachers are more eager to seek help and support from mentors when during their early-career stage of the teaching profession, so as to learn and practice satisfying outcomes for their students. Stanulis and Floden (2009) reported that if young and early-career teachers were provided with an intensive mentoring structure, their students perform at a higher level than those whose teachers who had not engaged in any mentoring practices. A qualitative study conducted by Wang (2013) in Mainland China suggested that mentoring support for novice teachers improved their professional development by demonstrative, supportive and collaborative means.

Teacher efficacy and teacher leadership development

Teacher leadership, from the individual stance, has been interpreted as somewhat teacher efficacy or efficacious teacher leadership (Muijs et al., 2013, Gu and Day, 2013; Ng et al., 2018). It refers to the teachers' capability to enact teacher leadership influence to positively improve their students' performances by way of good instructional quality and effective class management and student engagement (Bandura, 1997; Wang and Ho, 2019). As noted by a number of researchers (Day and Gu, 2014a; Ng et al., 2018; Tschannen-Moran et al., 1998, 2007), young and early-career teachers are perceived as espousing high efficacy, motivation, and commitment at their beginning career stage of teaching profession. Accordingly, early-career teachers with a high efficacy are willing to assume teacher leadership and lead in innovative teaching and learning (Bandura, 1997; Day and Gu, 2014a; Wang and Ho, 2019). However, due to a lack of experience, those early-career teachers may find themselves struggling with leading efficiency in classroom management and student engagement, thereby hindering their self-efficacy and motivation in assuming leadership roles and responsibilities (Day and Gu, 2014a; Ng et al., 2018).

Efficacy is context-specific and can be influenced by school culture, organisational support, collaborative engagement, principal behaviour, recognition from colleagues and students, mentoring and coaching experience, and professional development. As suggested by an increasing number of studies (Tschannen-Moran and Barr, 2004; Chesnut and Cullen, 2014; Klassen et al., 2011), efficacious teachers can openly communicate and collaborate to share their teaching and learning experience within a positive and supportive school culture. Consequently, teacher efficacy and leadership are cultivated through a shared vision to improve students' performance.

Other personal issues contribute to the hindrance of teacher leadership development among early-career teachers, such as introverted personality traits, reluctance and resistance to change, a lack of shared goal and vision, the absence of professional knowledge and skills, and insufficient group and teamwork skills (Durias, 2010; Friedman, 2011; Katzenmeyer and Moller, 2009; Klinker et al, 2010; Muijs and Harris, 2006; Ng et al., 2018; Vermulst and Gerris, 2005). Yet, as aforementioned, such issues can be overcome with organisational support and the availability of leadership opportunities.

<u>Building relationships and teacher leadership development</u>

Building good relationships either in working relationships or interpersonal relationships is critical for teacher leadership development (Ng et al., 2018; Szeto, 2020; Wang, 2018). For young and early-career teachers to develop their leadership skills, building relationships with various stakeholders is crucial and requires essential interpersonal skills (Katzenmeyer and Moller, 2009; Wang, 2018). As the Chinese culture attaches significant importance to harmonious relationships and face value (*mianzi*) (Militello and Berger, 2010; Szeto, 2020; Wang, 2018; Wang and Ho, 2019), young and early-career teachers are required to show the respect and humbleness to older and senior teachers, and they try to avoid voicing their opinions and ideas different from their senior counterparts, thereby impeding leadership development of early-career teachers. By the same token, as evidenced by previous studies (Hofstede, 2011; Zheng et al., 2019), young and early-career teachers are apt to remaining silent to maintain the harmony and the face value of senior and older teachers during teacher collaboration in teaching and researching activities in China, thus resulting in a

contrived collaboration.

Finally, time constraints, such as insufficient time, administrative work, and busy schedule are the main barriers to the enactment of teacher leadership (Hands, 2012; Ng et al., 2018; Webber and Nickel, 2021). Studies (Gu et al., 2015; Liu et al., 2018) on teacher leaders who are *Banzhurens* in China implied that the multiple roles and responsibilities in teaching, managing, and leading made them overwhelmed, and taking up teacher leadership roles and responsibilities proved too much for them.

Summary

The literature review on the teacher leadership has provided a framework for the present study, in terms of the investigation of teacher leadership development of early-career teachers, as summarised in Table 2.9 below.

Table 2.9

Summary of the Literature of Teacher Leadership in the Present Study

Perspectives		Descriptions
Concepts of teacher leadership and teachers leaders	Definitions	Lead individually or collectively; Lead formally or informally; Lead within or / and beyond classrooms; Lead relationships and influence on various stakeholders.
	Roles	Formal leadership roles with leadership positions or titles; Informal leadership roles without positions but influence; Hybrid teacher leadership roles both in teaching and leading.
	Characteristics	Recognised by professional expertise; Recognised by certain personal virtues and traits; Recognised by visibility and presence.
	Influencing strategies	Strategies with colleagues; Strategies with students; Strategies with parents.
	Benefits	School-level benefits; Teacher-level benefits; Student-level benefits; Benefits for teachers themselves.

Theoretical underpinning	Constructivist theory	Leadership and learning are constructed and developed.
	Distributed leadership theory	Leadership is shared and distributed.
	Social cognitive theory	Leadership development is under the interplay of perceptions, practice, and contexts.
	Ecological framework	Leadership development is influenced by the complexity of macro, micro, and meso-levels of factors.
	Models of teacher leadership development	Leadership development for teachers; Theory of teacher leadership development; Framework of principal-teacher interaction effects on teacher leadership development; Teacher leadership identity development.
Factors of teacher leadership development	Macro-level	School culture; School principals; Professional development opportunities.
	Micro-level	Professional competency; Efficacy; Personality traits.
	Meso-level	Relationship with various stakeholders.

Chapter Three
Research Methodology

Overview

An explanatory sequential mixed-methods design is used in this study to address the underlying research questions. The first quantitative phase served to answer the first three *what* questions, namely, ***Research Question 1***: What are the teachers' perceptions of school culture in supporting teacher leadership development (teachers' perceptions in general and early-career teachers' perceptions in specific)? ***Research Question 2***: What are the early-career teachers' perceptions of leadership readiness of teacher leadership development? ***Research Question 3***: What is the relationship of school culture and leadership readiness of early-career teacher leadership development? This is then followed by the second qualitative phase in explaining *how* and *why* questions, for example, ***Research Question 4:*** How and to what extent are the leadership strategies or skills of early-career teachers to build relationships with various stakeholders? ***Research Question 5***: How and why do multi-level factors influence the teacher leadership development of early-career teachers?

In doing so, teacher leadership development of early-career teachers is investigated comprehensively, pragmatically, and contextually with a sequential explanatory mixed-methods design following the pragmatic approach in research.

Research paradigm of this study
<u>Positivism, interpretivism, and pragmatism</u>

The research paradigm is interpreted as the 'way of looking at the things' (Babbie, 2010, p.44). It has been featured as three perspectives, which are ontology, epistemology, and methodology (Guba, 1990; Wang, 2018). Ontology refers to '*what is the nature of the reality*'; epistemology indicates '*how do you know that*'; and methodology suggests '*how do you find it*' (Guba, 1990, p.18; Wang, 2018). Based on the different ontological beliefs that people hold, three research paradigms are proposed, namely, positivism, interpretivism, and pragmatism (Table 3.1).

Table 3.1

Key Issues of Research Methodology

Positivism	Interpretivism	Pragmatism
Quantitative	Qualitative	Mixed
Deduction	Induction	Abduction
Objectivity	Subjectivity	Inter-subjectivity
Generalisability	Context	Transferability

Note. Adapted from Morgan (2007); Wang (2018)

As seen in Table 3.1, in positivism paradigm, those who believe the world is objective will adopt a positivism paradigm. It has been established in the natural sciences and serves to investigate, test, predict and confirm theories and hypotheses with quantitative data obtained from a large sample (Evans, 2011; Taylor and Medina, 2013). Informed by positivism paradigm, the first quantitative phase of this study is to investigate the school culture *(RQ1)*, teacher leadership readiness *(RQ2)*, and their relationships *(RQ3)* with statistical measures. In this phase, the research aims to test the theory of teacher leadership in a deductive approach, and it is independent without added values and interference (Willson, 2010; Wang, 2018).

In contrast, the interpretivism paradigm argues that the reality is subjective with contextual and in-depth understanding. It cannot be fully embodied and investigated without considering the specific cultural and social contexts (Creswell, 2013) with qualitative data from interviews, observations and documents (Hibberts and Johnson, 2012). In such case, built on interpretivism, the second qualitative phase of this study aims to understand how teacher leadership is constructed from teachers' perceptions and experience in their real school settings. In this phase, the research is inductive with the researcher as the main instrument for data collections.

However, the pragmatism paradigm adopts a practical way to build the connections between positivism and interpretivism with the both quantitative and qualitative data for transferable purposes. It compliments the merits and drawbacks of these two paradigms (Brundrett and Rhodes, 2014), and finds out the middle ground in

supplementing the values and interpretations of humans with contextual consideration (Scott and Morrison, 2005). Therefore, informed by the pragmatism, the overall study supports the ontological belief that theory can be both generalisable and transferable to similar contexts with shared meaning and actions (Creswell, 2013, 2014; Morgan, 2007; Wang, 2018). From this perspective, an explanatory sequential mixed-methods design is adopted to understand the teacher leadership development, wider in quantitative phase and deeper in qualitative phase.

Research Design

Explanatory sequential mixed-methods design

Research design of this study is adapted from the model of Creswell and Clark (2011). Firstly, it is mixed in the sense that this study mixes both quantitative data and qualitative data to provide a general and contextual understanding of the teacher leadership. Secondly, it is sequential as the first phase quantitative data are collected and analysed first prior to the second phase qualitative data collection. Thirdly, it is explanatory as the second phase qualitative data aims to provide enriched and contextual evidence to explain and enhance first phase quantitative patterns and relationships. Fourthly, it is designed as small *quan* and big *Qual* in this mixed-methods, as the qualitative phase is framed under the case study approach by providing in-depth explanations within each case, and transferable patterns with similarities and differences from cross-case comparisons (Creswell and Clark, 2011; Guetterman and Fetters, 2018; Yin, 2014).

Case study approach

This study was framed as a case study because the investigation of teacher leadership development of early-career teachers was situational and contextual. It aligned with the nature of case study, which is an empirical inquiry to investigate a contemporary phenomenon in a real-life context (Yin, 2014).

Table 3.2

Case Study Design Choices

Design feature	Descriptions
Purpose of case study	
Instrumental	Case represents a phenomenon of interest.
Intrinsic	Case represents a unique or important situation, making the case itself as the primary interest.
Numbers of cases	
Single	Select critical, unusual, common, or longitudinal case.
Multiple	Select more than one case to compare and contrast.

Note. Creswell and Poth (2018); Wang (2018); Yin (2014)

Firstly, this study was an instrumental case study because the choice of case represented a phenomenon of interest, rather than a unique case making the case itself as a primary interest (Table 3.2). For instance, the aim of this study was to understand the phenomenon of teacher leadership development of early-career teachers, not for early-career teacher themselves *per se*. Secondly, this study was a multiple case study because it selected six cases to compare and contrast for a case-by-case transferability (Yin, 2014). To be specific, six government schools were conveniently selected in Northwest China, Gansu Province. It enabled the generation of more in-depth detailed analysis and comparison of the findings based on participants' perceptions, activities and interactions (Yin. 2014). Thirdly, among three major categories of case studies: explanatory, exploratory and descriptive case studies, this study adopted explanatory case study to explain how and why certain conditions take place (Yin, 2014).

Therefore, under the framework of the explanatory sequential mixed-methods design through case study approach (Creswell and Clark, 2011; Guetterman and Fetters, 2018; Yin, 2014), there are two stages of this research: the first stage is quantitative, followed by the second stage as qualitative case study, as shown in Figure 3.3 below.

Figure 3.3

The Explanatory Sequential Mixed-Methods Design for the Study
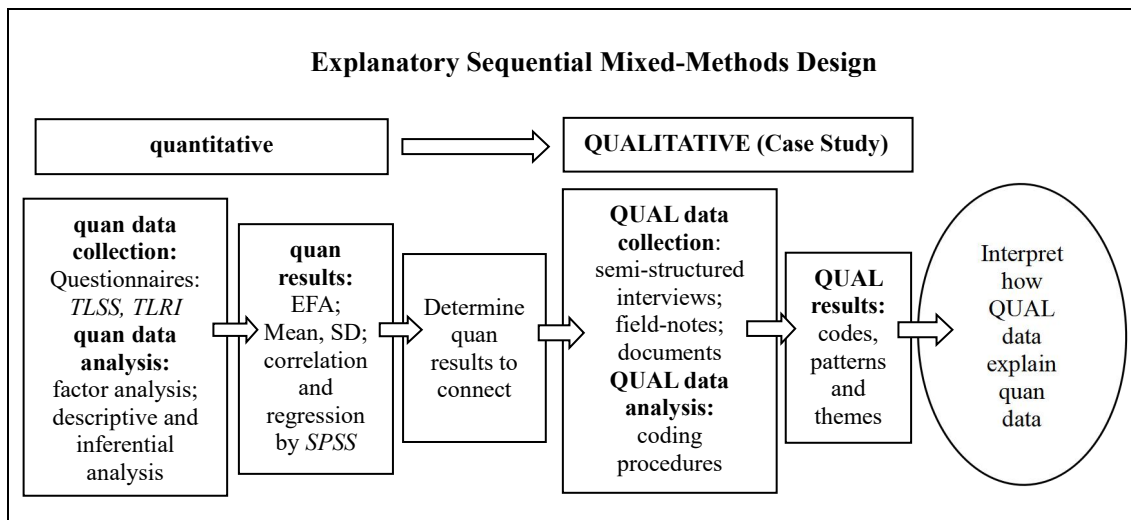
Note. Adapted from Creswell and Clark (2011); Guetterman and Fetters (2018); Yin (2014). *TLSS* (Teacher Leadership School Survey) and *TLRI* (Teacher Leadership Readiness Instrument) by Katzenmeyer and Moller (2009).

In phase one during the quantitative stage, two questionnaires (*Teacher Leadership School Survey,* thereafter *TLSS,* and *Teacher Leadership Readiness Instrument,* thereafter *TLRI*) were employed to answer **RQ1, RQ2,** and **RQ3** in examining to what extent the school culture supported teacher leadership of teachers in general, and early-career teachers in specific; the teacher leadership readiness of early-career teacher leadership; and the relationship between school culture and teacher leadership readiness of early-career teacher leadership development. This quantitative stage focused on examining the underlying patterns and relationships of these two constructs (Creswell, 2013). However, it failed to provide contextual explanations for *how* and *why* such patterns and relationships occurred. In such case, a second phase: qualitative stage was followed up with in-depth elaborations and explanations within case and across cases through case study approach in reflecting cultural and contextual similarities and variances.in Chinese school contexts.

During the second qualitative phase, multiple data sources encompassing semi-structured interviews, observational field-notes, and available documents were employed to answer research questions in explaining *how* and *why* a number of

factors (i.e. school culture, leadership readiness, and leading strategies) influence early-career teacher leadership development. Those collected qualitative data provided multiple participants' perceptions and experience of the researched phenomenon, and enhanced first phase quantitative data, so as to explain, validate, and triangulate through similarities and variances derived from multiple case studies (Wang, 2018; Yin, 2014).

In brief, the methodological choice of integrating mixed-methods and case study has provided a robust and complex enquiry to investigate the researched phenomenon of teacher leadership development of early-career teachers in Chinese cultural contexts, which aligned with the research philosophical belief that theory can be generalised by cases' transferability (Creswell, 2013; Wang, 2018).

Research site and access

In Gansu Province of Mainland China, two cities were purposefully selected among 14 cities based on their geographic proximity, diversity in school types, social economic status, and ethnicity. City A is located in the west region of Gansu Province with a higher social economic status and diverse ethnic groups (Inner Mongolian and Han ethnic groups). Whereas City B is situated at the eastern areas with a lower social economic status and comprised of mono Han ethnic group (see the Appendix-L).

After obtaining ethics approval from the Research Ethics Committee of University of Nottingham Malaysia (refer to the Appendix-E), access to schools and participants in two cities were obtained. Negotiating access to schools was challenging, and subjected to successfully identifying gatekeepers who could grant permission (Denscombe, 2007). In this study, initial permission to access schools was sought from the local education bureau with brief introduction of the aims, procedures, and ethics of the study. Meanwhile, the role of the researcher was explained and assurance was provided on protecting all information confidential and private. Upon obtaining the superintendents' permission to access the selected schools, the principals, who were the main gatekeepers, were contacted with an invitation letter explaining the purpose of the research (refer to the Appendix-C). Moreover, face-to-face communication with school principals and negotiation of convenient time and

venues with participants in the selected schools guaranteed the successful access to schools and participants. Time was spent on building rapport with participants and that contributed to a professional and trusting relationship, which was provided a conducive situation for the study (Glesne, 2006; Wang, 2018).

Pilot test

Prior to the formal data collection, a pilot test was conducted by the researcher during a three-week span from 22nd February, 2019 to 13th March, 2019 in one district of Northwest China, Gansu Province. As indicated by Ismail et al. (2018), a pilot test is a small scale of project which pretests the validity, reliability, acceptability and feasibility for the large scale of formal research. Meanwhile, it also pretests the *4Cs*, namely, content, construct, context and culture to provide a preliminary contextual framework to further understand the real application of research methodology and instruments (Brenton and Driskill, 2010; Lodhi, 2012). Following these guidelines, five main steps were undergone during the pilot test (refer to Figure 3.4 below).

Figure 3.4

Pilot Test Process
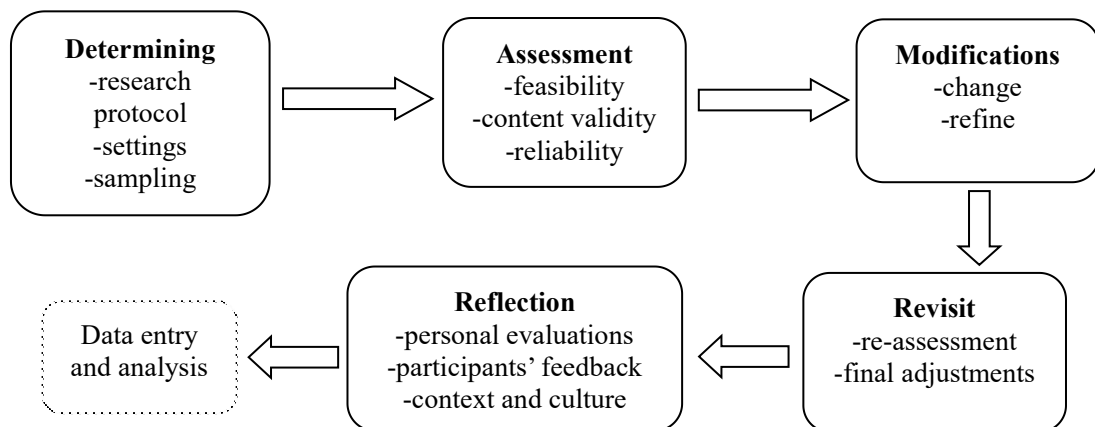
Note. Adapted from Ismail et al. (2018).

Firstly, the feasibility of research protocols was tested following the methodological procedures with a representative sample of participants. As such, a total number of nine teachers were invited to complete the first questionnaire *TLSS* in their

convenience, and seven early-career teachers were purposefully selected to fill out the second questionnaire *TLRI*. During this phase, the content validity, in particular, the face validity was tested. An ideal questionnaire should excel in the readability, feasibility, clarity of wording, as well as layout and format (Lancaster et al., 2004). As the questionnaires were bilingual (English and Mandarin) which had been subjected to a back-translation process (Hallinger et al., 2013), the understanding and comprehension of each item from the participants were crucial in measuring the theoretical constructs from the literature. Regarding this aspect, participants reflected that the questionnaires were easy to read and understand. Only a few of the Mandarin wordings were suggested to be refined better fit into the Chinese culture school settings. As such, the researcher made the revisions and modifications (Table 3.5).

Table 3.5

Initial and Revised Version of Items of the Questionnaires

2	At my school, teachers are provided with assistance, guidance or coaching if needed. 我校为所需教师所需提供协助，指导或者辅导。	2	At my school, teachers are provided with assistance, guidance or coaching if needed. 我校为**教师所需**提供协助，指导或者辅导。
9	I can see the points of view of my colleagues, parents and students. 我可以看到我的同事，家长和学生们的观点。	9	I can see the points of view of my colleagues, parents and students. 我可以**理解**我的同事，家长和学生们的观点。

Meanwhile, based on the collected questionnaires, Cronbach's Alpha was calculated for reliability. The Cronbach's Alpha reliability of the first questionnaire *TLSS* on nine teachers indicated a score of .985, while the second questionnaire *TLRI* on seven early-career teachers suggested a Cronbach's Alpha score of .813, both favouring a decent high degree of internal consistency (Hallinger and Liu, 2016).

This was then followed by a representative group of four participants who were purposefully selected to test the interview protocols, encompassing two early-career teachers, one middle leader, and one school principal. After the test, a set of new questions were added to capture emerging descriptions from participants. For example,

Question 1: What are the factors that shape or formulate the school culture?

Question 2: What are the factors that early-career teachers are reluctant to take on leadership roles?

Consequently, based on above-mentioned modifications, there indicated no further amendments, thus proceeding to the formal data collection of this study.

Phase One: Quantitative

<u>Sampling Selection of Schools and Participants</u>

Sampling is the technique or process of selecting samples from the population (Asiamah, et al., 2017). In general, there are two types of population, encompassing the target population and accessible population, and the latter is embedded from the former in accordance with the practical access to the entire unit of research for generalisation (Asiamah, et al., 2017; Creswell, 2013). In this study, sampling selections are based on two levels: selection of schools, and selection of participants. There are also two sampling techniques: random sampling and non-random sampling (O' Dwyer and Bernauer, 2013; Wang, 2018).

Selection of Schools

In terms of school selection, the convenient sampling technique, which is a type of non-random sampling, was adopted to select the six public schools in two cities (see Figure 3.6). As the research took the pragmatic perspective to gather and analyse sufficient data within time and traveling cost, such convenient sampling was practical on issues of access, time and cost.

Figure 3.6

Sampling Profile for Schools
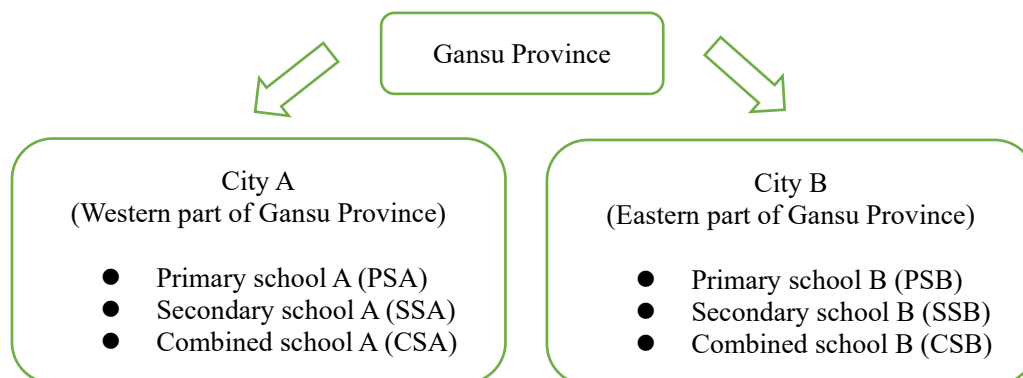
Selection of Participants

Two criteria were used to select participants in each school. The first criterion was random sampling which indicates that everyone in the population has the same and equal chance to involve in the sample, and it gains the most unbiased form of the sampling (Muijs, 2012). As such, when completing the first questionnaire *TLSS*, full-time in-service teachers from any rank were randomly selected. In selecting participants from three schools in City A, the target population is for all full-time teachers. Whereas in City B, due to the difficulty in accessing to the whole target population of full-time teachers, a portion of accessible population was reached in selecting sample of teachers, as seen in Table 3.7.

Concurrently, early-career teachers as the nested sample from the same sample of full-time teachers were purposefully identified to respond to the second questionnaire *TLRI,* which intentionally selected teachers who had seven or less years of in-service experience in their teaching profession. In two cities, sample selection of early-career teachers almost reached the whole population of the schools (see Table 3.7 below).

Table 3.7

Numbers of Participants for Two Questionnaires

Population (N)	City A (N=179)			City B (N=438)			
Sample (n)	**City A (n=170)**			**City B (n=172)**			**Total**
Participants for questionnaire *TLSS*	**PSA**	**SSA**	**CSA**	**PSB**	**SSB**	**CSB**	
Full-time teachers (random sampling)	58	44	68	60	56	56	342
Population (N)	City A (N=30)			City B (N=36)			
Sample (n)	**City A (n=26)**			**City B (n=33)**			**Total**
Participants for questionnaire *TLRI*	**PSA**	**SSA**	**CSA**	**PSB**	**SSB**	**CSB**	**Total**
Early-career teachers who worked within 7 years (purposeful sampling)	8	10	8	9	8	16	59

Instrumentation

In answering the first three research questions (Table 3.8 below), two questionnaires (*TLSS* and *TLRI*) as main research instruments were used (see the Appendix-I: authorised permissions from the publisher).

Table 3.8

Linking Research Methods to Research Questions

Items	Research Questions (RQ)	Research Methods (RM)	Participants
1.	To what extent does the school culture support teacher leadership development?	• Questionnaire *TLSS:*	• Teachers of all levels
2.	To what extent are early-career teachers ready for their teacher leadership development?	• Questionnaire *TLRI:*	• Early-career teachers
3.	What is the relationship between school culture and leadership readiness of early-career teacher leadership development?	• Questionnaire *TLSS and TLRI*	• Early-career teachers

As noted from Muijs (2012), the employment of questionnaires suggests a convenient and an efficient way in gathering and measuring opinions, beliefs, perceptions, and feelings with a large amount of participants for generalisation. In such case, the *TLSS* questionnaire developed by Katzenmeyer and Moller (2009) was used to measure teachers' perceptions of their school culture in supporting teacher leadership. This questionnaire has 49 items in measuring seven dimensions of school culture that

supports teacher leadership, namely, *developmental focus* (items from 1 to 7); *autonomy* (items from 8 to 14); *recognition* (items from 15 to 21); *participation* (items from 22 to 28); *collegiality* (items from 29 to 35); *open communication* (items from 36 to 42); and *positive environment* (items from 43 to 49). The *TLSS* is a Five-Likert scale measurement, with ordinal point from '1=Never', '2=Rarely', '3=Sometimes', '4=Often', to '5=Always'. Likewise, in order to measure early-career teachers' perceptions of teacher leadership readiness, a 25-item uni-dimensional questionnaire *(TLRI)* by Katzenmeyer and Moller (2009) was utilised with an ordinal measurement with a Five-Likert scale (1=Strongly Disagree, 2=Disagree, 3=No Opinion, 4=Agree, 5=Strongly Agree).

Quantitative Data Collection and Analysis

By using two questionnaires, the quantitative data was collected accordingly by traditional 'paper-pencil' method, together with the information sheet and consent forms. The *TLSS* was randomly administered to teachers in selected schools to address **RQ1**. Concurrently, within the same sample, the *TLRI* was purposefully administered to the identified early-career teachers to address **RQ2**. The collected quantitative data from *TLSS* and *TLRI* from the same sample of early-career teachers aimed to address **RQ3**.

After obtained the quantitative data collected from two questionnaires, *IBM SPSS Statistics 25* was run to analyse the quantitative data. Statistics analysis techniques were employed, encompassing factor analysis (EFA), descriptive statistics analysis (Mean, SD, aggregate mean), reliability test (Cronbach Alpha), and inferential analysis (correlation and linear regression analysis), as summarised in Table 3.9 below.

Table 3.9

Summary of Data Analysis of Quantitative Findings

Items	Research Questions	Research Methods	Analytical Strategies
1.	To what extent does the school culture support teacher leadership development?	• Questionnaire *TLSS:*	• Exploratory factor analysis (EFA) • Descriptive analysis (Mean, SD) • Reliability test (Cronbach Alpha)
2.	To what extent are early-career teachers ready for their teacher leadership development?	• Questionnaire *TLRI:*	• Exploratory factor analysis (EFA) • Descriptive analysis (Mean, SD) • Reliability test (Cronbach Alpha)
3.	What is the relationship between school culture and leadership readiness of early-career teacher leadership development?	• Questionnaires *TLSS, TLRI*	• Inferential analysis (Correlation and regression matrix) • Descriptive analysis (Mean, SD)

Factor analysis (Exploratory factor analysis: EFA)

As noted earlier, the instruments *TLSS* and *TLRI* measure school culture and teacher leadership readiness of teachers. However, such measures should be taken with great consideration whether they are applicable and suitable in a Chinese context, with cultural characteristics of collectivism and centralised system. Therefore, an exploratory factor analysis (EFA) was conducted to explore factor loading structures of both two questionnaires.

The Determinant score, Kaiser-Meyer-Olkin (KMO), and Bartlett's test of Sphericity were analysed for checking the appropriateness of running factor analysis. According to Shrestha (2021), the Determinant score > 0.0001 means there is an absence of multicollinearity; the value of KMO > 0.6 and significant value of Bartlett's Test < 0.05 together explain the adequacy and suitability of conducting factor analysis. Based on this, an exploratory factor analysis (EFA) was employed based on Principal Component Analysis (PCA) with varimax Kaiser normalization to extract underlying factor structures of *TLSS* and *TLRI,* with retained group of representative variables. Notably, two criteria guide the factor extraction and retained variables: The cut point of 0.5 for factor loading indicates the representatives of data; and no cross-loading of variables under more than one factor (Li and Liu, 2020; Shrestha, 2021; Wang, 2018).

Descriptive statistics analysis

Based on the factor analysis (EFA) results, the descriptive statistics from two questionnaires (*TLSS* and *TLRI*) were analysed by reporting Mean and SD with aggregated ranks (see the Appendix-M), in measuring the teachers' perceptions on school culture *(RQ1)*, and the early-career teachers' perceptions of teacher leadership readiness *(RQ2)*.

Correlation and linear regression analysis

To examine the relationship between school culture and teacher leadership readiness of early-career teachers (**RQ3**), the correlational and linear regression analysis were employed to find out the strength and predicting effect between these two variables. Notably, Determinant score > 0.0001, VIF < 10, and *Stepwise* were checked to ensure the absence of multicollinearity and collinearity of these two measures (Hasan, 2020). Descriptive statistics from two questionnaires (*TLSS* and *TLRI*) were analysed in reporting the Mean and SD with calculated aggregated ranks (see the Appendix-M), in measuring levels of early-career teachers' perceptions on school culture and teacher leadership readiness.

Validity and reliability of quantitative study

Validity indicates the credibility of research instruments, which can be achieved by content validity and construct validity (Anney, 2014; Bush, 2012). As noted earlier, the content validity or face validity of two questionnaires had been achieved during the pilot test for measuring whether the construct is theoretically sound, and items of questionnaires are feasible to be understood by participants (Wang, 2018). Regarding the construct validity of two questionnaires, convergent validity and discriminant validity were tested. The convergent validity refers that items in a construct should be strongly correlated, while discriminant validity suggests the items in different constructs should not be strongly correlated (Wang, 2018). As such, based on the Principal Component analysis (PCA) with varimax rotation, a factor loading over .50 indicates adequate convergent validity, while the factor loading .50 or less shows good discriminant validity (refer to the Appendix-K). Meanwhile, the reliability of

two questionnaires was calculated by employing Cronbach' Alpha, ensuring an acceptable internal consistency over .70 (Scott, 2012; Wang, 2018).

Phase Two: Qualitative

Sampling Selection of Interview Participants

In the qualitative data collection stage, purposive sampling strategy was adopted to select a representative group of participants for interviews (Babbie, 2010). Therefore, three groups of participants were intentionally selected to answer research questions. The first group was composed of school principals or deputy principals; the second group of participants consisted of middle teacher leaders who were at their mid or late professional life phases; and the third group constituted early-career teachers in their first seven years of teaching (see Table 3.10 below). As such, a total of 33 participants were interviewed in two cities (17 in City A and 16 in City B). The detailed information of the research participants can be referred to the Appendix-P.

Table 3.10

Numbers of Participants for Interviews

Participants	City A (n=17)			City B (n=16)			Total
	PSA	SSA	CSA	PSB	SSB	CSB	
Principal or deputy principal	1	1	1	1	1	1	6
Middle leaders	2	2	2	3	2	1	12
Early-Career Teachers	2	3	3	2	2	3	15
Total	5	6	6	6	5	5	33

Instrumentation

In order to gain in-depth information of specific contexts with a deeper understanding from the participants' perceptions and experiences (Muijs, 2012), multiple sources of instruments were employed to collect qualitative data, encompassing semi-structured interviews, observational field-notes, and available documents (Table 3.11).

Table 3.11

Linking Research Methods to the Research Questions

Items	Research Questions (RQ)	Research Methods (RM)	Participants
1.	To what extent does the school culture support teacher leadership development?	• Semi-structured interviews • Observational field-notes • Available documents	• Principals or deputy principals • Middle teacher leaders • Early-career teachers
2.	To what extent are early-career teachers ready for their teacher leadership development?	• Semi-structured interviews • Observational field-notes • Available documents	• Principals or deputy principals • Middle teacher leaders • Early-career teachers
3.	What is the relationship between school culture and leadership readiness of early-career teacher leadership development?	• Semi-structured interviews • Observational field-notes • Available documents	• Principals or deputy principals • Middle teacher leaders • Early-career teachers
4.	What are the leadership strategies of early-career teachers to build relationship with various stakeholders?	• Semi-structured interviews • Observational field-notes • Available documents	• Principals or deputy principals • Middle teacher leaders • Early-career teachers
5.	What factors that foster or impede early-career teacher leadership development in the selected schools?	• Semi-structured interviews • Observational field-notes • Available documents	• Principals or deputy principals • Middle teacher leaders • Early-career teachers

According to Bell (2014), interview is the most common form of data collection in qualitative studies. Though time-consuming, labour-intensive and highly subjective, its main purpose is to obtain a distinct kind of information which is not observable (Merriam and Tisdell, 2016). It is also a flexible and adaptable research tool (Coleman, 2012, p.250). For these reasons, semi-structured interviews were used in this study allowing probes and prompts to access participants' perspectives and understandings, which may not be achieved by highly structured interviews, or loosely unstructured interviews (Merriam and Tisdell, 2016, p.109).

This was coupled by another instrument: observations with field-notes. The utilisation of observational field-notes aims to complement and triangulate interview findings (Scott, 2012). Such observation facilitates the researcher in understanding the participants' reactions, practices and interactions with a more objective angle. Notably,

during the observation, a range of guidelines were followed as Johnson and Christensen (2014) suggested: the observations are conducted in a trustworthy, respectful, flexible, reflective and rapport manner to observe and record the distinctive features and characteristics of the specific contexts, cultures, communications and interactions (Hallinger et al., 2017).

The available documents were also utilised as qualitative data collection instruments, such as education policies and school regulations. They can provide further information and insights into how organisations work and what practices guide decision making within the school context and school culture (Merriam and Tisdell, 2016, p.164). Such documents further serve as a means of triangulation as Fitzgerald (2012) indicated, and the findings of documents should be linked with the aim to answer the research questions and related to the themes from the literature as a means of data triangulation.

Notably, in qualitative phase, the researcher is the key instrument throughout the whole qualitative method stage. In such case, the employed multiple sources of instruments captured an enriched, complimentary, and triangulated perspective for teacher leadership development of early-career teachers in this study.

Qualitative data collection, management, and analysis

Therefore, the qualitative data were collected from above-mentioned semi-structured interviews, observational field-notes, and available documents, following the interview protocols and observational checklist (see the Appendix-G and the Appendix-H). The interviews were conducted in the convenience of research participants after granting their permissions. They were audio-recorded which lasted for about half to one hour to obtain detailed opinions and perceptions addressing research questions. The observational field-notes were also made during the interviews to capture research participants' reactions and interactions, and followed-up with non-participative observations in their classrooms and staff rooms to validate and triangulate interview responses. Meanwhile, available school documents and handbooks were collected and checked, further complimenting and triangulating interview findings.

After the collection of qualitative data, all interviews were transcribed from the audio tapes shortly after completion in each school, and verbatim transcription technique was used to maintain details (Bush, 2012; Wang, 2018). Meanwhile, transcribed interviews were translated into English following the basic rules of back-translation: direct translation but also keeping some colloquial words in Chinese to preserve its authenticity (Hallinger and Liu, 2016; Wang, 2018).

In qualitative data analysis, data collected from the interviews were analysed in accordance with the coding procedure, which defines how you make sense of the underlying issues and reduce large volumes of text to a thematic patterns (Gibbs, 2007). There are two types of coding: concept-driven coding and data-driven coding (Gibbs, 2007; Wang, 2018). Concept-driven coding, also called deductive coding, refers to pre-determined codes based on the literature review, conceptual framework, or research questions. Data-driven coding, also named inductive coding, indicates emerging codes or 'in vivo' codes based on the responses from the participants (Brundrett and Rhodes, 2014). As such, these two coding techniques were complimentary to each other and were used during the whole coding process.

Following the coding procedures in qualitative data analysis (Saldana, 2009), the researcher related the participants' response to the research questions according to the pre-determined codes from the literature. Then the researcher established the possible connections among the emerging codes to formulate them into axial codes, such as emergent patterns, themes, categories and concepts. Meanwhile, interview transcripts were read and re-read several times to assign codes which were collapsed into themes (Saldana, 2009). After summarising and analysing the different forms of codes within cases and across six cases through constant case comparison (see the Appendix-N), the researcher interpreted and reported the qualitative results accordingly.

Authenticity and trustworthiness of qualitative study

Authenticity and trustworthiness in qualitative research are generic terms, referring to reliability or stability, validity or credibility, triangulation, and transferability (Anney, 2014; Bush, 2012). With respect to reliability or dependability of interview transcripts (Scott, 2012), inter-coder reliability or inter-coder agreement was sought

to ensure consistency or stability of the qualitative data. Based on a code-book (samples of code-book can be referred to the Appendix-J) provided by the researcher, a PhD student in leadership was invited to code 12 interviews independently. After comparing independently coded results between the researcher and the invited PhD student, the differences were discussed and resolved in the next round of coding, which contributed to a final agreement of 92 %.

The level of the validity or credibility of interviews was further achieved through respondent validation or member-checking (Bush, 2012), and the triangulation of respondents and data sources (Bush, 2012). According to Creswell and Miller (2000), member-checking will strengthen the validity and credibility of the narrative information from participants by systematically checking the qualitative data from interview responses. To further enhance on the validity of data, groups of participants can be invited to review the observational field-notes, and then discuss and comment on their accuracy (Creswell and Miller, 2000).

Additionally, respondent and data triangulation are essential in enhancing validity in case studies (Bush, 2012). This research triangulated responses from different groups of respondents (principal or deputy principal, middle leaders and early-career teachers) within a school and across different schools. Meanwhile, respondent data obtained from interviews were checked against observational field-notes and available documents. Additionally, this research adopted a range of research instruments (semi-structured interviews, observational field-notes, and available documents) to triangulate the research findings. Additionally, the multiple case study approach was employed in this research, which enabled cross-case comparisons, thus enhancing the external validity, which refers to the extent how findings can be applied or replicated to other groups or communities, or transferability of similar findings to other schools (Bush, 2012; Wang, 2018). Notably, all these mentioned procedures were conducive to ensuring the trustworthiness of the data.

Research Ethics

Ethical research is directed by two guidelines: informed consent of participants and minimised potential harm to participants (Bogdan and Biklen, 2007; Wang, 2018). In this study, the research was conducted according to the ethical procedures adhered to by the University of Nottingham and to the guidelines of the British Educational Research Association (BERA, 2018). The information sheet was provided with a detailed information about the study, and the consent form (refer to the Appendix-A and Appendix-B) was signed by the participants after reading the information sheet. Notably, participants were informed that their willingness of participation was entirely voluntary, and they could withdraw from taking part in the study any time. For example, two participants were reluctant to be voice recorded during the interviews. As such, notes were taken upon their agreement.

Meanwhile, this research was conducted by following the guidelines of confidentiality, anonymity and privacy. Information provided by the participants were treated confidentially and kept in a password-protected computer that could be accessed by the researcher herself only. Additionally, all schools and participants' identities were kept anonymous and private (Johnson and Christensen, 2014). For example, schools were labeled such as PSB (primary school in City B), and participants were given the pseudonym, for example, PSBECT1 (early-career teacher 1 from the primary school in City B).

The limitations of the study

No research is impeccable and escapable from limitations (Gray, 2013; Javadi, 2017; Wang, 2018). This study has unveiled a number of limitations, including geographical considerations of research sites, sample sizes, and techniques of data collection.

Regarding geographical considerations of the research sites, this study examined public schools in two cities of Gansu Province, which might not provide a comprehensive picture of teacher leadership development in all K-12 schools throughout the country due to its vastness in China. However, in contrast to a number of studies conducted in teacher leadership in developed and coastal cities in China,

this study provided regional evidence of teacher leadership in less developed and remote cities, which added more contextual variables of factors that influence teacher leadership development of early-career teachers. Meanwhile, with the multiple cases study approach, the similar patterns of teacher leadership development among six schools can be generalised to other schools through the case-to-case transferability.

Another limitation is the small sample size of six schools and the number of early-career teachers in each school, which makes the generalisation difficult, specifically in investigation of early-career teacher leadership development. However, this concern is addressed by employing both survey instruments assessed by teachers including early-career teachers in schools; complimented with interviews, observational field-notes, and accessible documents; and triangulated by school principals and middle teacher leaders. As such, schools as overarching cases and early-career teachers as enriched cases are comprehensively investigated to achieve the breadth and depth of this study.

In addition, the selection of schools employing a convenience sampling is also a limitation as it reduced the generalisation and objectivity. Under the time and travel cost considerations, and the permissions to get access to schools, six public schools were conveniently selected as they are located in the same city, and under the same local educational bureau. Furthermore, the research participants for interviews (middle leaders and early-career teachers) were recommended by their school principals, which might make them feel top-down authority pressure and power relationship considerations from their principals (Wang, 2018). As such, they might provide conservative opinions for evaluation of their principals. To minimise such problems that might affect the research findings, observational field-notes were complimented during on-site interviews and conversations in their offices. The guarantee of data confidential and multiple sources of data triangulation helped to decrease such considerations.

Summary

This chapter has articulated the methodological choice of explanatory sequential mixed-methods design based on a pragmatic research paradigm. The quantitative phase measures levels of the school culture, the teacher leadership readiness of early-

career teachers, and the relationship between these two variables in early-career teacher leadership development in Chinese school context. This is then followed by the qualitative phase aiming to provide explanations to enhance *how* and *why* those factors influence the early-career teacher leadership development. During data collection and analysis, the research ethics were followed throughout the whole process. The next chapter provides findings of this research in addressing the underlying research questions.

Chapter Four

Quantitative Findings of Schools in City A and City B

Overview

This chapter reports the quantitative findings collected from schools in City A and City B in Gansu Province. Two questionnaires (*Teacher Leadership School Survey,* thereafter *TLSS,* and *Teacher Leadership Readiness Instrument,* thereafter *TLRI*) were adopted in this study, which were originally developed by Katzenmeyer and Moller (2009). The use of the first questionnaire (*TLSS*) aimed to provide the data to answer **Research Question 1** in measuring the teachers' perceptions of the extent of school culture in supporting teacher leadership in general, and early-career teachers' perceptions in specific, while the second questionnaire (*TLRI*) to provide the data to answer **Research Question 2** in assessing the early-career teachers' perceptions on their teacher leadership readiness, and the two questionnaires (*TLSS* and *TLRI*) in **Research Question 3** in examining the relationship between school culture and teacher leadership readiness of early-career teachers. The findings of each research question are presented below.

Findings from Teacher Leadership School Survey (*TLSS*)

Demographic information of teachers in all schools in City A and City B

A total of 170 teachers from three schools in City A and 172 teachers from three schools in City B completed the *TLSS* questionnaire, showing a return rate of 94.4 % in City A and 95.56 % in City B.

City A is located in the western region of Gansu Province and shares a border with Mongolia (refer to Appendix-L). This city enjoys a relatively higher social economic status with a dominant mining industry, and its population composed of a more diversified ethnic composition made up of inner Mongolian and Han ethnic groups.

Table 4.1.1

Teachers' Profile in City A and City B in Filling out TLSS

TLSS		City A				City B			
Characteristics	**Type**	PSA (n=58)	SSA (n=44)	CSA (n=68)	**City A (n=170)**	PSB (n=60)	SSB (n=56)	CSB (n=56)	**City B (n=172)**
Teaching Experience	0-7 Years	8 13.8%	10 22.7%	8 11.8%	26 15.3%	9 15%	8 14.3%	16 28.6%	33 19.2%
	8-23 Years	15 25.9%	14 31.8%	30 44.1%	59 34.7%	36 60%	28 50.0%	20 35.7%	84 48.8%
	24+ Years	35 60.3%	20 45.5%	30 44.1%	85 50.0%	15 25%	20 35.7%	20 35.7%	55 32.0%
Gender	Male	15 25.9%	23 52.3%	18 26.5%	56 32.9%	11 18.3%	20 35.7%	29 51.8%	60 34.9%
	Female	43 74.1%	21 47.7%	50 73.5%	114 67.1%	49 81.7%	36 64.3%	27 48.2%	112 65.1%
Ethnicity	Han	48 82.8%	38 86.4%	13 19.1%	99 58.2%	60 100%	55 98.2%	56 100%	171 99.4%
	Minority	10 17.2%	6 13.6%	55 80.9%	71 41.8%		1 1.8%		1 0.6%
Leadership Position	With Formal Position	39 67.2%	23 52.3%	49 72.1%	111 65.3%	40 66.7%	37 66.1%	42 75%	119 69.2%
	Without Formal Position	19 32.8%	21 47.7%	19 27.9%	59 34.7%	20 33.3%	19 33.9%	14 25%	53 30.8%
Educational Level	Vocational College	19 32.8%	8 18.2%	8 11.8%	35 20.6%	14 23.3%	1 1.8%	4 7.1%	19 11.0%
	Bachelor	37 63.8%	35 79.5%	59 86.8%	131 77.1%	46 76.7%	55 98.2%	51 91.1%	152 88.4%
	Master			1 1.4%	1 0.6%			1 1.8%	1 0.6%
	Others	2 3.4%	1 2.3%		3 1.7%				

Note. In City A, PSA refers to the primary school in City A, SSA refers to the secondary school in City A, and CSA refers to the combined school in City A. In City B, PSB refers to the primary school in City B, SSB refers to the secondary school in City B, and CSB refers to the combined school in City B.

As the Table 4.1.1 shows, 85 (50 %) teachers in three schools in City A are at their late-career teaching trajectory with more than 24 years of teaching experience, whereas early-career teachers who have taught for seven or less years account for only 26 (15.3%) of the total number (170) of teachers. There are 114 (67.1%) female and 56 (32.9%) male teachers in the three schools in City A. SSA has more male teachers compared to the other two schools. On taking all three schools together, there are 99 (58.2%) teachers of Han and 71 (41.8%) Mongolian ethnicity. However, CSA has more Mongolian teachers 55 (80.9 %) than Han teachers. Additionally, 111 (65.3 %) teachers hold formal leadership positions such as heads of department, subject leaders, and home-classroom teachers (*Banzhurens),* and 59 (34.7 %) are

teachers with no formal leadership positions. Out of the total of 170 teachers in City A, 131 (77.1%) teachers hold bachelor degrees while 35 (20.6 %) are vocational college trained teachers, and one teacher (0.6%) with a postgraduate degree at master level. Situated at the eastern region of Gansu Province, City B has a relatively lower social economic status with its economic activities based on the agriculture. This city is comprised predominantly of the Han ethnic group.

As the Table 4.1.1 reveals, 84 (48.8%) teachers are at their mid-career teaching trajectory with 8 to 23 years of teaching experience in three schools in City B. This is more evident in PSB with 36 (60 %) mid-career teachers. In contrast, early-career teachers with seven years or less years of teaching experience account for only 33 (19.2%) of the total teaching staff in City B. From a total of three schools in City B, there are 112 (65.1 %) female and 60 (34.9%) male teachers, whereas CSB has a more balanced gender structure with 29 (51.8 %) male and 27 (48.2%) female teachers. Of the total 172 teachers in three schools, 119 (69.2%) teachers hold formal leadership positions while 53 (30.8%) has no leadership positions. In City B, 152 (88.4%) teachers possess bachelors' degree while 19 (11.0 %) are teachers graduated from vocational colleges, and one (0.6 %) with a master degree.

Demographic profiles of early-career teachers in City A and City B

As the nested sample of teachers above, early-career teachers who had seven and less years of teaching experience concurrently responded to the instrument *TLSS,* with a response rate of 100%.

Table 4.1.2

Profile of Early-Career Teachers in Filling up TLSS in City A and City B

TLRI		City A				City B			
Variables	**Type**	PSA (n=8)	SSA (n=10)	CSA (n=8)	**City A (n=26)**	PSB (n=9)	SSB (n=8)	CSB (n=16)	**City B (n=33)**
Teaching Experience	0-3 Years	5 62.5%	10 100%	4 50.0%	19 73.1%			9 56.2%	9 27.3%
	4-7 Years	3 37.5%		4 50.0%	7 26.9%	9 100%	8 100%	7 43.8%	24 72.7%
Gender	Male	2 25.0%	7 70.0%	4 50.0%	13 50.0%		5 62.5%	7 43.8%	12 36.4%
	Female	6 75.0%	3 30.0%	4 50.0%	13 50.0%	9 100%	3 37.5%	9 56.2%	21 63.6%
Ethnicity	Han	8 100%	8 80.0%	1 12.5%	17 65.4%	9 100%	7 87.5%	16 100%	32 97.0%
	Minority		2 20.0%	7 87.5%	9 34.6%		1 12.5%		1 3.0%
Leadership Position	With Position	2 25.0%	1 10.0%	4 50.0%	7 26.9%	4 44.4%	3 37.5%	7 43.8%	14 42.4%
	Without Position	6 75.0%	9 90.0%	4 50.0%	19 73.1%	5 55.6%	5 62.5%	9 56.2%	19 57.6%
Educational Level	Vocational College		1 10.0%		1 3.8%	2 22.2%			2 6.1%
	Bachelor	8 100%	9 90.0%	8 100%	25 96.2%	7 77.8%	8 100%	15 93.8%	30 90.9%
	Master							1 6.2%	1 3.0%

As Table 4.1.2 shows, 19 (73.1 %) early-career teachers have worked for three years in City A. There is an equal number of male and female early-career teachers in City A while SSA has more male 7 (70 %) than female early-career teachers 3 (30 %). Among the 26 early-career teachers, 7 (26.9%) early-career teachers held formal positions while 19 (73.1%) held non-formal positions. With regard to their educational qualifications, 25 (96.2%) of early-career teachers are bachelor degree holders and one in SSA was vocational college trained.

In City B, 24 (72.7%) of early-career teachers have worked between 4 to 7 years while CSB has more early-career teachers 9 (56.2%) who are in first three years of teaching. There are 21 (63.6%) female early-career teachers and 12 (36.4%) male early-career teachers. Among 33 early-career teachers, the non-positional early-career teachers 19 (57.6%) is slightly over formal leadership position holders 14 (42.4%). 30 (90.9%) of early-career teachers are bachelor degree holders and 2 (6.1%) are vocational college trained. Only one early-career teacher in CSB held a master degree.

An exploratory factor analysis (EFA) with principal component analysis method and varimax rotation was employed to explore underlying factor structures of *TLSS* with representative variables in the Chinese context. Table 4.1.3 shows the sampling adequacy and appropriateness of running EFA for *TLSS*. The determinant score 1.05> 0.00001 indicates there is no multicollinearity, KMO .968> .60 suggests the sample is adequate, and Bartlett's test .000 reveals the appropriateness for EFA (Shrestha, 2021).

Table 4.1.3

Determinant Score, KMO and Bartlett's Test of TLSS

a. Determinant = 1.05

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.968
Bartlett's Test of Sphericity	Approx. Chi-Square	13462.151
	df	990
	Sig.	.000

The EFA results of instrument *TLSS* indicate that six underlying factors were explicitly loaded with 37 retained variables or items in six schools of both City A and City B, explaining 69.054 % of total variance with eigenvalue greater than 1.00 (refer to the Appendix K-1). The six loaded factors are, *teacher ownership, professional development and recognition, open communication, school environment, participation in decision-making,* and *teacher collaboration.* The calculated alpha coefficient of reliability for the *TLSS* with six factors ranges from .70 to .90 above (Table 4.1.4), which indicates an acceptable internal consistency (Shrestha, 2021).

Table 4.1.4

Reliability of TLSS

Factor analysis of *TLSS*	Loaded factors	Factor 1: Teacher ownership	Factor 2: Professional development and recognition	Factor 3: Open communication	Factor 4: School environment	Factor 5: Participation in decision-making	Factor 6: Teacher collaboration	Overall
n=342	Reliability	.938	.923	.935	.892	.873	.719	.971

<u>**RQ1:**</u> What are the teachers' perceptions of the level of school culture in supporting teacher leadership (*TLSS*)

Based on EFA results of *TLSS,* the level of school culture perceived by teachers in supporting teacher leadership is presented as below (Table 4.1.5) in City A and City B, and in overall two cities. Aggregate means were used to provide the ranking for the mean scores (refer to the Appendix-M).

Teachers' perceptions of the level of school culture in supporting teacher leadership (TLSS) in general

Table 4.1.5

Mean and SD of Teachers' Perception of TLSS in City A and City B

Teachers in City A and City B	Factors	City A				City B				Overall two cities
		PSA n=58	SSA n=44	CSA n=68	**City A n=170**	PSB n=60	SSB n=56	CSB n=56	**City B n=172**	**n=342**
Mean SD Rank	F1: Teacher ownership	3.95 .71 H	3.72 .61 H	3.73 .66 H	3.80 .67 H	4.06 .68 H	3.79 .68 H	4.05 .88 H	4.05 .69 H	3.92 .69 H
	F2: Professional development and recognition	3.99 .78 H	4.03 .56 H	3.86 .75 H	3.95 .72 H	**4.37 .56 VH**	3.89 .66 H	4.14 .88 H	4.17 .64 H	4.06 .69 H

F3: Open communication	3.76 .78 H	3.50 .83 H	3.65 .72 H	3.65 .77 H	4.06 .59 H	3.60 .77 H	3.85 .91 H	3.97 .71 H	3.81 .76 H
F4: School environment	4.04 .60 H	3.65 .64 H	3.89 .67 H	3.88 .65 H	**4.29** **.49** **VH**	3.64 .82 H	4.12 .76 H	4.07 .73 H	3.97 .69 H
F5: Participation in decision- making	**3.23** **1.19** **M**	**3.09** **1.19** **M**	3.43 .97 H	3.28 1.11 M	3.42 1.15 H	**2.76** **1.09** **M**	3.63 1.19 H	3.45 1.19 H	3.37 1.15 M
F6: Teacher collaboration	3.43 1.02 H	3.70 .86 H	3.64 .78 H	3.59 .89 H	3.63 .98 H	3.50 .91 H	3.52 1.14 H	3.73 .94 H	3.66 .92 H
Overall	3.86 .63 H	3.68 .61 H	3.74 .64 H	**3.77** **.63** **H**	4.10 .51 H	3.67 .66 H	3.98 .80 H	**4.01** **.63** **H**	**3.89** **.64** **H**

VH (Very high:4.21-5.00), H (High:3.41-4.20), Medium (M:2.61-3.40), Low (L:1.81-2.60) and VL (Very Low:1.00-1.80)

As Table 4.1.5 shows, City A has an overall high score of teacher leadership school culture as perceived by teachers (Mean 3.77, SD 0.63). Notably, *professional development and recognition* was rated with the highest score (Mean 3.95, SD 0.72) while *participation in decision-making* was rated as the lowest score (Mean 3.28, SD 1.11). This indicates teachers in City A perceived their teacher leadership practices were most supported in professional development and recognition, but least supported in participation in decision-making. The other four factors of school culture were also rated as high scores, namely, *school environment* (Mean 3.88, SD 0.65), *teacher ownership* (Mean 3.80, SD 0.67), *open communication* (Mean 3.65, SD 0.77), and *teacher collaboration* (Mean 3.59, SD 0.89) in City A.

Among the three schools in City A, teachers in PSA rated school culture as the highest score with Mean score 3.86, (SD 0.63), especially in *teacher ownership* (Mean 3.95, SD 0.71)*, open communication* (Mean 3.76, SD 0.78)*,* and *school environment* (Mean 4.04, SD 0.60). By comparison, SSA rated these three factors the lowest compared to other two schools. However, two factors from SSA were rated as the highest scores among the three schools, which are, *professional development and recognition* (Mean 4.03, SD 0.56)*,* and *teacher collaboration* (Mean 3.70, SD 0.86)*.* Even with such high scores in these two factors, *participation in decision-making* in SSA was rated as the lowest with Mean 3.09, (SD 1.19) with a medium score, whereas CSA has the highest score of Mean 3.43, (SD 0.97) on this factor in participation in decision-making.

In City B, teacher leadership school culture perceived by teachers was also rated at a high score with Mean 4.01 (SD 0.63) in overall three schools. Among six factors, three top highest factors fall into *professional development and recognition* (Mean 4.17, SD 0.64), *school environment* (Mean 4.07, SD 0.73), and *teacher ownership* (Mean 4.05, SD 0.69). By comparison, the lowest rated scores on teacher leadership factors are *open communication* (Mean 3.97, SD 0.71), *teacher collaboration* (Mean 3.73, SD 0.94), and *participation in decision-making* (Mean 3.45, SD 1.19). This indicates teachers in City B perceived school culture supported teacher leadership more on professional development and recognition with a positive environment, but less on teacher collaboration and decision-making.

From three schools in City B, teachers' perceptions of teacher leadership school culture in PSB were rated as the highest for all five factors except for *participation in decision-making*. Among the five highest rated factors, *professional development and recognition* (Mean 4.37, SD 0.56), and *school environment* (Mean 4.29, SD 0.49) were recorded at very high scores. In contrast, SSB rated all six factors as the lowest especially in *participation in decisions* with a medium score (Mean 2.76, SD 1.09). To be noted, CSB excels when compared to other schools with the highest score on *participation in decision-making* (Mean 3.63, SD 1.19).

In summary, teachers in City B perceived their school culture higher than schools in City A in supporting teacher leadership. This is most evident in PSB with the highest teacher leadership school culture with two very high score factors: *professional development and recognition*, and *school environment*. Meanwhile, six factors of teacher leadership school culture were also scored higher by teachers in City B than teachers in City A. This is prominently in *participation in decision-making* because teachers from City B rated this factor as a high score while teachers in City A rated it as a medium score which indicates teachers in City B perceived their participation in decision-making was more supported when compared to teachers from City A. In this regard, school culture in City B is more supportive to teacher leadership than City A, especially in professional development and recognition, and participation in decisions.

Early-career teachers' perceptions of the level of school culture in supporting teacher leadership (TLSS) in specific

Early-career teachers' perceptions on their school culture in supporting teacher leadership from six schools in two cities were presented as the Table 4.1.6 below.

Table 4.1.6

Mean and SD of Early-Career Teachers' Perception of TLSS in City A and City B

Early-career teachers in City A and City B		City A				City B				Overall two cities
TLSS	Factors	PSA n=8	SSA n=10	CSA n=8	City A n=26	PSB n=9	SSB n=8	CSB n=16	City B n=33	n=59
Mean SD Rank	F1: Teacher ownership	4.19 .49 H	4.00 .49 H	3.70 .37 H	3.96 .48 H	4.09 .66 H	4.03 .72 H	4.17 1.00 H	4.12 .84 H	4.05 .70 H
	F2: Professional development and recognition	**4.30 .47 VH**	**4.23 .48 VH**	3.75 .44 H	4.10 .48 H	**4.49 .24 VH**	4.00 .76 H	**4.25 .83 VH**	**4.26 .73 VH**	4.19 .61 H
	F3: Open communication	**4.38 .52 VH**	3.98 .51 H	3.77 .47 H	4.03 .54 H	**4.53 .45 VH**	4.02 .68 H	**4.30 .86 VH**	**4.30 .73 VH**	4.18 .66 H
	F4: School environment	**4.40 .45 VH**	3.90 .53 H	3.77 .53 H	4.01 .57 H	**4.41 .28 VH**	4.00 .66 H	**4.23 .97 VH**	**4.22 .76 VH**	4.13 .69 H
	F5: Participation in decision-making	**3.19 1.36 M**	3.80 .92 H	3.75 .46 H	3.60 .98 H	**4.39 .22 VH**	**3.31 .92 M**	**4.31 .89 VH**	4.09 .88 H	3.87 .95 H
	F6: Teacher collaboration	3.69 .88 H	4.15 .82 H	3.75 .38 H	3.88 .74 H	**3.33 1.03 M**	3.69 1.16 H	4.00 1.03 H	3.74 1.07 H	3.81 .93 H
TLSS	**Overall**	4.20 .40 H	4.02 .48 H	3.74 .38 H	3.99 .45 H	**4.29 .24 VH**	3.96 .63 H	**4.22 .90 VH**	4.18 .71 H	4.09 .61 H

VH (Very high:4.21-5.00), H (High:3.41-4.20), Medium (M:2.61-3.40), Low (L:1.81-2.60) and VL (Very Low:1.00-1.80)

As Table 4.1.6 shows, City A has an overall high score of teacher leadership school culture as perceived by early-career teachers (Mean 3.99, SD 0.45). Similar to teachers' perceptions in general, *professional development and recognition* was rated as the highest score (Mean 4.10, SD 0.48) while *participation in decision-making* was rated as the lowest score (Mean 3.60, SD .98). This implies early-career teachers in City A perceived their teacher leadership practices were highest supported in professional development and recognition, but least supported in participation in decision-making. The other four factors of school culture were also rated as high scores, namely, *open communication* (Mean 4.03, SD 0.54), *school environment* (Mean 4.01, SD 0.57), *teacher ownership* (Mean 3.96, SD 0.48), and *teacher collaboration* (Mean 3.88, SD 0.74) in City A.

From three schools in City A, early-career teachers in PSA rated the school culture as the highest in supporting teacher leadership (Mean 4.20, SD 0.40), followed by schools SSA (Mean 4.02, SD 0.48) and CSA (Mean 3.74, SD 0.38). Among six factors of teacher leadership supported by schools, *professional development and recognition* was supported as the very high level by PSA (Mean 4.30, SD 0.47) and SSA (Mean 4.23, SD 0.48). Similarly, *open communication* (Mean 4.38, SD 0.52) and *school environment* (Mean 4.40, SD 0.45) were perceived by early-career teachers in PSA as highest supported at very high level. However, *participation in decision-making* was least supported in PSA with a medium score (Mean 3.19, SD 1.36). Regarding other two factors of teacher leadership supported in school culture, *teacher ownership* was perceived highest by early-career teachers in PSA (Mean 4.19, SD 0.49), and *teacher collaboration* was rated by early-career teachers as the highest in SSA (Mean 4.15, SD 0.82).

In City B, the overall teacher leadership school culture perceived by early-career teachers was also rated at a high score with Mean 4.18 (SD 0.71). Three factors were rated by early-career teachers as the highest supported with very high level, which are: *open communication* (Mean 4.30, SD 0.73), *professional development and recognition* (Mean 4.26, SD 0.73), and *school environment* (Mean 4.22, SD 0.76). In contrast, three least rated teacher leadership factors were *teacher ownership* (Mean 4.12, SD 0.84), *participation in decision-making* (Mean 4.09, SD 0.88), and *teacher collaboration* (Mean 3.74, SD 1.07).

Among three schools in City B, early-career teachers in PSB (Mean 4.29, SD 0.24) and CSB (Mean 4.22, SD 0.90) scored a very high level of school culture in supporting teacher leadership, followed by school SSB (Mean 3.96, SD 0.63) with a high score. In regard with six factors of teacher leadership, four factors encompassing *professional development and recognition*, *open communication*, *school environment,* and *participation in decision-making* were rated by early-career teachers in PSB and CSB as the highest with very high scores. In the contrary, *participation in decision-making* was rated as the least supported in SSB (Mean 3.31, SD 0.92), and *teacher collaboration* was poorly supported in PSB (Mean 3.33, SD 1.03), as perceived by early-career teachers with medium scores.

In brief, early-career teachers in City B perceived their school culture supporting teacher leadership higher than schools in City A. This is predominantly explicit in schools PSB and CSB with the highest teacher leadership school culture with two very high scores, particularly in factors of *professional development and recognition, open communication, school environment,* and *participation in decision-making dimensions.* Meanwhile, five factors of teacher leadership school culture were also rated higher by early-career teachers in City B than early-career teachers in City A, except for *teacher collaboration* dimension. As informed, school culture in City B is more supportive than City A for teacher leadership of early-career teachers.

Findings from Teacher Leadership Readiness Instrument (*TLRI*) of Early-Career Teachers

The response rate of *TLRI* from early-career teachers is 100%. Table 4.2.1 shows the adequacy and appropriateness conducting EFA for a sample of *TLRI*. The determinant score 6.19> 0.00001 indicates there is no multicollinearity, KMO .901> .60 suggests the sample is adequate, and Bartlett's test .000 reveals the appropriateness for EFA (Shrestha, 2021).

Table 4.2.1

Determinant Score, KMO and Bartlett's Test of TLRI

a. Determinant = 6.19

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.901
Bartlett's Test of Sphericity	Approx. Chi-Square	637.576
	df	66
	Sig.	.000

The factor loading of the *TLRI* showed that one single factor was obtained with 12 retained items, explaining the 67.267 % of total variance with eigenvalue greater than 1.00 (refer to the Appendix K-2). It is noteworthy that this single factor with 12 items was aligned with the original uni-dimensional instrument of *TLRI,* and the reliability was identified as high with Cronbach Alpha .953.

RQ2: What are the early-career teachers' perceptions of the level of teacher leadership readiness (*TLRI)*

The results of *TLRI* of early-career teachers' perceptions on their teacher leadership readiness in City A and City B, and the overall two cities are reported as below (The Table 4.2.2).

Table 4.2.2

Early-Career Teachers' Perception of TLRI in City A, City B, and Overall Two Cities

	City A				City B				Overall two cities
Early-career teachers in City A and City B	PSA (n=8)	SSA (n=10)	CSA (n=8)	**City A (n=26)**	PSB (n=9)	SSB (n=8)	CSB (n=16)	**City B (n=33)**	**n=59**
Mean	4.08	4.28	4.08	4.16	4.53	4.14	4.25	4.30	4.24
SD	.77	.53	.19	.54	.20	.71	.80	.67	.61
Rank	H	**VH**	H	H	**VH**	H	**VH**	**VH**	**VH**

VH (Very high:4.21-5.00), H (High:3.41-4.20), Medium (M:2.61-3.40), Low (L:1.81-2.60) and VL (Very Low:1.00-1.80)

According to Table 4.2.2, early-career teachers in City A perceived their teacher leadership readiness with a high score (Mean 4.16, SD 0.54). In City B, the early-career teachers perceived their teacher leadership readiness as very high (Mean 4.30,

SD 0.67). This indicates early-career teachers in City B perceived their teacher leadership readiness higher than their counterparts in City A.

Among the three schools in City A, SSA recorded a very high score of teacher leadership readiness (Mean 4.28, SD 0.53), while the other two schools rated a high score in teacher leadership readiness: CSA (Mean 4.08, SD 0.19), and PSA (Mean 4.08, SD 0.77). Outstandingly, in City B, early-career teachers from PSB (Mean 4.53, SD 0.20) and CSB (Mean 4.25, SD 0.80) rated very high score in their perceptions on their teacher leadership readiness. In contrast, early-career teachers from SSB perceived their leadership readiness as the lowest with Mean score 4.14, (SD 0.71) among the three schools in City B.

To sum up, early-career teachers in City B perceived their teacher leadership readiness higher than early-career teachers in City A, and PSB and CSB recorded a very high score of teacher leadership readiness while SSB rated a high score. Although teachers in City A perceived teacher readiness at a lower score than those in City B, SSA stands out with a very high score of teacher leadership readiness when compared to the other two schools (PSA and CSA) in City A. From all six schools, early-career teachers from SSA, PSB, and CSB perceived their teacher leadership readiness at a higher score than the early-career teachers from the other three schools (PSA, CSA, and SSB).

_RQ3:_ What are the correlations between school culture and teacher leadership readiness of early-career teachers (_TLSS_ and _TLRI_)

The relationship of teacher leadership school culture and teacher leadership readiness of early-career teachers was examined by employing correlation analysis, with a sample of 59 early-career teachers in overall two cities, who responded to two questionnaires (_TLSS_ and _TLRI_) concurrently.

Early-career teachers' perceptions on their school culture and teacher leadership readiness in overall two cities were presented as the Table 4.3.1 below.

Table 4.3.1

Mean and SD of TLSS and TLRI Perceived by Early-Career Teachers

TLSS and *TLRI* of early-career teachers		Factor 1 Teacher ownership	Factor 2 Professional development and recognition	Factor 3 Open communication	Factor 4 School environment	Factor 5 Participation in decision-making	Factor 6 Teacher collaboration	*TLSS*	*TLRI*
n=59	Mean	4.05	4.19	4.18	4.13	3.87	3.81	**4.09**	**4.24**
	S.D.	.70	.61	.66	.69	.95	.93	**.61**	**.61**
	Rank	H	H	H	H	H	H	**H**	**VH**
VH (Very high:4.21-5.00), H (High:3.41-4.20), Medium (M:2.61-3.40), Low (L:1.81-2.60) and VL (Very Low:1.00-1.80)									

As seen in Table 4.3.1, early-career teachers perceived a high score on school culture in supporting teacher leadership with Mean score 4.09, SD .61, particularly in factor 2 on *professional development and recognition* with the highest Mean score 4.19, SD .61. This is followed by *open communication (*Mean 4.18, SD .66), *school environment (*Mean 4.13, SD .69), and *teacher ownership* (Mean 4.05, SD .70). By comparison, two factors were perceived by early-career teachers as the lowest: *participation in decision-making (*Mean 3.87, SD .95) and *teacher collaboration (*Mean 3.81, SD .93). This indicates early-career teachers' professional development and recognition was highly supported while teacher collaboration was poorly supported by school culture, as perceived by early-career teachers.

In addition to the teacher leadership readiness, it was rated by early-career teachers with a very high score with Mean score 4.24, (SD .61). This suggests early-career teachers perceived themselves having very high on their teacher leadership readiness.

The Table 4.3.2 shows the relationship of six factors of school culture and teacher leadership readiness from early-career teachers. The determinant score 2.68> 0.00001 indicates there is no multicollinearity between *TLSS* and *TLRI*.

Table 4.3.2

Correlation of TLSS and TLRI

		Table: Correlations							
		tlss	tlssf1	tlssf2	tlssf3	tlssf4	tlssf5	tlssf6	tlri
tlri	Pearson Correlation	.728**	.676**	.745**	.690**	.652**	.503**	.137	1
	Sig. (1-tailed)	.000	.000	.000	.000	.000	.000	.150	
	N	59	59	59	59	59	59	59	59

**. Correlation is significant at the 0.01 level (1-tailed).

*. Correlation is significant at the 0.05 level (1-tailed).

a. Determinant =2.68

Table 4.3.2 shows the school culture and teacher leadership readiness of early-career teachers was significantly, positively, and strongly correlated with each other (r=.728, p<.01), especially in *professional development and recognition* (r=.745, p<0.01). Whereas *open communication* (r=.690, p<0.01), *teacher ownership* (r=.676, p<0.01), *school environment* (r=.652, p<0.01), and *participation in decision-making* (r=.503, p<0.01) were significantly, positively and moderately correlated with teacher leadership readiness of early-career teachers (Costa, 2016, refer to the Appendix-O for the strength of correlation). However, there was no statistically significant correlation between *teacher collaboration* and teacher leadership readiness as the significant *p* value exceeds .05.

Additionally, the linear regression was run to further examine the predictive effect of school culture on teacher leadership readiness, explaining to what extent the change in teacher leadership readiness is caused by the school culture.

Table 4.3.3

Results of Linear Regression Analysis of School Culture and Teacher Leadership Readiness of Early-Career Teachers

		Coefficientsᵃ						
		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1.247	.377		3.311	.002		
	TLSS	.730	.091	.728	8.025	.000	1.000	1.000

a. Dependent Variable: TLRI   b. Predictors: (Constant), TLSS

As Table 4.3.3 shows, the school culture is a significant predictor and explains 53.0 % of the variance in teacher leadership readiness of early-career teachers (R=.728, R^2=.530, F=64.406, P=0.000<0.05). It also suggests with one-unit increase in school culture, the leadership readiness of early-career teachers increases by .73 (Table 4.3.3).

A multiple linear regression (*Stepwise*) was carried out to examine which factors function as significant predictors of teacher leadership readiness among early-career teachers (Hasan, 2020). The result (*Stepwise*) is shown in Table 4.3.4.

Table 4.3.4

Results of Multiple Linear Regression after Stepwise

<table>
<tr><td colspan="9" align="center">Coefficients^a</td></tr>
<tr><td></td><td colspan="2">Unstandardized Coefficients</td><td>Standardized Coefficients</td><td></td><td></td><td colspan="2">Collinearity Statistics</td></tr>
<tr><td>Model</td><td>B</td><td>Std. Error</td><td>Beta</td><td>t</td><td>Sig.</td><td>Tolerance</td><td>VIF</td></tr>
<tr><td>2   (Constant)</td><td>1.133</td><td>.372</td><td></td><td>3.044</td><td>.004</td><td></td><td></td></tr>
<tr><td>tlssf2</td><td>.741</td><td>.088</td><td>.745</td><td>8.420</td><td>.000</td><td>1.000</td><td>1.000</td></tr>
</table>

a. Dependent Variable: tlri

Table 4.3.4 shows only factor 2 on *professional development and recognition* is the significant predictor of teacher leadership readiness of early-career teachers, which explained 55.4% of the variance (R=.745, R^2=.554, F=70.889, P=0.000<0.05). It also suggests with one-unit increase in *professional development and recognition*, the teacher leadership readiness of early-career teachers increases by .74 (p<.05). However, other five factors were not significant predictors of teacher leadership readiness of early-career teachers as their *p* values all exceed .05.

As noted above, among six factors of *TLSS*, five factors are significantly and positively correlated with *TLRI*, except for factor 6 on *teacher collaboration,* which shows no significant relationship. The regression analysis results suggest school culture plays a significant effect on leadership readiness of early-career teachers, particularly for factor 2 on *professional development and recognition*.

Summary

In a nutshell, this chapter has reported quantitative findings guided by three research questions: the level of school culture in supporting teacher leadership (teachers in general, and early-career teachers in specific), the level of teacher leadership readiness of early-career teachers, and the relationship between school culture and teacher leadership readiness of early-career teachers.

The EFA results of a 37-item *TLSS* with six factors, and a 12-item *TLRI* provide more suitable factor structures of teacher leadership in a Chinese context, with a representative factors with high loading items. Based on these two measures (*TLSS* and *TLRI*), the quantitative results are summarised as the Table (4.4.1; 4.4.2) below.

Table 4.4.1

Level of TLSS in City A and City B

	City A	City B
TLSS	Teachers' perceptions in general	
	A high score of school culture in supporting teacher leadership	A high score of school culture in supporting teacher leadership
Six factors of *TLSS*	Highest score in *professional development and recognition*	Highest score in *professional development and recognition*
	Lowest score in *participation in decision-making*	Lowest score in *participation in decision-making*
	City B suggests a higher score of school culture in supporting teacher leadership in all six factors than City A.	
TLSS	Early-career teachers' perceptions in specific	
	A high score of school culture in supporting teacher leadership	A high score of school culture in supporting teacher leadership
Six factors of *TLSS*	Highest score in *professional development and recognition*	Highest score in *Open communication.*
	Lowest score in *participation in decision-making*	Lowest score in *teacher collaboration*
	City B suggests a higher score of school culture in supporting teacher leadership of early-career teachers in five factors than City A, except for *teacher collaboration* dimension.	

Table 4.4.2

Level of TLRI in City A and City B

	City A	**City B**
TLRI	A high score of teacher leadership readiness of early-career teachers.	A very high score of teacher leadership readiness of early-career teachers.
	Early-career teachers in City B perceived a higher score of teacher leadership readiness than early-career teachers in City A.	
Levels of teacher leadership school culture and teacher leadership readiness were all rated higher in City B when compared to City A.		

Table 4.4.3

Correlational Analysis Results of TLSS and TLRI of Early-Career Teachers

	TLSS	***TLRI***
	A high score of school culture in supporting teacher leadership of early-career teachers.	A very high score of teacher leadership readiness of early-career teachers.
	Professional development and recognition was rated as the highest while *teacher collaboration* was rated as the lowest.	
Correlation analysis results	There is a significant, positive, and strong correlation between the school culture and teacher leadership readiness of early-career teachers, particular in *professional development and recognition*.	
	Among six factors of *TLSS*, five factors are significantly and positively correlated with *TLRI*, except for factor 6 on *teacher collaboration*.	
Regression analysis results	School culture plays a significant effect on teacher leadership readiness of early-career teachers, particularly in the factor 2 on *professional development and recognition*.	

Chapter Five
Qualitative Findings of Schools in City A

Overview

In this chapter, the qualitative evidence of the case studies of three schools in City A is presented, drawing on their respective nuanced contexts and enriched explanations to enhance the first phase quantitative findings detailed in 'Chapter Four'. A variety of data sources, including semi-structured interviews, observational field-notes, and available documents, have validated and triangulated the perceptions and experiences of early-career teacher leadership development. In this chapter, school contexts and participants' information are introduced first, followed by the themes arising from the data to answer the research questions. Predicated on the answers, the schools in City A are reported separately. Chapter Five reported on schools in City A while Chapter Six on schools in City B.

Schools in City A

City A is located in the north western region of Gansu Province. Its population composed of various ethnic groups, mainly the Inner Mongolian and Han ethnic groups. This city has a relatively high social economic status with mining as its pillar industry. In this city, three schools were selected based on the recommendations of the local educational bureau.

School Context: Primary School A

Primary school A (thereafter PSA), founded in 1953, is a small sized school. There were 58 full-time teachers and the majority of them were Han ethnic teachers. There were 280 students from families with a relatively high social economic backgrounds whose parents are government officials or civil servants who earn stable incomes.

School Context: Secondary School A

Secondary school A (thereafter SSA) was established in 1996 encompassing both junior high school and senior high school sectors. However, in response to the educational policy for integration of educational resources, the senior high school sector was moved into the neighbouring city since 2006, leaving the current school as a junior high school from grade 7 to grade 9. There were 50 full-time teachers and 210 students. The majority of the students were from relatively lower social economic status whose parents work in the surrounding pastoral rural areas.

School Context: Combined School A

Under the government policy on educational resources allocation and integration in ethnic minority district. Combined School A (CSA) integrated both primary and secondary sectors in one school in 2014. This school provided on-site accommodation for students from grade 6 to grade 12. Among the 71 full-time teachers, only 12 were from the Han group while the others were Mongolians. To date, there are approximately 270 students and all of them were Mongolians. The vast majority of students' parents come from the pastoral areas with relatively low social economic background.

Information of research participants

A total number of 17 research participants have been interviewed in City A. The information is illustrated in Table 5.1.1 below.

Table 5.1.1

Information of Research Participants in City A

	City A (n=17)			Total
Participants	**School: PSA**	**School: SSA**	**School: CSA**	
Principal or deputy principal	1	1	1	3
Middle leaders	2	2	2	6
Early-career teachers	2	3	3	8
Total	5	6	6	17

As seen from Table 5.1.1, a total number of five participants were interviewed in PSA, encompassing two early-career teachers with seven or less years of teaching experience, two mid-career teachers holding formal leadership positions as *Banzhurens,* and one deputy principal. In SSA, six participants were interviewed, consisting of three early-career teachers with two or three years of teaching experience, two middle leaders as *Banzhurens* at their mid-career stage, and one deputy principal. For school CSA, six participants were interviewed, including three early-career teachers with one year of teaching experience, two heads of departments as middle leaders at their mid or late career stage, and one deputy principal.

Primary School A

School culture in supporting teacher leadership

There are six factors that function as major themes (refer to the quantitative findings in Chapter Four): teacher ownership, professional development and recognition, open communication, school environment, participation in decision-making, and teacher collaboration. The following thematic discussions offered different interpretations from the participants of PSA.

Teacher ownership

Teacher ownership refers to a sense of belonging and freedom of the control over the work (Kyza and Georgiou, 2014; Ng et al., 2018). As detailed in interviews, three predominant domains of teacher ownership have been unveiled in PSA - adopting formal leadership roles, the freedom in making adjustments for the students, and being supported by school administrators for teachers' innovative tryouts.

The early-career teachers in PSA could adopt formal leadership roles such as *Banzhuren*, which was perceived as beneficial to 'all aspects of development' of early-career teachers (PSAECT1) through experiential practice, as epitomised by an early-career teacher from PSA:

"I think early-career teachers that become *Banzhuren* and take up its responsibilities are bold...and such teachers can develop leadership skills well." (PSAECT2)

Teacher ownership was also explicitly apparent in teachers' freedom to make professional adjustments for their students. As teacher (PSABT1) expressed, "Teachers should generally feel confident in their ability to control their students' learning and their level of teaching." With regard to this statement, it was observed that early-career teachers in PSA were granted 'freedom' in making adjustments for the teaching content and instructions, as they stated,

"For classroom teaching, I try to let the students digest the content... I can adjust the levels of teaching difficulty based on students' acceptance." (PSAECT1)

"My teaching difficulty lies in the variability of the child... I used to teach according to the book but I couldn't see the children's eyes. Now I show teaching content on the whiteboard...applying ICT can capture the child's concentration." (PSAECT2)

Furthermore, it was made apparent that teacher ownership in innovative tryouts was supported by school administrators in PSA. As an early-career teacher (PSAECT2) concurred that,

"School leaders are more encouraging to young and early-career teachers, and they support our innovative attempts." (PSAECT2)

Early-career teachers further expressed that the support for teacher ownership experienced in school PSA enhanced their professional confidence to lead in classroom teaching instructions.

Professional development and recognition

The professional and leadership efforts of teachers should serve as their defining features, which can be achieved by continuously developing their professional capacity to lead (Katzenmeyer and Moller, 2009). In PSA, teachers' professional development was evident in two main approaches: self-directed learning and

development, and participation in developmental programmes and activities.

It was observed that teachers in PSA engaged in self-directed development such as enhancing their professional qualifications and competency. As iterated by the deputy principal (PSAP1), the teachers' educational background in PSA essentially reached the standard of the required qualifications for teaching in primary schools. Regarding those possessing relatively low academic qualifications, they endeavored to improve their academic qualifications continuously through the self-study. This was reinforced by teacher (PSABT1),

> "When I joined the school, I felt my capacity for professional knowledge and skills were insufficient. I attended college training for half a year to improve my English teaching and learning. After I taught the students in the school, I subscribed to English newspapers and magazines weekly for self-study." (PSABT1)

Similar opinions were expressed by the early-career teacher (PSAECT1) in her aim to increase her professional expertise to lead through self-planned continuous learning. As she stated, "to improve my mathematics teaching competency and proficiency".

Continuous professional development (CPD) programmes and activities such as mentor-mentee partnerships and teaching researching activities were also available in PSA. In particular, the training for professional development was prevalent in PSA, and manifested through several forms: online training, on-site training, and off-site training. Teachers acknowledged the benefits of receiving online training and on-site training for their professional development. They remarked the online training as 'convenient and helpful' (PSAECT1) when learning ICT. Moreover, on-site training was praised as 'highly interactive' (PSAP1) and 'very helpful for classroom teaching' (PSAECT2). Despite this, almost all research participants expressed their preference for off-site training, and described it to 'broaden their horizons and viewpoints' (PSAP1) and 'open up their mindset and outlook' (PSABT1), with it being perceived as the 'most beneficial to professional growth' (PSAECT2) for early-career teachers.

> "I feel that going out for off-site training is most beneficial to me. When I come back and try to use the observed and learned knowledge and skills in my classes, although the student's degree of cooperation is not high, it will

improve later if I persist." (PSAECT2)

The mentor-mentee support was also demonstrated as viable in PSA, through assigning an old, experienced teacher to mentor a young and early-career teacher, with a focus on lesson observation and evaluations. This was highlighted by an early-career teacher (PSAECT2) in PSA,

> "There are a lot of teaching instructions during mentoring... we will discuss the key points of the textbook, review the lesson plans, ppt slides, and modify the syllabus for open classes." (PSAECT2)

Additionally, the Chinese version of professional learning communities (PLCs), teaching and researching activities were also identified to support the professional development teachers in PSA. For instance, teaching and researching activities were evidenced to be 'routinely' organised to update teachers' professional knowledge and skills. As an early-career teacher (PSAECT2) denoted that,

> "We have teaching and researching activities once a week... what we learned in teaching and researching activities can be used in our classroom teaching after learning." (PSAECT2)

Besides professional development, recognition was also perceived as critical in developing teacher leadership when PSA teachers were recognised by their professionalism and leadership in different aspects (Katzenmeyer and Moller, 2009). As made evident from interviews, young and early-career teachers were recognised by their fast-learning ability and proficient application of ICT. On the other hand, older and experienced teachers were recognised by their rich experience in effective classroom teaching methods and classroom management.

It was further evidenced that it was extremely difficult for teachers to gain recognition for their work ethics and learning attitudes, with senior teachers and school administrators being notably critical. To illustrate, teachers in PSA emphasised that the work ethics and morality of teachers should be exceptional, with older teachers being regarded as more dedicated, selfless, and hard-working than young and early-career teachers. Furthermore, older teachers advocated modest and humble learning attitudes whilst young and early-career teachers were perceived to lack such attitudes,

as senior and middle leaders in PSA complained,

> "Young teachers lack modest and humble attitudes, and the spirit of study and dedication is less... our old teachers do things selflessly and dedicatedly, but young teachers do not." (PSAP1)

> "Young teachers must have humble and modest attitudes to learn...but young teachers nowadays don't share this belief." (PSABT2)

Open communication

The school's support for the teachers' degree of communication is crucial in their teacher leadership development. When teachers are open and free to share and exchange their professional ideas and experiences, teacher leadership manifests (Katzenmeyer and Moller, 2009). In this respect, teacher communication was perceived as 'free and open' in expressing their opinions, and 'informal' when helping solve problems in PSA. As teachers claimed, their individual experience exchanges and discussions primarily transpired privately in teacher staff rooms. Due to the shortage of teachers from different divisions of teaching subjects, the teaching staff rooms were not arranged in accordance with teaching and researching subjects. Instead, teachers were allocated to large offices with mixed teaching subjects. Furthermore, it was observed that staff rooms were quite spacious as 10 to 12 teachers could share one room that facilitated face-to-face teacher communication.

In such circumstances, the teachers' staff rooms functioned as the primary and informal venue for teacher communication and discussions, especially for solving problems that teachers encountered. As stressed by an early-career teacher (PSAECT2),

> "We mainly deal with our emotions through internal resolution in staff rooms. Sometimes I talk to the colleagues around me to solve the misunderstandings and conflicts with parents." (PSAECT2)

<u>School environment</u>

A positive school environment is imperative for the teacher leadership development of early-career teachers; effects of a positive school environment are reflected in teachers' positive feeling and attitudes, teachers' satisfaction with their work environment and leadership of school administrators, and the respect received from others (Katzenmeyer and Moller, 2009). Teachers in PSA described the school as 'satisfying' (PSAECT1) and 'good and passionate' (PSAECT2). Such positive attitudes were evident in the teachers' satisfaction with the physical environment of their school. For instance, teachers in PSA were generally satisfied with the school infrastructure's 'advanced teaching equipment' (PSAP1), 'greening of the school' (PSABT1), and 'advanced ICT applications' (PSAECT1). Additionally, teachers expressed their satisfaction with the school administrators. Predicated on the interview comments, teachers described their school administrators as 'encouraging and supportive' in PSA. These levels of teacher satisfaction originated from the leadership styles and practices of school administrators. As suggested by interview excerpts, the principal was perceived as the top managerial leader in charge of the overall school management and administration. Espoused with formal leadership legitimacy, an allocative leadership was practised by the principal through delegating leadership responsibilities and tasks to other senior leaders, as the deputy principal reiterated that,

> "We have two deputy principals in charge of teaching and school safety, and we manage based on allocated tasks and sections delegated by the principal." (PSAP1)

Besides the satisfaction with school administrators, the respect from others, such as students, colleagues, and parents, served a critical role in teachers' positive attitudes towards their school. Teachers in PSA indicated they were respected by their students with 'less rebellious and more respectful' attitudes (PSAECT1), and were also respected by parents who possessed higher educational backgrounds. To illustrate,

> "Parents with higher educational backgrounds pay more attention to the cultivation of their children...when I taught the first grade, the parents were more respectful and cooperative with me." (PSAECT1)

> "High-level education parents are particularly willing to cooperate with teachers and understand teacher's intentions." (PSAP1)

Participation in decision-making

Decision making is a distinctive aspect of teacher leadership (Katzenmeyer and Moller, 2009; Qian and Walker, 2019). Interviews with teachers of PSA illustrated that teachers had limited rights when making decisions. Regarding school-wide decision making, no teachers indicated their participation in selecting new teacher staff or allocating time and resources. Likewise, in group-level activities such as teaching and researching activities, decisions of content and topics were 'pre-arranged' by the school principal. As early-career teacher (PSAECT2) stated, "The principal leads the teaching and learning activities with planned learning by him."

Despite this, teachers seemed to embrace more freedom and autonomy within their own classrooms. Early-career teachers highlighted that they had 'free rights' in making decisions in their classroom predicated on their professional expertise. To illustrate, early-career teacher (PSAECT1) expressed that she was 'more free' to utilise ICT applications with many soft-wares in her teaching. This was resonated by another early-career teacher (PSAECT2),

> "There are more multimedia applications I am free to apply... school leaders hold a tolerant attitude and let us decide." (PSAECT2)

Teacher collaboration

Teacher collaboration is a shared and distributive form of teacher leadership (Harris, 2003; Katzenmeyer and Moller, 2009). Teachers in PSA evidenced that 'peer observation' was the most predominant feature of teacher collaboration. Teachers verbalised that they communicated and discussed with each other to enhance teaching practices during peer observations. Yet, some teachers described such collaborations as not spontaneous but 'mandated' for the sake of teachers' professional titles. As the deputy principal (PSAP1) remarked,

> "Class observations and evaluations are one of the requirements for teachers' professional titles, and teachers 'must' have lesson observations and evaluations constantly." (PSAP1)

The documents obtained in PSA on teachers' ranking system for professional titles confirmed this, clearly stating: "Teachers must have no less than 15 class observations in a term to reach the requirements."

Teacher leadership readiness of early-career teachers

A sense of readiness of teacher leadership in early-career teachers is critical in their decision to adopt leadership roles and enact teacher leadership practices (Katzenmeyer and Moller, 2009; Sinha and Hanuscin, 2017). Interviews of early-career teachers in PSA illustrated their awareness, professional competency, and confidence in teacher leadership.

With regard to the teacher leadership awareness, though lacking explicit knowledge of teacher leadership, two early-career teachers believed that 'everyone has teacher leadership' and perceived that teacher leadership was practised in classrooms when leading students with professional instructions. From this perspective, they labelled teacher leadership in classrooms as 'pedagogical or instructional leadership'. Meanwhile, they perceived teacher leadership as an influence and method to build relationships with parents, colleagues, and school administrators, for the ultimate purpose of students' learning and development.

When asking whether the two early-career teachers were competent and confident in their teacher leadership, early-career teacher (PSAECT1) admitted that she possessed leadership in classroom governance, self-development, leading, and assisting old teachers in ICT and electronic products applications. Concurrently, she planned to adopt a leadership position as *Banzhuren* next semester. For early-career teacher (PSAECT2), who was already a teacher leader as a *Banzhuren*, she confidently acknowledged her leadership skills by building relationships with students and aimed to further develop her leadership capacity.

"I am a maths teacher and my language skills were not good before. But being as a *Banzhuren,* I exercised my leadership skills by communicating with students... students like making friends with me and like chatting with me after class... I will develop my leadership further..." (PSAECT2)

School culture and teacher leadership readiness of early-career teachers

School culture serves an imperative role in the development and readiness of teacher leadership in early-career teachers (Katzenmeyer and Moller, 2009). A positive school culture enhanced early-career teachers' readiness in their professional competency and confidence to lead, and vice versa.

As aforementioned in PSA, supporting teacher ownership was evident and this culture enabled teachers to adopt leadership roles and feel confident to lead classroom instructions. The school culture in PSA, which emphasised teacher professional development and recognition, also developed early-career teachers' professional competency and efficacy to practice leadership and exert positive influences. This was further encouraged by the open communication practiced among colleagues, which developed early-career teachers' emotional resilience to lead.

Teachers' satisfaction with the school environment of PSA both physically and culturally enhanced early-career teachers' confidence and commitment to lead and influence others. Moreover, classroom and student-related decisions made by early-career teachers in PSA developed their efficacy to lead students as instructional or pedagogical leaders. The prevalence of teacher collaboration with a focus on peer observation and evaluations developed early-career teachers' professional confidence to lead students with improved classroom teaching instructions, even though it was described as 'mandated' and not spontaneous.

Leadership strategies of early-career teachers in building relationships

Teacher leaders must utilise essential leadership strategies and skills to exert a positive influence and build good relationships with others (Katzenmeyer and Moller, 2009). This was evidenced in PSA through teachers building relationships with their colleagues, students, and parents.

Through building rapport with colleagues, the significance of 'communicative and cooperative skills' was signified by early-career teachers. This was epitomised by an early-career teacher (PSAECT2),

> "Teacher leadership is relationship building with colleagues. There is nothing more important than a harmonious and comfortable atmosphere to get along well with colleagues. Many communicative and cooperation skills are needed to get along with colleagues and build rapport." (PSAECT2)

Through establishing good relationships with students, early-career teachers reflected that 'emotional bonding' (PSAECT1) and 'making friends' (PSAECT2) with them were significant strategies. Compared with students, relationships with parents were more difficult to build, requiring methods such as the 'art of speaking' (PSAP1), 'expressing not persuading' (PSABT2), 'showing care to their children', and 'communicating equally like friends' (PSAECT2).

Influential factors of early-career teacher leadership development

Teacher leadership development of early-career teachers was notably influenced by a multitude of factors in PSA, both externally and internally. Regarding the facilitating factors, interview statements detailed that rewards like certificates were perceived as essential to increase early-career teachers' motivation to lead in PSA, because they were viewed as a kind of recognition and encouragement for early-career teachers.

> "Material rewards have a certain effect for recognising young teachers, and are fundamentally affirmation and appreciation of their leadership...the certificate also has an encouraging effect on young teachers." (PSABT2)

Yet, numerous factors were identified in PSA to impede early-career teacher leadership development, encompassing a culture of seniority, fewer off-site training opportunities, shortage of teachers, time constraints, interpersonal relationships, and a lack of experience and confidence.

With regard to the seniority, the deputy principal (PSAP1) complained that teacher promotion and honorable titles in PSA were 'prioritised to the older and senior teachers', thus making young and early-career teachers passively wait with decreased

motivation. Simultaneously, fewer off-site training opportunities impeded early-career teachers' professional competency to lead as they were perceived to be the 'most effective' approach for their professional development. Furthermore, the teacher shortage in the same teaching subjects made teaching and researching activities unequally organised amongst different teaching and researching groups. For instance, small groups were 'monthly' (PSAECT1) whilst larger groups were 'weekly' organised (PSAECT2). Remarkably, time constraints and administrative work in PSA were observed to restrict early-career teachers' engagement in peer observations and teaching instructions.

In particular, school structures with more elder and senior teachers and fewer younger and early-career teachers posed barriers for building relationships between colleagues. For instance, to maintain a 'harmonious with fewer conflicts' collegial relationship, young and early-career teachers tended to express their 'humble and modest attitudes' for the sake of good interpersonal relationships. In addition, interviews with various teachers in PSA implicated that young and early-career teachers were described as 'ego-centred, materialistic, passive, less initiative and reflective' by senior teachers, and older and senior teachers tended to adopt 'euphemistic' attitudes to discuss and communicate with them. Consequently, a lack of authentic voices and opinions impeded the professional improvement of early-career teachers in PSA. Concurrently, the negative influence from students and parents also imposed barriers for early-career teachers' confidence to lead. As detailed by most teachers' interview comments, passive, protective, performance-driven, and spoiling parents, and fragile and passive students all posed difficulties for early-career teachers' confidence in dealing with relationships with parents and leading effectiveness of students.

Personal factors, such as a lack of teaching experience of early-career teachers further discouraged their confidence and efficacy to lead, as they were 'frequently questioned' by parents on their professional teaching and leadership ability, as an early-career teacher (PSAECT2) shared.

In brief, school culture of PSA is more structural with rules, roles, and regulations. The school principal of PSA was the main leader in setting directions and making decisions for the whole school. In school levels, senior leadership responsibilities and tasks are practised in a way of delegation and allocation from the principal. In group levels, it is still the principal who makes the decisions of the topic and content of professional learning communities, and directly led the teaching and researching activities. Meanwhile, teacher communication and collaboration were featured as informal, private, and mandate. Henceforth, teacher leadership of early-career teachers in PSA is more prominent in their classroom-levels. Teacher ownership of early-career teachers was encouraged to make free adjustments and innovative tryouts for their students. Moreover, the leadership opportunities such as *Banzhuren* positions developed early-career teachers' leadership capacity.

Secondary School A

School culture in supporting teacher leadership development

The six factors of school culture: teacher ownership, professional development and recognition, open communication, school environment, participation in decision-making, and teacher collaboration that were utilised in the analysis of PSA were also employed in the analysis report of the qualitative data for SSA.

Teacher ownership

Both positive and less desirable evidence on teacher ownership in SSA were articulated in interview comments. In regard to the positive aspect, the research participants remarked that the school provided leadership opportunities for young and early-career teachers, in the form of adopting the *Banzhuren* role. This opportunity was perceived as beneficial for both the 'personal' (SSAECT1) and 'professional' (SSAECT3) development of early-career teachers. This was explicitly expressed by an early-career teacher (SSAECT3),

"I usually observe and study the classes of *Banzhuren*. I have no experience now, but I often communicate with the *Banzhuren* and understand the students... so we cooperate with the *Banzhure*n to manage the class... when the *Banzhuren* has to go out, I will help take the class occasionally. At the beginning, I would not deal with problems involving the parents of the students, but now I deal with them calmly..." (SSAECT3)

Despite this, little evidence was observed in teacher ownership with relation to the freedom in making adjustments to their teaching content and instructions, as teachers expressed they 'must strictly follow the national curriculum standards for classroom teaching' (SSAP1), and 'rarely have opportunity for innovation' (SSAECT2). For instance,

"We follow the school's guidance in teaching, and there are few chances for innovation." (SSAECT2)

Furthermore, teachers' ownership in innovative attempts was less supported and recognised by school administrators and their teacher colleagues in SSA. According to the deputy principal (SSAP1),

"There is a teacher who has made many attempts to innovate, but there are too many tricks with no model, and the effect is not good... the teaching experiment was unsuccessful... the teacher's innovation was not recognised by the teachers." (SSAP1)

Such comments were later confirmed by an early-career teacher (SSAECT1), "I have adjusted my teaching methods, but the effect is not good." Through observations, the confidence and morality of this early-career teacher had eroded with the absence of ownership and recognition.

Professional development and recognition

Teacher leadership is facilitated by building a professional capacity to lead (Katzenmeyer and Moller, 2009). The professional development of teachers was found to be supported by SSA through various continuous professional developments and plans for increasing knowledge and skills by the teachers themselves. The training models included online training with certificates issued upon completion, on-

site training for lesson observations and evaluations, and off-site training in the form of visiting other schools or holding teacher lesson competitions.

> "There was a lot of training, such as going out for competitions, in-school teachers listening to the evaluation class, and online training for young teachers... there is a certificate after training... the training content can be selected. For example, PPT courseware... there are compulsory and elective courses." (SSAECT3)

As the preferred model of professional development, online training opportunities have the advantages of 'convenience and flexibility'. Yet, off-site training is regarded by almost all teachers as the 'most beneficial and effective' model for their professional development. The deputy principal (SSAP1) recalled his previous experience of off-site training on the topic of 'student-centred teaching and learning', which he described as 'long-lasting' and yielded a significant influence on 'teaching philosophy'. Additionally, the knowledge and practices he gained from the training made him win the recognition of others.

Concurrently, teachers themselves also engaged in self-directed professional learning and development to update their knowledge and skills, as shown by the various teachers below.

> "During my teaching, I slowly explored and realised the importance of psychology, and then I went to learn this on my own. At that time, I took the exam for a psychologist... which made a big difference." (SSABT1)

> "I frequently watch public classes online and I observe other teachers' classes." (SSAECT1)

> "When I first entered the school, I felt that my college degree was a bit low, so I took the undergraduate exam through online learning." (SSAECT3)

Early-career teachers reported that, in order to develop younger teachers' professional knowledge and teaching skills, the school made it compulsory for a mentor-mentee practice with a focus on lesson observations and evaluations, as confirmed by early-career teachers,

> "Yes, I had mentor support... the school education department has this policy to encourage old teachers to help develop young teachers." (SSAECT2)

> "I have mentor support and we listen and observe each other's classes... I will analyse and combine all aspects of their suggestions." (SSAECT3)

Teachers who served as mentors that showed new knowledge and skills won the recognition as role models from others. To illustrate, *Backbone teachers* were recognised as experts in their professional knowledge, teaching instructions, and mentoring young and early-career teachers.

> "*Backbone teachers* have experience and achievements in education and teaching. They have great influence on teachers..." (SSAP1)

> "*Backbone teachers* play a role in supervising and being role models for young and early-career teachers." (SSAECT1)

Open communication

In SSA, teachers were observed not to be updated on the latest policies, displaying a lack of open communication. There were reserved opinions, but failure in communication was to blame.

For instance, teachers believed that the school principal of SSA failed to regularly organise teachers together to discuss and learn educational documents and policies, thus making teachers, especially older teachers, feel 'a sense of abandonment by society' (SSAECT2) due to the lack of information on the latest knowledge and information. Communication among teachers, and teaching and researching communities were not routinised, resulting in teachers complaining about 'weakly organised' (SSAP1), 'few' (SSAECT1), and 'not fixed' (SSAECT3) programmes. As a result, the opportunities for teachers to exchange ideas and share their professional ideas and opinions were limited.

Consequently, due to the lack of formal venues for communication between teachers, teachers' staff rooms served as the primary places for 'informal and private' teacher communication. It was observed that, in the teachers' staff rooms in SSA, teachers were allocated according to the subjects they taught, increasing the interactions and communication between each other. Even so, the teachers had different opinions that

they described as 'reserved' due to the seniority and power relationship among colleagues, as elaborated by an early-career teacher (SSAECT2),

> "When communicating with teachers in the staff rooms, it is not the relationship of colleagues, nor the fair or equal communication between colleagues... because some teacher colleagues are my previous teachers, as a result, some of my opinions will be reserved." (SSAECT2)

Due to the lack of open communication caused from reserved opinions, the issue of ineffective problem solving by teachers exists. The situation was exacerbated by the blame attitude from senior leaders which made early-career teachers feel 'isolated' (SSAECT1), 'helpless and hopeless', and 'decide to leave the teaching profession' (SSAECT2).

> "I digest and solve my problems by myself... and I don't communicate with other teachers... this affects me physically and mentally, and I feel isolated." (SSAECT1)

> "When I have problems, I can only resolve them by myself... I found that school leaders and *Backbone teachers* are sometimes useless... I found that the senior leaders of the school directly blamed me and expressed dissatisfaction with me... I decided to leave a year later." (SSAECT2)

School environment

Teachers described SSA's school as 'vicious' (SSABT1), 'problematic' (SSABT2), and 'disappointing' (SSAECT2). Furthermore, the teachers were dissatisfied with their school infrastructure due to the limited resources, as described below:

> "The campus environment is not planned... other schools have experimental bases and lotus gardens, and all students are participating... our school has no good planning... even no school gate." (SSAP1)

Low levels of teacher satisfaction were linked to the leadership of school administrators who were viewed as 'directive and autocratic'. The principal of SSA was viewed to be practicing solo managerial leadership using positional authority. This was confirmed by the deputy principal (SSAP1) when he stated that,

> "Leaders are those with formal leadership positions, for example, principals, and they are legal representatives of the school." (SSAP1)

In SSA, only the principal was considered as the leader, and no participants acknowledged the leadership roles of others, even those in formal leadership positions as senior or middle leaders. This was the case because teachers held an attitude of 'egalitarianism' in which all teachers were equally the same. Even the deputy principal (SSAP1) humbly reiterated,

> "I just manage the teaching in the style of an ordinary teacher, without any leadership." (SSAP1).

Simultaneously, early-career teachers felt that they were less respected by older teachers and less trusted by parents. For instance, early-career teacher (SSAECT2) confessed that she was 'bullied' by older teachers because of their seniority.

> "Because I am a young teacher, the older teachers do not choose to teach my class... my class did not have a history teacher for the first month because he refused to teach my class... older teachers have some right to speak... this really affects my confidence." (SSAECT2).

Additionally, the lack of trust from parents also made early-career teachers 'frustrated' to attempt any relationship building.

> "Because I just started working, many parents have a lot of distrust of us young teachers, and they feel that being young means we may not be able to teach students well. They will express their distrust directly at the parent meeting... at the time, I was very frustrated and did not know how to deal with it." (SSAECT3)

Participation in decision-making

Teacher participation in making decisions in SSA was top-down and controlled by the solo leadership of the principal, and teachers only had the right in making classroom-related decisions predicated on their expertise. Teachers expressed that they were restricted in making decisions because they were 'tightly controlled' by the principal.

"Classroom decisions are made by teachers themselves, and other decisions have been arranged by the school principal." (SSAECT3)

"The principal controls the overall situation and development of the school... I have the idea and want to change the school environment... but as the vice principal, I have no planning power... the vice principal is in charge of the work according to the arrangement of the principal." (SSAP1)

"Decision-making is still under administrative leadership, the principal... we teachers just work, and what we say won't work." (SSABT2)

Teacher collaboration

Peer observation and evaluations were observed as the prominent features of teacher collaboration in SSA. Teachers described their peer observations as 'frequent, many, and mandated' with verbal evaluations for better solutions for students' development.

"There are about 20 peer observations in a semester... there are more verbal comments." (SSAECT1)

"We have class observations. After the class, the comments will follow... there will be suggestions on how to make students accept and do better." (SSAECT3)

After examining the school handbook for the required frequency of lesson observations and evaluations, which suggested '15 times in a term', teacher collaboration on class observations in SSA was evidenced to satisfy these requirements.

Teacher leadership readiness of early-career teachers

Teachers are change agents when adopting leadership roles and exerting leadership influence (Katzenmeyer and Moller, 2009). In SSA, early-career teachers defined teacher leadership as the ability to lead students, classrooms, and colleagues. As an early-career teacher (SSAECT3) expressed,

"Teacher leadership is reflected in the students approving you and respecting you... it is also the cohesion among the teachers, and everyone is willing to listen and cooperate in the activities." (SSAECT3)

Early-career teachers felt less competent and confident in adopting teacher leadership roles and responsibilities at a school level, but admitted that teacher leadership was restricted to their classrooms, as mentioned by an early-career teacher (SSAECT1),

> "I think I have a certain level of leadership in classroom teaching, but I am not particularly good at it." (SSAECT1)

Similarly, another early-career teacher (SSAECT3) believed she possessed teacher leadership but only in leading her students. Despite this, she was reluctant to display her leadership performance in front of colleagues due to an attitude of 'egalitarianism'. As a result, she believed she had no leadership among fellow teachers.

> "We cannot say grade leaders and *Banzhurens* are teacher leaders… we are all just teachers and colleagues, and we work together…" (SSAECT3)

At the time, considering adopting a leadership role, early-career teacher (SSAECT1) 'never thought about being a *Banzhuren'* unless he was extrinsically motivated by professional promotions. However, an early-career teacher (SSAECT3) planned to 'lead the class in the future as a *Banzhuren*'. Unfortunately, another early-career teacher (SSAECT2), who previously held a *Banzhuren* leadership position, resigned and left the teaching profession due to the 'disappointing and hopeless' school culture.

School culture and teacher leadership readiness of early-career teachers

Evidently in SSA, school culture served a significant role in teacher leadership readiness of early-career teachers. A positive school culture strengthened early-career teachers' professional competency and confidence to lead, and vice versa (Katzenmeyer and Moller, 2009). The mentor-mentee programme significantly developed early-careers' professional knowledge by 'highlighting the teaching focus' (SSAECT3) from lesson observations and evaluations; the frequent peer observations enhanced early-career teachers' classroom teaching instructions and ability to effectively lead students with a 'good response' (SSAECT1). Even so, a lack of teacher ownership in making adjustments to innovative teaching damaged early-career teachers' confidence to lead students. As an early-career teacher (SSAECT1) disappointingly expressed,

"I have conflict with students. Because students feel that the level of my innovation in teaching did not reach their expectation... they feel that the classroom is not attractive." (SSAECT1)

The seniority and power relationships early-career teachers experienced were evident in the lack of teacher communication, which eroded their ability to establish good relationships with other teachers. The lack of decision-making in school-wide issues failed to keep teachers informed of the latest developments in school, thus restricting them within their own safe domains - their classrooms. Moreover, the negative environment and little or no respect from parents, colleagues, and school leaders led to teacher attrition and negative feelings and attitudes, posing a potential barrier to students' learning and development.

"There is no opportunity for a positive encouragement and development space... I decided to leave a year later... I was hesitant at the time because teachers and students were more emotionally connected, and I paid more attention to students than other teachers, and the feelings were deeper... at the time, I felt my decision to leave would affect the students, so I hesitated and struggled for a long time... the final decision to leave was due to the negative attitude of some parents... (SSAECT2)

Leadership strategies of early-career teachers in building relationships

Establishing exceptional working relationships with various stakeholders is critical for exerting teacher leadership influence (Katzenmeyer and Moller, 2009; York-Barr and Duke, 2004). As expressed by SSA teachers, 'taking the initiatives' was perceived as the catalyst for a good learning relationship between younger and older teachers. For building a good relationship with students, strategies like 'making friends' (SSAECT3), 'emotion bonding' (SSAECT2), and 'trust building' (SSAECT3) were regarded as effective approaches. For instance,

"The age difference between me and my students is smaller than that of other teachers... students and I are like friends after class... they trust me and will share things secretly with me if they don't want to talk to their *Banzhuren*... making friends and trust are important..." (SSAECT3)

When building good relationships with parents, 'convenient communication approaches' (SSAECT3) and 'extra care' (SSAECT1) to their children were viewed as beneficial for teacher-parent communication and relationships. As early-career teachers remarked,

> "Parent WeChat groups allow for timely feedback on student performance to be sent to parents, and parents will give feedback to students at a certain stage... I pay extra attention to students from low-income families... parents will support me if they know this." (SSAECT1)

> "Interactions and communications with parents are quite frequent because there are WeChat groups, phone calls, meaning students' problems will be timely addressed with the convenient communication." (SSAECT3)

Influential factors of early-career teacher leadership development

In terms of the factors that facilitated the teacher leadership development of early-career teachers, motivational rewards and incentives encouraged early-career teachers' confidence to lead. To illustrate, providing material rewards, or certificates were regarded as motivational for recognising early-career teachers, like an early-career teacher (SSAECT1) highlighted that,

> "Material rewards are part of recognition... the recognition of our personal accomplishment is the biggest reward for early-career teachers... the school should also establish an incentive and rewarding mechanism." (SSAECT1)

Despite this, certain factors were identified as barriers for early-career teacher leadership development. One of the impeding factors was seniority. The culture in SSA prioritised promotion, rewards, and training opportunities predicated on teacher seniority. Consequently, young and early-career teachers had to wait, accumulating their years of teaching experience before they were senior enough to be promoted.

> "The training is generally given to those close to appraisal of professional titles, based on seniority ranking." (SSAP1)

> "The so-called situation of seniority in this school... every time there is competition or training, it is for older teachers who are close to professional titles." (SSAECT2)

Concurrently, the contextual factor of the 'aging and performance-driven' (SSAECT3) school culture was also perceived to reduce teachers' motivation and efficacy to adopt leadership roles and practise leadership. As elaborated by an early-career teacher (SSAECT1),

> "Our school's age structure is relatively old, with fewer young teachers, and large age differences, which have a great impact on the classroom innovation of new teachers..." (SSAECT1)

Furthermore, personal factors such as a lack of experience, and an introverted personality discouraged early-career teachers to practise leadership with confidence.

> "Parents regarded early-career teachers as young and inexperienced in teaching and leading their children... they showed less respect and trust to us." (SSAECT2).

> "I am shy to express myself among teachers... so I have no leadership among colleagues." (SSAECT1)

Relational factors such as building relationships with students and parents were further discovered as predominant barriers for early-career teachers to adopt leadership roles. The present study evidenced that the 'performance-driven, passive and protective' (SSAECT3) parents posed difficulties in establishing a good working teacher-parent relationship. Additionally, the gender differences of secondary school students further posed as obstacles to teacher-student relationships, as informed by an early-career teacher SSAECT1.

> "There is a big difference between male and female students in dealing with student issues... the actual classroom teaching will be affected because of dealing with the problems of boys and girls..." (SSAECT1)

Heavy administrative work, heavy workload of teachers, and 'busyness' of *Banzhuren* all occupied teachers' time, hindering their professional and leadership development to conduct peer observations and self-development. As early-career teachers complained that,

"As a new teacher, you must basically complete the next day's workload every day. If you want to participate in competitions or training, you need to master these in a short period of time. This is a bit difficult." (SSAECT2)

"Departments outside the school put great pressure on the school. Teachers must cope with local government inspections. It will interfere with normal teaching. Now the class is very tense, which will affect our teaching." (SSAECT3)

<u>Summary of SSA</u>

In short, school culture of SSA is more administrative and leadership lies predominantly on power, authority, and isolation. The school principal of SSA was the solo leader with absolute authority who tightly controlled the overall situation of the school. At the school-levels, the senior leaders such as the deputy principal was delegated by the principal with the arranged tasks and responsibilities. In group levels, teachers' voices and opinions were never sought and respected by the school principal. In addition, teacher communication in group-level was less and reserved. The school culture of SSA either failed to routinise the formal platform of teacher communication like teaching and researching groups, or demotivated teachers' informal communication with seniority and power relationship. Even worse, at classroom-levels, early-career teachers were deprived of their ownership in making free adjustments and innovations in teaching and learning. Consequently, teacher leadership development of early-career teachers in SSA depicted negative findings: reduced with a sense of isolation, destroyed with helpless and hopeless feeling, and less confident in showing leadership in front of teacher colleagues.

Combined School A

School culture in supporting teacher leadership development

The thematic discussions in CSA are depicted below in regard with six factors of school culture in supporting teacher leadership: teacher ownership, professional development and recognition, open communication, school environment, participation in decision-making, and teacher collaboration.

<u>Teacher ownership</u>

Teacher agency is reflected through the teacher ownership associated with teacher leadership (Katzenmeyer and Moller, 2009). School CSA supported teacher ownership when assuming leadership roles, freely adjusting teaching content and instructions, taking the initiatives for students' learning, and being supported by school administrators in teachers' innovative practices.

It was evident that formal leadership roles as *Banzhuren* were often adopted in CSA. Early-career teachers perceived the act of assuming formal leadership roles as an effective approach to develop their ownership and responsibility in their classrooms, especially with their students. This was confirmed by an early-career teacher (CSAECT2),

> "Being a *Banzhuren* has a stronger sense of ownership and responsibility, and has a better understanding of students. If you are not a *Banzhuren*, you lack some ability in class management." (CSAECT2)

The necessity of adopting *Banzhuren* leadership roles was firmly acknowledged by others, and was perceived as a 'must' for the leadership development of early-career teachers, as informed by *Banzhuren* (CSABT1),

> "Young teachers must be *Banzhurens* when they come to school... let them have more opportunities to be *Banzhuren* and exercise more... some young teachers didn't want to be a *Banzhuren* when they were assigned, but they gradually liked being *Banzhurens* because all aspects such as leading classes and solving problems were developed..." (CSABT1)

CSA's teachers further claimed that they were free to make flexible adjustments to teaching instructions and curriculum predicated on their students' needs.

> "Teachers are free to control teaching resources. In the past, it was necessary to teach according to textbooks, but now I teach students in accordance with their aptitude, teach flexibly in the class, and incorporate some new elements." (CSABT1)

> "There are more opportunities and things I can control. I can adjust the curriculum, and I can decide what content I teach according to different grades of children." (CSAECT1)

The embraced ownership further inspired early-career teachers to take the initiatives for their students, as an early-career teacher (CSAECT1) elaborated,

> "Because there are no teaching materials in Mongolian, like information technology, all the content is controlled by me. So according to the characteristics of the students, besides the knowledge of books, I will find some more content to teach that the students like, it will be easier for students to accept. Therefore, the control of courses and teaching is more flexible." (CSAECT1)

Additionally, teachers in CSA were allowed to be innovative and their attempts were supported by school administrators. As an early-career teacher (CSAECT1) highlighted that,

> "Teachers in elementary schools focus more on innovation and attention in order to attract students... I think our principal encourages us a lot... the principal will encourage us to do first, and then solve the problem when there is one." (CSAECT1)

Professional development and recognition

Professional learning and development were observed as a key construct for building teacher leadership capacity in CSA, as teachers engaged in continuous learning and development. Professional learning and development were provided by schools and regulated by teachers themselves. According to the teachers, they were provided with training, mentor-mentee opportunities, and a continuous learning community for professional development (CPD) opportunities.

Regarding training models, teachers stated that they received various forms of training, such as online, on-site, and off-site training. Teachers acknowledged the merits of online training as 'efficient, flexible, and time-saving' for improving professional knowledge. Additionally, they praised the on-site training as one of the 'most effective and helpful' models for enhancing their classroom teaching instructions. According to the early-career teacher (CSAECT2),

> "Asking experts to come over to the school is most helpful for my classroom instructions. They will come over to listen to the class and then evaluate and correct them." (CSAECT2)

In particular, most teachers agreed that off-site training was the 'best' model for their professional development of knowledge and classroom applications.

> "I still think that the off-site training is the best... after going out for training, almost half of the gained knowledge and skills can be used in practice after returning." (CSAECT1)

Concurrently, the mentor-mentee partnership to guide young and early-career teachers to develop their professional efficacy was viable in CSA.

> "Young teachers are mentored by the old teachers and the *Backbone teachers*... young people should be mentored by them... they can stimulate young teachers and give them a bright prospect, which will make them feel so promising." (CSABT2)

Another on-site learning method for the professional development of teachers was discovered in CSA: 'routinised, thematic, and subject-based' teaching and researching group activities. For instance,

> "The teaching and research are carried out according to the characteristics of the subject, teachers collectively prepare lessons, and learn new things together." (CSAECT1)

> "Teachers who have gone out to train will come back to share their training experience with new knowledge and skills during teaching and researching activities." (CSAECT3)

Besides the professional development opportunities provided by the school, a self-directed learning and development by teachers themselves was also evident in CSA. As an early-career teacher (CSAECT1) stated that,

> "I learn by myself about psychological knowledge or teaching methods... my previous normal university didn't seem to involve this part, which I learned after reading books." (CSAECT1)

The knowledge and skills obtained by the teachers were recognised by the school administration. For instance, young and early-career teachers were recognised by their learning speed and their ICT skills, along with their exceptional teaching instructions. In addition, teachers' work ethics and morality gained recognition from other teachers.

"The ability of young teachers to update knowledge is very fast... now, young teachers are very capable of learning, especially the ability to learn new things and ICT." (CSABT2)

"The content of knowledge cannot be mistaken... young teachers have to accept with humility... and the degree of accepting the opinions of others must be accepted with humility." (CSAP1)

Open communication

In order to improve their professional knowledge and instructions, teachers must be open and free to share and exchange their ideas and experiences, and this is when teacher leadership begins to emerge (Katzenmeyer and Moller, 2009). The teachers in CSA enjoyed open and easy communication among themselves, which was described as 'equal and straightforward' (CSAECT1) for teachers' professional improvement and problem-solving. To illustrate,

"Teachers communicate with each other like friends. Everyone is really equal. There is no so-called seniority ranking. Everyone has a say." (CSAECT1)

"The degree of open communication is good... the open-mindedness of the Mongolian school is still very good... for example, after the open classes, our director and other teachers will point out the shortcomings, and will not speak euphemistically to protect face. If there is a problem, the leader will directly criticise it." (CSAECT2)

School environment

Teachers held general positive attitudes towards CSA and described it as 'good, encouraging, enthusiastic'(CSAECT1), 'harmonious' (CSABT1), and 'open-minded' (CSAECT2), highlighting CSA's positive school environment. Such positive attitudes were particularly evident from teachers' satisfaction with the advanced school infrastructure and facilities, rich and diverse cultural atmosphere and activities, and leadership of school administrators.

For a start, teachers expressed their satisfaction with the physical environment of CSA when praising that 'the school infrastructure and facilities are particularly good' (CSAECT1). Simultaneously, teachers commented that the merits and benefits of CSA's combined school structure in integrating resources and building familiarity

among teachers and students, as described below:

> "Everyone thinks it is a good thing for a combined school... because there are few students here, the combined school can integrate teachers and education resources all together." (CSABT2)

> "Compared with separate schools, teachers in the middle sector have an understanding of the students in the elementary sector. When primary students are entering the middle sector, the teachers will focus on the characteristics of the students." (CSAECT1)

Teachers were proud and content with the working environment of CSA, which promoted traditional ethnic Mongolian culture, with rich cultural and extra-curricular activities. This was informed by an early-career teacher (CSAECT1),

> "The inheritance of traditional Mongolian culture of this school is very good, and extracurricular activities are also very rich. Every Wednesday is for traditional activity. I have organised and participated in it. There are archery, wrestling, long-tune matouqin, dance, and indoor activities. There are also outdoor ball games, and most professional teachers organise extracurricular activities. Students are highly involved, and I particularly like it." (CSAECT1)

Furthermore, teachers were satisfied with the leadership of the school administrators of CSA. The school administrators were described as 'encouraging and inspiring' (CSAECT3) by teachers. In CSA's senior leadership team, the school principal was perceived as the managerial leader who primarily oversaw school management and administration. The deputy principal who oversaw teaching was regarded as an instructional leader in professional teaching and learning. This was explicitly articulated by deputy principal (CSAP1),

> "I created my own characteristics in the teaching of leadership, which is a guiding force for teaching and learning. How to lead students in the process of education and teaching should be strengthened and studied." (CSAP1)

Participation in decision-making

As a prominent aspect of teacher leadership, decision-making was evident in CSA as teachers' ideas and opinions were sought by school administrators and teachers participated in different levels of decisions. For instance, in terms of the school-level

decisions like staff member selections, teachers' opinions were respected by school administrators through 'consultation'. As informed by a teacher (CSABT1),

> "For the selection of teachers, or teacher leaders, for example, the selection of *Banzhurens*, you must first register yourself, and then the school will discuss and share ideas together and decide." (CSABT1)

Concurrently, middle leaders were allowed and encouraged to make decisions regarding teaching and research group activities and during 'middle-level meetings' (CSAP1). Moreover, classroom teachers were 'free and spontaneous' (CSAECT1) to make classroom and student related decisions, with their decisions being supported by school leaders. As an illustration,

> "The teachers spontaneously organised the reading activities for students... the specific reading content is determined by the instructor." (CSAP1)

> "I have full decision-making power in class-related matters, and I do not need to report to the principal when I have my classes. I can decide the activities in the class." (CSABT1)

> "I have decision-making power within my ability, but those beyond my ability will report to the director of teaching affairs." (CSAECT1)

Teacher collaboration

When teachers engage in collaborative activities, teacher leadership becomes significantly influential (Katzenmeyer and Moller, 2009). This was apparent in CSA when teachers participated in teaching and researching group activities and peer classroom observations.

To illustrate, teachers stated that they had 'a lot of cooperation' (CSAECT1) in the teaching and researching group activities, in which teachers 'collectively prepared lessons' (CSAECT1). At the same time, peer observation was suggested as 'frequent and voluntary' by teachers.

> "I listen to the classes quite frequently... I try to listen to the classes when I have time." (CSAECT1)

"We have many peer observations. I have listened to more than 40 classes in the last semester… I have listened to different subjects." (CSAECT3)

Teacher leadership readiness of early-career teachers

Teacher leadership readiness demonstrates the personal agency in teachers' willingness and decisions when assuming leadership roles and practicing leadership (Katzenmeyer and Moller, 2009). In respect to teacher leadership awareness and beliefs, all three early-career teachers claimed that they viewed teacher leadership as 'a nature and can be nurtured'. As epitomised by an early-career teacher (CSAECT2),

"There are both. Leadership is a nature and nurture. Some teachers themselves have strong classroom control abilities, and their voice can suppress students. Some can also be cultivated after practise." (CSAECT2)

Additionally, early-career teachers believed that teacher leadership was for all teachers within and beyond classrooms, and was also an influence which was not necessarily attached to formal leadership positions.

"Leadership is to teach and influence... I think teachers have a certain level of leadership in classes, emotional communication outside of the classroom, and continuous learning ability. It is not necessarily a teacher with a leadership position, but a certain aspect has its own characteristics." (CSAECT1)

When asking whether they were confident in their leadership roles and practices, early-career teachers confessed that they possessed more leadership in classrooms than outside classrooms. Early-career teacher (CSAECT1) claimed her leadership was exhibited in the 'professionalism of the teaching subject'. Early-career teachers supported this claim with the argument that her leadership ability was to 'manage and govern students' (CSAECT2), and to 'lead the students and give good lessons' (CSAECT3).

When discussing their readiness to adopt leadership roles, two early-career teachers stressed their plans to apply for *Banzhuren* leadership roles after a few years because, at the moment, they felt they were 'too young to be a good *Banzhuren*' (CSAECT1) and should 'stabilise in the classroom and improve professional development first' (CSAECT2).

> "I should familiarise myself with the whole set of teaching materials as soon as possible in the first three years and master the cultivation of students' management and teaching ability... after three or four years, when I improve the ability, I will apply for *Banzhuren...*" (CSAECT2)

For early-career teacher (CSAECT3), who was already a *Banzhuren*, he believed his leadership beyond the classroom was 'not strong', and planned to further develop his leadership in 'organising extra-curricular activities' and 'launching communication with parents'.

School culture and teacher leadership readiness of early-career teachers

As previously discussed, it was evident that the relationship between school culture and early-career teacher leadership readiness in CSA was strong. Early-career teachers were encouraged to undergo professional and leadership development and learn new knowledge and skills. Early-career teachers were recognised by their confidence in their learning speed and ICT skills. Informal and straightforward communication developed early-career teachers' problem-solving confidence. Additionally, diverse extra-curricular activities developed early-career teachers' leadership skills in student management and communication with parents. Classroom and student-related decisions made by early-career teachers developed their efficacy to lead students' effectiveness. Furthermore, peer observations and evaluations matured early-career teachers' instructional skills in classrooms.

Leadership strategies of early-career teachers in building relationships

CSA's teachers perceived teacher leadership as an influence to lead others with necessary interpersonal skills. In this regard, teachers articulated that taking the initiatives, communicating with respect, and equal and humble attitudes were essential when establishing harmonious relationships with colleagues. On the other hand, communication and cooperation skills were necessary in building exceptional relationships with parents. In addition, close observation of students' characteristics, making friends, paying more attention to gender differences, and balancing personal and professional relationships were imperative in relationship building and leading effectiveness with students. For instance, early-career teacher (CSAECT1) stressed

the importance of observing students' gender differences for effective classroom management and student engagement.

> "I think the observation is very important. The psychological endurance of children nowadays is different from that of children in the past. I have deeply experienced it... boys and girls suddenly had a very strong reaction. If I praised girls too much, boys would have a big reaction…" (CSAECT1)

Early-career teacher (CSAECT3) cemented this belief,

> "Current students cannot be criticised, I need to communicate slowly, and strengthen the ability and skills to communicate with students. Communication skills for different genders in the class are important. When a girl cries, I can't handle…" (CSAECT3)

Influential factors of early-career teacher leadership development

Remarkably, a multitude of factors that facilitate or impede the teacher leadership development of early-career teachers were identified in CSA. In respect to the facilitating factors, motivational rewards encouraged early-career teachers to be teacher leaders. Motivational rewards such as spiritual encouragement or material rewards helped increase early-career teachers' self-recognition and confidence in their teaching and leadership efforts.

> "Teachers need encouragement in all aspects, materially and spiritually. I think it's like issuing a certificate of honor, which is a great encouragement... the young teachers will be very happy when they receive rewards..." (CSABT1)

> "There should be a reward mechanism and flexible salary adjustments for us." (CSAECT2)

Despite this, a variety of factors were distinguished as substantial barriers for the teacher leadership development of CSA's early-career teachers. Firstly, numerous contextual factors that discouraged teachers' professional development were observed. Among the factors, several early-career teachers complained about a lack of off-site training opportunities and limited educational resources,

"Our school is very limited for off-site training... there should be more opportunities for teachers to go outside... conduct field trips to see how outside teachers deal with problems..." (CSAECT3)

"All textbooks have to be determined from Inner Mongolia, except for this textbook I teach, I have nothing. Without a workbook, my teaching is more at a loss." (CSAECT2)

Concurrently, time constraints stemming from heavy administrative work, busyness of *Banzhurens*, and a tight work schedule occupied early-career teachers' time and left little time and space for professional and leadership development, as some early-career teachers expressed,

"Schools should have less administrative work. These administrative tasks reduce the impact of new teachers' concentration on classroom teaching." (CSAECT2)

"As a *Banzhuren*, I am usually busy here and there... there is little time to prepare lessons... insufficient time for lesson preparation and a lack of a good grasp of the textbook knowledge, which makes me less confident." (CSAECT3)

Performance-focused, passive, less respectful parents, and performance-anxious students all observed significantly hindered the teacher leadership development of early-career teachers in CSA.

Personal barriers, such as a lack of experience and confidence, also impeded young and early-career teachers' confidence to lead. For example,

"I was nervous at the beginning of teaching the class. When I was nervous, I would be incoherent. The students could clearly see my nervousness... students in high school can tell that the teacher is nervous and will question the new teacher. I worry about not being recognised by students, and not being confident." (CSAECT3)

Summary of CSA

The culture of CSA was more symbolic with meaning, vision, and encouragement. There was open and straightforward communication and was encouraged among teachers to share their ideas and solve problems. Teachers' opinions in schools were

respected by school administrators through 'consultation'. In group-level participation, senior and middle leaders served as instructional leaders in leading teacher professional development, and teachers had frequent cooperation and collaborative activities. At classroom-levels, teachers were free and spontaneous to make decisions and adjustments for their students. The supportive school culture, early-career teachers in CSA were confident in their leadership within and beyond classrooms. Notably, teacher leadership development of early-career teachers indicated 'emerging' in taking up leadership roles, and 'further developing' outside classrooms in leading wider scope of activities.

Summary of qualitative findings of three schools in City A

As above-mentioned qualitative findings of three schools in City A, a brief summary of teacher leadership development of early-career teachers is illustrated in Table 5.1.2.

Table 5.1.2

Summary of Teacher Leadership Development of Early-Career Teachers

	School: PSA	**School: SSA**	**School: CSA**
School culture	Structural Rules, roles, regulations, and policies	Administrative Power, politics, authority, and isolation	Symbolic Vision, meaning, inspiration
Leadership in school-levels	Principal as the managerial leader Delegated or allocated leadership	Principal as the top authority Directive and autocratic leadership	Principal as the managerial leader Delegated or allocated leadership
Leadership in group-levels	Decisions made by principal Seniority and interpersonal relationship	Decisions tightly controlled by principal Seniority, egalitarianism, and power relationship	Teachers' decisions are respected through 'consultation' 'Open and straightforward communication and collaboration
Leadership in classroom-levels	Early-career teachers as instructional leaders	Restricted instructional leadership of early-career teachers	Early-career teachers as instructional leaders
Leadership development of early-career teachers	'Emerging' in taking up leadership roles; 'Developed' leadership skills with espoused leadership positions	'Reduced' with a sense of isolation; 'Destroyed' with a helpless feeling; 'Less confident' in showing leadership	'Emerging' in taking up leadership roles; 'Further developing' leadership beyond classrooms
Leadership strategies	Cooperation and communicative skills	Taking initiatives	Taking the initiative; respect, equal and humble attitudes

	Making friends; Emotional bonding	Making friends; Emotion bonding; Trust building	Making friends; Balance professional and personal relationship
	Expressing not persuading; Art of speaking; Showing care for students	Convenient communication approaches; Extra care for students	Communicate like friends
Influential factors	Certificates; Material rewards	Certificates; Material rewards	Certificates; Material rewards
	Promotion prioritises seniority Fewer off-site training opportunities	Promotion, reward, and training prioritise seniority Aging teacher structure	Fewer off-site training opportunities; Limited education resources
	Prior experience; Lack of experience Administrative work; No time for peer classroom observation Busyness of *Banzhuren*	Lack of experience; Introverted personality Administrative work No time for peer classroom observation Heavy workload Busyness of *Banzhuren*	Lack of experience; Lack of confidence Administrative work No time for peer classroom observation Busyness of *Banzhuren*
	Fragile students; Passive students Difficulty in students' habit formation Performance-driven parents; Passive parents; Protective parents; Spoiling parents	Low acceptance from students; Gender difference of students Performance-driven parents; Passive parents; Lack trust from parents; Protective parents	Fragile students; Passive students Performance-focused parents; Passive parents; Less respectful parents

Chapter Six

Qualitative Findings of Schools in City B

Overview

Employing the same data presentation as in Chapter Five, the current chapter articulates the qualitative evidence of case studies of three schools in City B.

Schools in City B

Different from City A, City B is situated at the eastern areas of Gansu Province. This city constitutes mono Han ethnic group, and owns a lower social economic status with major industry in agriculture. By the same note, three schools were selected in accordance with the recommendations from local educational bureau.

School Context: Primary School B

Primary school B (thereafter PSB) was established in 1950. Previously this school was privately owned by a local railway company. In 2005, the local government took it over and transformed PSB as a public school. To date, there are approximately 168 full-time teachers and 2200 students. The majority of students come from relatively high social economic background because the majority of their parents are civil servants and government officials, and a few are migrant parents coming from nearby rural villages.

School Context: Secondary School B

Secondary school B (thereafter SSB) was founded at 1967. This school was initially established as a complete secondary school, comprising of both levels of junior and senior high school sectors from grade 7 to grade 12. However, in 2003, the local government turned it into a junior high school serving students from grades 7 to 9. There are about 150 full-time teachers and 1700 students. SSB is surrounded by four villages nearby. The majority of students come from relatively lower social economic background, with parents working far away from home to earn a living.

School Context: Combined School B

Combined school B (thereafter CSB) was founded in 2003 in response to the government call for providing a nine-year compulsory education to the children from the surrounding villages. This school combined both the primary and secondary sectors in one school covering from grade 1 to grade 9. There are 120 full-time teachers and 1000 students. The majority of students are from low social economic background with their parents working in other cities to make a living.

Information of research participants

In total, 16 participants were interviewed in City B. The information of interviewees is illustrated in Table 6.1.1 below.

Table 6.1.1

Information of Interview Participants in City B

Participants	City B (n=16)			Total
	School: PSB	**School: SSB**	**School: CSB**	
Principal or deputy principal	1	1	1	3
Middle leaders	3	2	1	6
Early-career teachers	2	2	3	7
Total	6	5	5	16

In PSB, there are two early-career teachers with seven years of teaching experience, three teachers at their mid or late career stage holding formal leadership positions as *Banzhuren,* and one school principal. In SSB, there are five interviewees, consisting of two early-career teachers with formal leadership positions as *Banzhurens*, one mid-career formal teacher leader as the director of teaching affairs, one deputy principal, and the school principal. In CSB, a total of five participants were interviewed, including three early-career teachers with formal leadership positions, one middle leader as the director of teaching affair department, and one deputy principal.

Primary School B

School culture in supporting teacher leadership

Six factors of school culture in supporting teacher leadership were used as the guide to report the qualitative data, constituting teacher ownership, professional development and recognition, open communication, school environment, participation in decision-making, and teacher collaboration.

<u>Teacher ownership</u>

When discussing teacher ownership in regard to adopting leadership roles and having governance over work, participants in PSB revealed two broad aspects: adopting middle leadership roles, and the freedom to make adjustments for the students.

Teachers firmly acknowledged that PSB prioritised middle leadership opportunities for young and early-career teachers. For instance, *Banzhuren* and grade leader positions. As a teacher (PSBBT1) explained,

> "There used to be older and experienced teachers in leadership positions, but from this year on, those with good and strong abilities will assume leadership positions. It has nothing to do with age, you just go by yourself in applying for leadership positions. The school has been replaced by young teachers at many levels, and the older ones in leadership positions are replaced gradually." (PSBBT1)

Early-career teacher (PSBECT1) further cemented this,

> "*Banzhuren* positions are open to young and early-career teachers if they have experience in management. They are also put as first priority in applying for grade leadership positions, based on self-initiation and strong capabilities." (PSBECT1)

As evidenced, such leadership opportunities brought about the change and development of early-career teachers. The personality of teachers, as early-career teacher (PSBECT1) stressed, changes from 'introverted to extroverted after being a *Banzhuren*'. Furthermore, she detailed the development of her teaching and leadership.

"Being a *Banzhuren* has greatly improved my teaching, management, and communication ability. I have grown a lot, my organisation, coordination, and oral expression have all improved." (PSBECT1)

Besides adopting leadership roles, early-career teachers further evidenced that they possessed ownership with the freedom to adjust teaching instructions. To illustrate, early-career teacher (PSBECT1) claimed she made 'free choices and decisions' predicated on her students' learning needs and difficulties when developing the themes of second classes.

"Themes of second classes are related to students' situations, for example, if students are weak in reading, the second class will be on reading. If students want to improve calligraphy, then the second class will be organised to practise this." (PSBECT1)

A similar opinion was expressed by a teacher (PSBBT1),

"We can try different teaching methods and styles, as long as it achieves the expected goal for student learning and development." (PSBBT1)

Professional development and recognition

As a critical aspect in building teacher leadership capacity, the professional development of PSB was broken down into two approaches: participation in various training opportunities, and engagement in professional learning communities (PLCs). In PSB, all teachers revealed that, in order to enhance their professional expertise, they received various forms of training, such as online training, off-site training, and on-site training. However, teachers complained about the online training having 'too much theoretical and autonomy concerns', and off-site training suffering from 'limited numbers and time constrains'. Instead, all teachers indicated their preference for on-site training for 'improving real classroom teaching', as confirmed by a teacher (PSBBT1),

"We have teacher training through inviting master teachers to our school. I was deeply impressed by the lessons of master teachers with the advanced design and concepts, which will greatly improve my classroom learning and teaching." (PSBBT1)

Professional learning communities (PLCs) were observed as another feature of teachers' professional development in PSB. For instance, teachers expressed that they regularly participated in subject-based teaching and researching groups, such as Chinese groups, Maths groups, English groups, and Comprehensive groups. According to an early-career teacher (PSBECT2),

> "There will be teaching and research activities every week for each level and group. Lesson observations and evaluations are organised, the grade leaders and teachers will listen and comment." (PSBECT2)

The checked school handbook of PSB confirmed this, clearly stating teaching regulations and the research group activities requirements:

> "Teaching and researching group activities must be organised on a weekly basis for lesson preparations, lesson observations and evaluations, policy and theory learning (in the unit of teaching and researching subjects)."

The word 'recognition' emerged as a significant theme in PSB when acknowledging teachers as professionals and role models. To illustrate, early-career teachers recognised *Backbone teachers* as role models for efficient and professional teaching, management and leadership skills, and mentoring young and early-career teachers. As several early-career teachers stated that,

> "The leadership of *Backbone teachers* is recognised by their rich teaching experience and teaching styles. *Backbone teachers* are our role models. We early-career teachers respect *Backbone teachers*, and we are willing to learn from them." (PSBECT1)

> "The leadership of *Backbone teachers* is in leading effective classroom teaching and management, and we must learn. 40-minute classes conducted by *Backbone teachers* may be more efficient than our two classes." (PSBECT2)

Likewise, the leadership of *Banzhurens* was recognised in their higher degree of cooperation with parents. Teachers emphasised their recognition of *Banzhurens* in 'organising parent meetings' (PSBBT1), and 'cooperating with parents for their support' (PSBBT3). The importance of winning recognition from parents was further cemented by a teacher (PSBBT3),

"Parent recognition is important. If they understand you very well, and they are very supportive of your work and requirements. If they are cooperating with us, our work is made easy." (PSBBT3)

Open communication

As a platform for the emergence of teacher leadership, teachers' open and free communication was explicit in PSB in two forms: formally in teaching and researching activities, and informally in teacher staff rooms. Teachers remarked that they openly shared and communicated their experiences and opinions during teaching and researching activities, with their students being the focus. As an early-career teacher (PSBECT2) highlighted that,

"Teachers sit and discuss together, not necessarily on teaching, we communicate on the various aspects of students, such as their psychology. Teaching is only one aspect of our interaction with children, and it is important to consider all aspects." (PSBECT2)

Concurrently, informal communication was observed as 'frequent' in teacher staff rooms when exchanging ideas of teaching and problem-solving. As an early-career teacher (PSBECT1) shared,

"Teacher communication is frequent in offices... we can ask and consult anything about teaching and our problems." (PSBECT1)

It was observed that PSB's teaching staff rooms were arranged by grades, further confirming the previous statement. Teachers from the same grades were seated face-to-face and communicated very often, especially when they prepared lessons and discussed student-related issues.

School environment

An environment that supported leadership development was evident in PSB. Teachers happily expressed their satisfaction with the school environment both physically and culturally, acknowledged the leadership of school administrators, and highlighted the respect received from parents when building a close school-family relationship.

Additionally, all of the teachers praised PSB for its newly constructed buildings and advanced ICT facilities, such as the advanced computers and multi-media applications in the science and technology rooms. The convenience of the technology rooms and ICT facilities enhanced early-career teachers' implementation of ICT in teaching and learning, and leading others via ICT. Early-career teacher (PSBECT1) confidently stated, "My leadership practice is reflected in proficient use of multimedia in teaching and learning." A teacher (PSBBT1) further supported this belief,

> "Early-career teachers have leadership skills. The development of information technology is relatively fast, and older teachers rarely actually update information technology. They think that young teachers should lead them to communicate and learn more in multimedia applications." (PSBBT1)

Teachers also shared their satisfaction with PSB's cultural environment, namely, the diverse extra-curricular activities in football and second classes. As a teacher (PSBBT3) proudly expressed,

> "Our school specializes in sports. There are also second classes, such as calligraphy classes, art classes, music classes, and special sports classes. These second classes are developed according to the children's different personalities in small classes, aiming to better student development." (PSBBT3)

Teachers also expressed their satisfaction with the school leadership. 'Visionary' (PSBECT1), 'encouraging' (PSBECT2), and 'empowering' (PSBBT1) were all words used to describe the school principal. Simultaneously, teachers denoted that the school principal and senior leaders were the joint leaders of school leadership teams. The school principal was regarded as a managerial leader who governed the whole school management, while senior leaders were considered more as instructional leaders who, together with the principal, monitor teachers' instructional activities. As an early-career teacher (PSBECT2) commented that,

> "The principal usually attended school-level teaching and researching activities on lesson evaluation... and the deputy principal and the director of teaching affairs also attended and commented on lessons." (PSBECT2)

Additionally, the respect received from parents was critical in teachers feeling positive about PSB. As a teacher (PSBBT2) said,

> "I feel that each parent is particularly supportive of the work. I can tell from students' completion in their homework, students with high quality of homework are guided by their parents. So, the family-school connection is very close." (PSBBT2)

It was also observed that parental involvement in school activities was crucial building establishing a respectful and close family-school relationship. As described by teachers, the establishment of the parent committee contributed to assisting teachers in class engagement, classroom arrangement, and school security. This was resonated by an early-career teacher (PSBECT1),

> "Since this semester, a parent committee has been added by the school. The parent committee is to help the *Banzhuren* handle the daily routine. There is an open class every week, members of the parent committee can listen to the class. There are 63 students in our class, and the family committee will do cleaning and security." (PSBECT1)

Participation in decision-making

One of the key elements of teacher leadership - participation in decision-making - was mainly prevalent in teachers' domains of professional expertise in PSB, for instance, classrooms and professional learning communities (PLCs).

With regard to the decision-making in classrooms, teachers' opinions and ideas were sought and respected by school administrators as they were highly trusted. The school principal (PSBP1) affirmed that,

> "I trust teachers as professionals. Once they step into the classrooms, their professionalism and ethics are there. As such, I make teachers decide in their own professional domains." (PSBP1)

At a group-level, middle leaders such as grade leaders, teaching leaders, and research group leaders made the decisions. Notably, those middle leaders were engaged in instructional activities upon the principal's distributed leadership. For instance, the principal did not directly lead the professional learning activities. Nevertheless, he

distributed his leadership to grade-level leaders to lead the teaching and researching groups. It was the grade leaders who arranged the learning activities, meaning the principal was not involved. This was confirmed by a teacher (PSBBT2),

> "Our teaching and researching activities are organised by grades. Current teaching and researching activities are fixed and are held every week and organised by the grade leader." (PSBBT2)

Concurrently, early-career teachers were also respected when voicing their opinions and making decisions in topics and themes of teaching and researching activities. Furthermore, the decision-making process among teachers underwent 'discussion, consultation, and negotiation'. As several teachers mentioned,

> "The themes and content of teaching and research are all determined by the teachers through consultation." (PSBECT2)

> "The teaching and research topics are decided by the teachers through consultation and negotiation. These ideas are all discussed and negotiated by many teachers. Even if the principal alone proposes it, he will also seek the opinions of our teachers." (PSBBT2)

Nonetheless, in respect to the school-level decisions, such as staff member selections, no teachers indicated their decision-making in such situations. A teacher (PSBBT1) confirmed this,

> "Teachers rarely have decision-making power in selecting teachers and the process of personnel changes." (PSBBT1)

Teacher collaboration

In PSB, interviews reflected that teachers collaborated primarily through participating in teaching and researching activities, and lesson observations and evaluations. A teacher (PSBBT2) elaborated upon this,

> "Every semester, the school will select several teachers for each grade, with different teaching approaches to the same class. These activities improve teachers' lesson conduction greatly." (PSBBT2)

Consequently, these collaborative and developmental activities during teaching and researching activities developed young and early-career teachers' professional competency and confidence to lead. As proclaimed by an early-career teacher (PSBECT1),

> "Experience sharing is the most profitable. Slowly adjust and reflect on your own teaching. Our young teachers are constantly improving from lesson evaluations. Now I have my own system gradually, and I have my own ideas, views, styles and experiences in teaching." (PSBECT1)

Teacher leadership readiness of early-career teachers

Besides the school culture supporting teacher leadership, the leadership readiness of early-career teachers themselves was imperative, such as leadership awareness, professional competency, and confidence to lead (Katzenmeyer and Moller, 2009).

Interview comments detailed that all early-career teachers were oblivious to the concept of teacher leadership, as they commented 'I never heard of this term.' Despite this, the concept of leadership was perceived as either positional or non-positional. Early-career teacher (PSBECT1) explained this view, "Teachers all have leadership, not just teachers with leadership positions." Regarding non-positional teachers, leadership was perceived as instructional practice within classrooms. As an early-career teacher (PSBECT2) stated that,

> "The teacher leadership in classrooms is to manage classrooms and prepare and organise each lesson well. Teacher leadership is mainly reflected through students' feedback. If the children respond well, it means that the lesson is relatively successful." (PSBECT2)

Notably, although early-career teacher (PSBECT2) was a subject teacher without a formal leadership role, her beliefs and values of the teaching profession closely paralleled the teacher leadership concept.

> "Teaching is a lifelong career. Although this profession is very hard, I love it very much. Teachers work hard and cannot be measured by money. Teachers are ethical, dedicated, and pay a lot of efforts." (PSBECT2)

Teacher leadership was also practised beyond classrooms. Early-career teacher (PSBECT2) added that 'organising extra-curricular activities' was recognised as leadership.

> "Teacher leadership also reflects how extracurricular activities are being organised outside the classroom. Large-scale activities require the *Banzhuren* and teachers to coordinate." (PSBECT2)

In terms of professional competency and confidence to lead, the interviews articulated that two early-career teachers prioritised their continuous, professional learning and development, focusing on teaching and their students.

> "I will strive for more training and learning opportunities. I must keep learning, not only to learn your own business level, but also to constantly understand your children." (PSBECT1)

> "First, I need to study hard. I feel my own shortcomings when I come to such a big school. I have to improve my teaching skills, but focusing on teaching is my first priority." (PSBECT2)

As a result, early-career teacher (PSBECT1) aimed to further enhance her professional and leadership development. On the other hand, predicated on her leadership readiness and school appointment, early-career teacher (PSBECT2) is a potential future teacher leader, as she delineated, "It depends on school arrangement, if the principal allows us math teachers to be *Banzhuren*, it's fine with me." Therefore, early-career teacher (PSBECT2) was not proactive in assuming a *Banzhuren* position and awaited opportunistic appointment by the school.

School culture and teacher leadership readiness of early-career teachers

As aforementioned, Teacher leadership readiness of early-career teachers for their teacher leadership development is significantly dependent on school culture. PSB's school culture emphasised teachers' professional development and recognition and developed early-career teachers' professional competency and confidence to assume leadership roles and practice leadership; satisfaction of the school environment's advanced ICT facilities enhanced early-career teachers' confidence to lead and influence others. Free adjustments in teacher ownership developed teachers'

confidence to lead classroom instructions and students. Moreover, the formal and informal communication between teachers developed the effectiveness in problem-solving of students; decision-making in classrooms and learning communities developed early-career teachers' ownership as instructional or pedagogical leaders. Teacher collaboration with a focus on peer observations and evaluations developed early-career teachers' professional competency to lead in PSB.

Leadership strategies of early-career teachers in building relationships

In the present study, a set of leadership strategies were crucial in building relationships with students, teacher colleagues, and parents. As declared by numerous teachers, 'communication skills' and 'emotional bonding skills' served significant roles in building a good teacher-student relationship. To illustrate,

> "Primary students see not only the content of the class, but also all aspects of the language and personality of teachers. I need to communicate more and learn more with *Backbone teachers* in how to communicate with students." (PSBECT2)

> "I like participating in student activities and making them feel that I am one of them, and making them fall in love with me. As long as they fall in love with me, they will fall in love with the subject I teach. Like friends." (PSBBT2)

When establishing the relationships with teacher colleagues, being 'open for diversity' was imperative. According to an early-career teacher (PSBECT2),

> "I can accept different opinions of colleagues on my lesson evaluations. If you can't accept different opinions, you won't grow. It does not affect interpersonal relationships. Taking me as an example, I would not mind having different opinions." (PSBECT2)

Teachers reflected that 'cooperation and problem-solving skills' were essential to win support when forming relationships with parents. Consequently, those leadership strategies contributed to a positive leadership influence and relationship when interacting with various stakeholders.

Influential factors of early-career teacher leadership development

Five levels of impediments were observed in the teacher leadership development of early-career teachers: school-level, teacher-level, personal-level, student-level, and parent-level.

A lack of formal mentor support for young and early-career teachers was identified as a school-level barrier. As echoed by an early-career teacher (PSBECT1),

> "We had no formal mentoring support for new and early-career teachers. At the beginning, we took the class by ourselves, and explored by ourselves. there are few teachers and every year there is shortage of teachers, mentoring is not organised." (PSBECT1)

Regarding teacher-level barriers, teachers often experienced a heavy workload, especially a 'busyness' of multiple responsibilities as *Banzhurens*. According to early-career teachers,

> "I am very busy every day as a *Banzhuren*. In addition to the workload of daily activities, I also have to be responsible for left-behind children. I often have to register and report them to my superiors. This is the workload of the *Banzhuren*." (PSBECT1)

> "Being a *Banzhuren* has more work to do and the work is more detailed. There are many students now, teachers usually have to read students' homework after class." (PSBECT2)

For personal-level, prior experience in rural schools was perceived as a barrier for teachers' professional competency and confidence to lead, as claimed by an early-career teacher (PSBECT2),

> "I have been working in rural schools for 6 years... the rural school also trains young teachers, but the teacher quality may not be good enough... I must study hard to improve my professional knowledge and teaching in this school." (PSBECT2)

Teachers also discussed some student-level barriers. Large class size, relationship with students, and diverse students all hindered practising classroom leadership for teachers. As an early-career teacher (PSBECT1) complained that,

"There are too many students, and the classroom is very crowded, and the children are not easy to manage. Since children are in grade one, they are quite troublesome. Today's children have distinct characteristics, and each level is completely different. Although we are urban schools, there are particularly many children of migrant workers." (PSBECT1)

Furthermore, teachers claimed there was a parent-level barrier when building teacher-parent relationships. According to interviews, the complexity of parents' background and migrant parents with less education resulted in passive teacher-parent communication. As an early-career teacher complained (PSBECT2),

"Nowadays, the family situation is even more important than classroom teaching. Parents can be aware of it, but they can't put it into practical action. The character of the child will be affected by the family background. Single-parent families, children raised by grandparents, or a lack of communication with their parents, will have problems." (PSBECT2)

Summary of PSB

The school culture of PSB is featured as encouraging and empowering with a focus on teacher's needs, skills, and relationships. At school levels, teachers' professional and leadership capacity was built by participating various forms of developmental activities, leading diverse extra-curricular activities, and building relationship with parent committees. At group levels, early-career teachers' decisions and opinions were respected through discussion, consultation, and negotiation. Meanwhile, teachers can openly and freely shared and communicated either formally in teaching researching activities, and informally in their staff-rooms. In classroom-levels, early-career teachers were empowered to make free decisions and judgement on teaching and learning instructions. In such case, early-career teachers were confident in their leadership both within and beyond classrooms. Teacher leadership development of early-career teachers in PSB was 'further enhancing' in leadership knowledge and skills, or 'emerging' upon opportunistic appointment by principal.

Secondary School B

School culture in supporting teacher leadership development

The six factors of school culture in supporting teacher leadership consist of teacher ownership, professional development and recognition, open communication, school environment, participation in decision-making, and teacher collaboration. The thematic discussions illustrated five participants' different perceptions and experiences they had in SSB.

<u>Teacher ownership</u>

Teacher leadership development is significantly influenced by teachers' sense of ownership and control over their work. Early-career teachers in SSB confessed that they may assume formal leadership roles as *Banzhuren*. Nevertheless, due to a lack of teachers, most early-career teachers were assigned as *Banzhurens* when they joined the school. Furthermore, less desirable findings were observed when teachers revealed a lack of free control over their professional work in SSB. Early-career teachers claimed that they possessed less ownership in adjusting their teaching content and instructions, because 'the teaching basically follows the syllabus' (SSBECT1), and only 'small teaching adjustments are possible' (SSBECT2). Although teachers stated that their principal was supportive and encouraged teachers to experiment with various teaching methods to attract students' attention, due to the actual students' low acceptance and a performance-driven school culture, teachers' ownership in innovative tryouts was restricted and discouraged. As early-career teachers confessed,

> "Innovation must be combined with the actual situation of students... the teaching innovation is not acceptable to our students... after all, their foundation is here." (SSBECT1)

> "For innovation, I can try simpler content for students... schools and parents take a wait-and-see attitude, but still think that grades are more important... If I make too many adjustments, it will affect test scores." (SSBECT2)

<u>Professional development and recognition</u>

Teacher professional development – a predominant feature of teacher leadership - in SSB was explicit in three main approaches: self-directed learning and development, training models of continuous professional development (CPD), and school-based professional learning communities (PLCs).

Firstly, teachers claimed their self-directed development occurred through 'hard-working' and 'self-reliance study'. Secondly, SSB encouraged a multitude of teacher training, such as online training, on-site training, and off-site training. Teachers indicated that they favoured both online training and on-site training less, because they perceived them as 'very general' and 'theoretical' when applying the methods in their actual classroom teaching instructions. This was summarised by an early-career teacher (SSBECT2),

> "The biggest problem with online training is that it doesn't fit well with the actual teaching. The situation of students is different. Some online training has nothing to do with the subject. Very general… the training of inviting famous teachers to the school is a special seminar, which is more theoretical and has fewer specific methods and measures." (SSBECT2)

Nevertheless, all teachers were 'impressed' by off-site training and called it 'applicable'.

> "I like training outside the province, and I feel very impressed. It is mainly used in classroom practice. I have been to Nanjing to observe the training outside the school. Their equipment is very advanced… there is more emphasis on the learning process of students, classroom discussions, and many forms of group cooperation… after I came back, I followed this model…" (SSBECT2)

Thirdly, the Chinese version of professional learning communities like teaching and researching activities were also viable for teachers' professional development in SSB.

> "The school has a mechanism for teacher professional development, like teaching and research activities… teacher development is tightly enhanced…" (SSBBT1)

Consequently, the professional expertise gained by teachers was recognised by other teachers through setting good examples, namely, being role models in professional expertise and good influences. As an early-career teacher (SSBECT1) highlighted that,

> "*Backbone teachers* have a lot of professional expertise, they pay attention to helping new teachers, have a strong dedication, and have a lot of professional publications… the *Banzhuren* is very good at the construction of classroom styles and the influence of correct classroom orientation…" (SSBECT1)

Besides professionalism, good work ethics and morality were also recognised. As Principal (SSBP1) emphasised a number of core elements of teachers.

> "Teachers must love the school, love students... are benevolent and righteous... dedicate and educate people... cultivate the future talents of the country... with patriotism, dedication, honesty, and friendliness." (SSBP1)

Using this criteria, older teachers adhered to the school leaders' expectations. Contrastingly, young and early-career teachers were less acknowledged. As the principal (SSBP1) claimed that,

> "Younger teachers don't learn, and don't have a professional goal plan... they are aimless and have bad time management and work ethics..." (SSBP1)

Open communication

Regarding free and open expression of teachers' ideas and problems, interviews indicated there was an informal, less critical, and lack of mutual communication and learning in SSB. To illustrate, teachers claimed that their communication was primarily informal in the teacher staff rooms as experienced teachers were often consulted in regard to teaching. This was confirmed as the teacher staff rooms were very 'small and crowded' with approximately 20 teachers from the same grade. As such, teachers from the same teaching grade tended to communicate and interact with each other more frequently.

Teachers further highlighted the importance of a harmonious relationship to maintain good interpersonal relationships and teacher communication. Early-career teachers stated they were 'OK with communication' (SSBECT1) and 'getting along well with

colleagues' (SSBECT2). Principal (SSBFP1) reinforced such harmonious communication and relationships with his statement emphasising the Chinese cultural characteristics.

"In this big cultural environment and harmonious society, interpersonal relationships must be done well." (SSBFP1)

Despite this, the principal also pointed out the drawbacks of teachers' harmonious communication.

"We want to 'hit the nail on the head' and point out the teachers' problems directly, but teachers cannot do it... pointing out problems will affect interpersonal relationships." (SSBP1)

The deputy principal (SSBBT1) also criticised teacher communication as lacking mutual learning, making teacher sharing and communication difficult.

"Teachers lack the awareness and enthusiasm for mutual learning. Some teachers are embarrassed to take the initiative to ask and help those teachers. Very lacking in mutual communication." (SSBBT1)

School environment

In regard to SSB's positive school environment, early-career teachers had an overall 'good impression' of SSB's teachers, students, and school leaders. To illustrate, early-career teachers described teachers in SSB as 'professional and responsible', students as 'active', and school leaders as 'kind'. For instance,

"My first impression of the school was very good. I felt that the teachers in the school were very good at teaching and they were very professional. The students are also very active in class... and the teachers are very responsible." (SSBECT1)

"I think the school leaders are very kind... they are not horrible, and my pressure is not too great." (SSBECT2)

In particular, the school principal was regarded as a managerial leader of overall school management, including school resources, funding management, the school's physical condition management, and being responsive to diverse needs. He was also perceived as an instructional leader that oversaw teaching and researching groups and monitored teachers' instructional activities. As epitomised by the principal and deputy principal of SSB,

> "I package the grades and groups of teaching and researching, check the lesson plans, and comment on the content." (SSBP1)

> "The principal is mainly in charge of overall school management… each of our leadership teams is in charge of a teaching and their research group… we need to listen to teachers' lessons and give feedback after listening…" (SSBBT1)

At the same time, the school principal's leadership responsibilities were distributed to other senior leaders with 'clear leadership divisions' and 'independent management and leadership'. For instance, the senior leaders lead teachers' professional development, such as teaching and researching activities. As Deputy principal (SSBBT1) articulated,

> "Our school leaders have their own division of labour, each with its own responsibilities. and each other's work does not interfere… I am in charge of teaching... for teaching and researching activities, I focus on the lesson preparation of teachers from the same grade and subject." (SSBBT1)

Participation in decision-making

In respect to teachers' rights in making decisions, SSB's participants indicated that their decisions were restricted by different levels. When discussing school-level decision-making, teachers stated that they had 'no participation' in key decisions such as staff selection and resources management. As a teacher (SSBBT2) disappointingly pointed out,

> "Even the city mayor was appointed by the government but not selected... how can we make decisions?" (SSBBT2)

Concurrently, teachers claimed their decisions were 'restricted' in group-level learning communities. For instance, early-career teachers' opinions and ideas were rarely sought, because the topics of teaching and researching group activities were 'arranged' (SSBECT1) and 'prescribed' (SSBECT2) by senior leaders. Even worse, teachers' classroom decisions were 'limited' due to less autonomy and test-driven pressure as previously noted.

Teacher collaboration

In relation to teacher collaboration, findings revealed a co-existence between teacher collaboration and competition in SSB. Professional learning activities, such as teaching and research group activities and peer classroom observations, were evidenced as the two primary features for teachers coming together to discuss, share, and solve problems. According to an early-career teacher (SSBECT2),

> "Teaching and researching is organised every Thursday... and the teachers discuss together according to their own situations... how to manage students, solve students' problems... it is a good way." (SSBECT2)

The deputy principal (SSBBT1) confirmed this,

> "We have a fixed time every week to do teaching and researching activities from the same subject... is mainly about the perplexities in teaching and the confusions of class management." (SSBBT1)

Nonetheless, the frequency of teaching and researching group activities varied from 'frequent' to 'less' predicated on the sizes of teaching and researching groups. As indicated by an early-career teacher (SSBECT2),

> "For big subject groups like Chinese, mathematics and English groups, teaching and researching activities are a little bit more, and our geography group is still less because our group is small." (SSBECT2)

Peer classroom observations were also frequent and 'mandated with the strict school policy' (SSBECT2). As she stated that,

> "A teacher must listen at least five times and write down the record of lesson observations and evaluations... teachers must listen to classes when having no classes, it is quite strict." (SSBECT2)

Besides teacher collaboration, competition in seeking teacher professional development was also evident in SSB. As an early-career teacher (SSBECT1) articulated that,

> "We have participated in teacher competitions... competitions are very good in improving our own teaching skills, and the use of whiteboard skills." (SSBECT1)

Teacher leadership readiness of early-career teachers

Teacher leadership readiness implies teachers' awareness, professional competency, and confidence to lead either formally or informally. SSB's early-career teachers lacked the explicit knowledge of the concept of teacher leadership. Despite this, their perception of leadership closely aligned with teacher leadership when 'relationship building' and 'trust building' with various stakeholders in schools. As early-career teachers iterated,

> "Leadership is to deal with good relationships with students and colleagues." (SSBECT1)

> "The leadership of teachers among the students and parents must be able to build trust, so that they believe that the teacher can do a good job… and the school leaders must believe in our abilities…" (SSBECT2)

In relation to the competency and confidence to lead, two early-career teachers as *Banzhurens* acknowledged that they possessed teacher leadership in classroom management and student instructions. Nevertheless, regarding their leadership beyond classrooms, they humbly admitted that: "I have certain leadership among colleagues to get along with them harmoniously" (SSBECT2); "my leadership in my relationships with colleagues is fine" (SSBECT1).

Regarding the teacher leadership development of the two early-career teachers, both two early-career teachers stressed their priorities of professional development in improving classroom teaching instructions, with students being their focus.

> "Self-development and progress are also very important for my leadership development… I should improve myself… so I have to take time to listen to lessons and improve… I will observe students more and connect and communicate more emotionally…" (SSBECT1)

> "In recent years, I have planned only to improve my teaching instructions, or learn more professional management and leadership knowledge… I will learn more about the student's family situation…" (SSBECT2)

School culture and teacher leadership readiness of early-career teachers

The findings above highlighted the importance of school culture in developing the teacher leadership of early-career teachers. A lack of teacher ownership when adjusting teaching instructions discouraged early-career teachers to lead with innovative practices in their classrooms. The disconnected professional learning opportunities, like online training, failed to develop early-career teachers' classroom applications when leading students. Additionally, the lack of mutual communication and critical voices failed to develop early-career teachers' professional knowledge and skills. Furthermore, the limited decision-making hindered early-career teachers' leadership within their classroom domains. Nevertheless, a positive school environment developed early-career teachers' efficacy and commitment to lead. Similarly, supported teacher collaboration in competitions developed early-career teachers' professional knowledge and skills in leading with ICT applications.

Leadership strategies of early-career teachers in building relationships

As previously discussed, teacher leadership was perceived as establishing relationships and exerting influence. Consequently, a set of leadership skills or strategies were essential to build relationships with various stakeholders.

As SSB revealed, the skills of 'observation of students' emotional status' and 'balancing the relationship' were claimed as effective when building exceptional relationships with students. At the same time, 'self-initiation' and 'communication' skills were imperative in building working relationships with colleagues. This was explicit in taking the initiatives to consult the experienced teachers and to communicate more with *Banzhurens.*

> "This school has more older teachers and fewer young teachers, and sometimes the relationship is more distant. But if you take the initiative to ask them questions, they are very willing to help, after all, they have a lot of experience." (SSBECT1)

When building relationships with various types of parents, 'communication, conflict management, and problem-solving' skills were critical. Early-career teacher (SSBECT1) also believed this,

> "The *Banzhuren* faces a lot of parents, and we have to communicate with different parents. So sometimes when facing conflicts with parents, we should be good at communicating with the parents, be more patient, put aside the bad attitude of the parents, and focus on solving students' problems." (SSBECT1)

Influential factors of early-career teacher leadership development

Notably, a multitude of multi-dimensional and contextual factors that discouraged the teacher leadership development of early-career teachers were discovered in SSB.

Firstly, a lack of mentor-mentee support was a barrier for early-career teachers' professional and leadership development. As early-career teachers complained,

> "There is no one-to-one help and mentor support for young and early-career teachers. We just learn through communication with the *Banzhuren* for teaching experience." (SSBECT1)

> "I heard we have mentor support in school, but no one took me because I was not teaching the main subject… so the school asked me to learn from other teachers and listen to their classes." (SSBECT2)

Simultaneously, a lack of motivational rewards for teacher innovation further discouraged early-career teachers' motivation to lead. Like an early-career teacher (SSBECT2) shared,

> "School culture would be nice to give new teachers more guidance, and appropriate rewards… but it is not offered at the current stage… most teachers still look at spiritual recognition…" (SSBECT2)

Teacher (SSBBT2) resonated this,

> "The policy here is that only fines are not rewarded, such as attendance, 20 deductions for late arrivals, no rewards. Cracking down on teachers' professional enthusiasm." (SSBBT2)

Secondly, teacher-level barriers such as tight schedules and heavy workloads consumed early-career teachers' time for professional and leadership development, as stated by an early-career teacher (SSBECT2), "time is too tight and not enough for innovation and professional development".

Thirdly, early-career teachers' confidence to lead was discouraged by the relational-level with students and parents. For instance, the difficulty in communicating with students due to their personality change, and the complexity of their parents and family background.

> "There are many parents who go out to work… neglect the management of their children… and some family members have a poor relationship with their children, which directly affects the performance of the students when they come to school… it makes my teaching and communication difficult..." (SSBECT1)

> "The family situation of the students here is particularly complicated. Some parents gave up and prevented the teachers from making more demands on their students. Some parents spoiled their children very much, and think that their children grow up healthily, without too much demand… I feel frustrated…" (SSBECT2)

Personal-level factors, such as prior experience in rural schools, further impeded early-career teachers' confidence to lead. As an early-career teacher (SSBECT2) recalled her previous experience in teaching rural schools,

> "Once I graduated, I stayed at the rural schools for 5 years. I feel very helpless… there is no professional geography teachers in rural schools… I feel a big gap when I come to this school… I must improve myself in my professional knowledge and skills…" (SSBECT2)

Lastly, the low social economic status, low and fixed salary, and tight government control all contributed to less ownership and motivation for early-career teachers' career choices and development. As epitomised by a teacher (SSBBT2),

> "I have been working for more than 20 years, and my salary is less, which is far from the west of Gansu Province. Everyone survives with low financial income… talents will not come with such low salary… like Maslow's hierarchy of needs, people must meet the first level of basic needs before they can enter the second level…" (SSBBT2)

<u>Summary of SSB</u>

To sum up, the school culture of SSB is featured as roles, rules, policies, power, and competition. At school level, leadership tasks and responsibilities were independently conducted by formal leaders like the line managers, and teachers including early-career teachers had no participation in making school-related decisions. At group level, the senior leadership team led the teacher professional development in a pre-arranged manner, leaving little space for teachers in voicing their ideas and opinions. Meanwhile, teacher communication in learning communities was less frequent. Teachers preferred to communicate in their staff-rooms informally, less critically, and harmoniously. Teacher collaboration and competition co-existed in SSB for teacher professional development. In classrooms, teachers' ownership in adjustments was restricted because of a performance-driven culture. Therefore, early-career teachers in SSB, though holding leadership positions as *Banzhurens,* they were not confident in their leadership competency. As such, they put their priority in continuously developing professional knowledge and skills. From this regard, teacher leadership development of early-career teachers in SSB is 'developing'.

Combined School B

School culture in supporting teacher leadership development

The thematic discussions in CSB are delineated below with respect to six factors of school culture in supporting teacher leadership. Namely, teacher ownership, professional development and recognition, open communication, school environment, participation in decision-making, and teacher collaboration.

Teacher ownership

Teacher ownership is first embodied when early-career teachers assume formal leadership roles in CSB. For instance, when they first joined the school, they were assigned to either administrative work or *Banzhuren* leadership roles predicated on the school's needs and early-career teachers' capabilities. Moreover, teacher ownership was observed to be granted in CSB because early-career teachers asserted their freedom in their classroom instructions, such as innovative tryouts. This was highlighted by an early-career teacher (CSBECT2),

> "I think our school is very free... just do it in your style... in terms of innovations in mathematics, I set up some small games, use software to design some cartoons…" (CSBECT2)

Teachers' autonomy in innovation was supported by school leaders in CSB with 'encouragement without blame', a view shared by early-career teacher (CSBECT2). As a result, when espoused with supported teacher ownership, early-career teachers had more autonomy and flexibility in leading their classroom instructions and students' engagement. To illustrate, early-career teachers were passionate when 'designing interesting activities' (CSBECT2), and 'employing blended methods' (CSBECT3) to increase students' attention and interests.

Professional development and recognition

CSB was perceived as a professional organisation that provided a variety of professional development opportunities for teachers. This encompassed online training, off-site training provided by the district Education Bureau, school-based open classes, and mentor support.

Teachers perceived online training as 'useful but less practical', and described off-site training as 'less regular'. As early-career teachers admitted that,

> "Online training is more useful for theoretical knowledge... it doesn't fit the reality too much..." (CSBECT1)

> "Training organised by the Education Bureau for professional development is also required... but not regularly held... once a year..." (CSBECT2)

Despite this, early-career teachers believed school-based open classes and mentor support were 'most effective' for their professional development and classroom teaching. The following teachers proclaimed,

> "I think listening to the open classes is most effective for me. During the lessons, the points that are particularly good will be tried and used in my classroom and experimented..." (CSBECT3)

> "In mentorship, I will find an experienced teacher to learn from him about teaching... and the school will arrange which teacher you want to study with..." (CSBECT1)

Recognition was evidenced as an additional outstanding feature in CSB, in which teachers gained acknowledgement from various stakeholders. To illustrate, teachers gained recognition from parents in their 'good qualifications and good classroom performance' (CSBECT3). Furthermore, teachers were recognised by their colleagues in 'effective teaching and good class management skills' (CSBECT2). Experienced teachers, such as *Backbone teachers* and *Banzhurens*, were recognised by their 'professional expertise' (CSBECT1), role modeling in their 'continuous development' (CSBP1), and leadership in 'problem-solving skills' (CSBECT1). On the other hand, young and early-career teachers were recognised by their 'energetic characteristics' (CSBBT1) and 'strong acceptance for new things' (CSBP1).

<u>Open communication</u>

Teacher communication in CSB was described as 'open and harmonious'. As an early-career teacher (CSBECT1) articulated that,

> "We talk openly and are clear about what we do.... in interpersonal relationships, there are no obvious conflicts..." (CSBECT1)

In such a harmonious environment, teachers tended to focus on teaching-related issues in a professional manner 'without too many considerations in communications', as pointed out by an early-career teacher (CSBECT2).

At the same time, it was observed that 'informal and frequent' communication and sharing in teacher staff-rooms focused on teaching and students. As remarked by an early-career teacher (CSBECT2),

> "The three *Banzhurens* of our grade are in the same office. We frequently communicate on how to teach... and communicate about ways to deal with problems of students..." (CSBECT2)

The observations that teachers' staff-rooms in CSB were arranged according to subjects and grades confirmed this belief. In the primary sector, teachers from grade 1 to grade 3 were allocated to 'lower grades teaching staff rooms' while teachers from grade 4 to grade 6 were seated in 'higher grades teaching staff room'. In this case, teachers from the same staff-rooms had more interactions and communication.

<u>School environment</u>

CSB embraced the positive school environment because teachers held 'satisfying attitudes' towards the combined school structure, good school infrastructure, rich cultural and extra-curricular activities, leadership of school administrators, and the respect received from others.

Teachers identified two advantages of CSB's combined school structure: quick adaptation, and familiarity for students and teachers. As expressed by CSB's teachers, when students finish primary school and enter the secondary school sector, teachers who are going to teach them can seek the opinions and advice from the students' previous primary school teachers to understand their students. Due to the convenient combined structure, teachers have more adaptive instructions for students according to their individual situations. Similarly, students can also have an initial understanding about their future teachers, and make adjustments to quickly accommodate themselves for new semesters. As an early-career teacher (CSBECT2) remarked that,

> "For students, for example, in seventh grade, other students may have to adapt, but we don't have this problem... as long as you come to school, teachers are very familiar with it... the adaptability and control of the class are particularly beneficial. This is consistent with the benefits of a combined school..." (CSBECT2)

Teachers also expressed their satisfaction with the physical environment of CSB, stating that: "I have a good impression of advanced teaching facilities" (CSBECT1), "the hardware facilities are good" (CSBECT2), and "the school looks very neat and tidy" (CSBECT3). These comments of satisfaction were confirmed by the observations that CSB was equipped with newly constructed buildings and advanced ICT applications.

Furthermore, teachers were impressed by CSB promoting traditional Chinese culture and diverse extra-curricular activities. According to teachers, the school provided the opera '*Qin Qiang*' - a musical performance that embodies northwest culture - to enrich students' lives and educate students of Chinese traditional cultural values. Simultaneously, an abundance of second classes, including music, painting, and football activities were organised for students' comprehensive development.

Teachers were also satisfied with the school's leaders. For instance, school leaders were praised as 'supportive and encouraging'. As for the school leadership team, the principal was portrayed as a top managerial leader in 'grasping the whole school situation' (CSBBT1). The other three deputy principals possessed independent leadership responsibilities, and were considered as instructional leaders because they

all engaged in teaching instructions. Evidently, a distributed leadership was prominent in CSB. As an early-career teacher (CSBECT1) articulated that,

> "Our school has one principal and three deputy principals. They have different leadership responsibilities... and are independent... the principal is in charge of the overall management... other deputy principals are involved in teaching and monitoring teachers' progress..." (CSBECT1)

During the observation of CSB, respect among colleagues was noticed. Early-career teacher (CSBECT3) shared her views that,

> "Our school culture is tolerant and respectful to young teachers… there is no generation gap between junior and senior teachers…older teachers often praise us on aspects we did well..." (CSBECT3)

Evidently, CSB's characteristics contributed to early-career teachers' positive attitudes, with a concluding remark stating that 'overall, it is quite satisfying' (CSBECT1).

Participation in decision-making

With respect to teachers' taking part in decision making in CSB, early-career teachers argued that their decision-making primarily resided on classrooms and teaching-related aspects, but, with a 'bounded freedom'. For instance,

> "The teacher's decision making is mainly for teaching... if it's in a classroom, it's okay to make your own decisions." (CSBECT1)

> "The first of decision-making is in teaching, and then as long as it is within the scope, you can basically decide by yourself." (CSBECT2)

However, when regarding a broader scope of participation, teachers commented they had limited rights in group-level decisions. To illustrate, the topics of teaching and researching activities were established by grade leaders, who were regarded as instructional leaders that lead the professional development of teachers and make decisions in CSB. Notably, there were no indications from teachers in making school-level decisions. As stressed by a teacher (CSBBT1),

"Teacher recruitment and selection was managed by the district Education Bureau, even the school principal has no right in teacher selection and hiring." (CSBBT1)

Teacher collaboration

After the interviews were conducted, it was evident that there was a co-existence of teacher collaboration and competition in CSB that teachers perceived as conducive to their professional development. Regarding teacher collaboration, teaching and researching activities functioned as the primary places for teachers to share and exchange their teaching experience. As recalled by an early-career teacher (CSBECT2),

"In the teaching and researching activities, everyone's thoughts and experiences have been integrated, and everyone will discuss how to teach better, which is very helpful for improving our own teaching." (CSBECT2)

This adhered to the documented requirements of teacher collaboration for improving CSB's teaching quality,

"Teachers should attend teaching and researching activities once a week; teachers should put forward possible solutions to a problem during teaching and researching activities; teachers should reflect on what they have learned during teaching and researching activities, and provide a report in the end of the term." (school documents)

At the same time, teacher competition in 'the same class with different teaching approaches' was featured as an effective way for teachers' professional progress. This was emphasised by an early-career teacher (CSBECT3),

"Teacher cooperation and competition are conducive to the growth and progress of teachers... if two people work together on the same class, a class has different views..." (CSBECT3)

Teacher leadership readiness of early-career teachers

Early-career teachers' leadership readiness is reflected by their awareness, competency, and confidence to lead. As for leadership awareness, two early-career teachers (CSBECT1, CSBECT2) indicated that they 'heard this term' but lacked detailed knowledge whilst early-career teacher (CSBECT3) 'never heard about this concept'. Despite this, the three early-career teachers provided their own understandings of teacher leadership. They perceived teacher leadership as the 'classroom leadership' in leading students and class management. Furthermore, they elicited teacher leadership as an 'influence' on students, parents, and teacher colleagues; the concept of teacher leadership was perceived, not defined, by formal leadership positions. As early-career teacher (CSBECT1) believed, 'all teachers to some extent have teacher leadership.' Nevertheless, early-career teacher (CSBECT3) juxtaposed this view with the argument that 'positional leaders have more leadership than normal subject teachers'. From this point of view, teacher leadership was also perceived as more 'formal' than 'informal' upon positional legitimacy.

Alongside with the competency and confidence for teacher leadership, early-career teachers in CSB were humble and modest to acknowledge they were teacher leaders and possessed leadership capacity. Early-career teacher (CSBECT1) believed he had less leadership in 'leading students and classroom management'. The classroom observational data on his Math class on *'Revisions'* confirmed CSBECT1's belief. In a large class containing approximately 50 students from grade one, CSBECT1 was struggling with class discipline regulations and student management. The ill-behaved students from the last few rows frequently interrupted normal class teaching, but CSBECT1 lacked the sufficient management skills and strategies to regulate them. In this case, the effectiveness of his classes wasn't achieved, thus discouraging his 'confidence and efficacy' in leading in his classrooms.

The other two early-career teachers believed that they possessed teacher leadership capacity in 'teaching instructions and class management' (CSBECT2), and 'discipline management and organising extra-curricular activities' (CSBECT3). The classroom observational data also confirmed their beliefs. Prior to the class, CSBECT3 stressed class discipline several times, directed students with proper sitting, and instructed

them in preparing for lessons. During her teaching instruction time, she employed blended teaching methods with PPTs, cartoons and various activities to increase students' interest and attention. As such, the success of her class management, teaching instructions, and student engagement guaranteed her leadership efficacy and aspiration in 'winning recognition from all stakeholders'.

Remarkably, the interview comments of the three early-career teachers revealed that their level of leadership confidence might be attributed to their personality traits. As an early-career teacher (CSBECT1) commented, he was 'shy in front of students' whilst the other two early-career teachers described themselves as 'easy-going and open in communication' (CSBECT2) and 'energetic and self-regulated in teaching and learning' (CSBECT3).

With regard to their teacher leadership development, Early-career teacher (CSBECT1) implied that his intention to focus on his classroom leadership is teaching first, and subsequently applied for a leadership position as *Banzhuren* after a few years. For the two early-career teachers already working as *Banzhuren*, they highlighted their developmental plans to further enhance their teacher leadership knowledge and skills. For instance, early-career teacher (CSBECT2) stressed his leadership focus on 'managing classes', 'increasing student scores', and 'developing their moral values'. Early-career teacher (CSBECT3) emphasised 'learning the leadership and management experience from others' and 'combining theoretical knowledge and practical skills' (CSBECT3).

School culture and teacher leadership readiness of early-career teachers

As previously discussed, school culture serves an imperative role in teacher leadership readiness of early-career teachers for their teacher leadership development. CSB's school culture, which emphasised the professional development and recognition of teachers and their professional competency and confidence to practise leadership. To illustrate, the school-based open classes and mentor support developed early-career teachers' professional knowledge and skills, thus increasing their leadership competency and confidence in their classroom teaching instructions; teacher satisfaction of CSB's positive school environment enhanced early-career teachers'

confidence and commitment to influence others. Additionally, the sense of ownership in freedom and flexibility to make adjustments developed early-career teachers' professional competency to lead their students with effective instructional practices. Concurrently, the open communication with free and frequent conversations and discussions with their colleagues developed the professionalism and problem-solving skills of early-career teachers; decision-making in classrooms developed early-career teachers' ownership as instructional or pedagogical leaders for their students. Furthermore, the co-existence of teacher collaboration and competition developed early-career teachers' professional and leadership knowledge and skills.

Leadership strategies of early-career teachers in building relationships

Teacher leadership was defined as the leadership skills and influence on building interpersonal relationships with various stakeholders. This was further resonated by interview comments from CSB's teachers.

In respect to the leading strategies in building relationships with students, early-career teachers claimed the importance of 'management with patience' (CSBECT3), 'showing care and love for students' (CSBECT1), and 'observation of students and their family background' (CSBECT2). As explained by an early-career teacher (CSBECT2),

> "I closely observe students and their parents to find out effective methods in educating students." (CSBECT2)

At the same time, early-career teachers viewed 'communicating and negotiating skills' as effective strategies in building exceptional relationships with parents. For instance, as an early-career teacher (CSBECT3) denoted that,

> "If you have sufficient communicating and negotiating skills in presenting your efforts and practices to develop their kids and improve their academic results, they will recognise and cooperate with you." (CSBECT3)

When establishing exceptional working relationships with teacher colleagues, 'communicative, collaborative, and negotiation skills' were perceived as effective strategies by early-career teachers. As expressed by an early-career teacher (CSBECT3),

> "We have many collaborative activities... and also competitions... good communication and negotiation skills are essential... not to influence interpersonal relationships among colleagues…" (CSBECT3)

Influential factors of early-career teacher leadership development

Regarding the factors that facilitate the teacher leadership development of early-career teachers, interview findings uncovered that motivational rewards served critical roles in CSB. To illustrate, motivational rewards were perceived as a recognition of early-career teachers because it was necessary to 'reward and recognise teachers for their efforts especially for early-career teacher (CSBECT2), and 'teachers were motivated once they got recognition from rewards' (CSBECT3).

Despite this, various factors were identified in CSB to impede the teacher leadership development of early-career teachers. Firstly, poor teacher-parent relationships were uncovered by early-career teachers as damaging to their confidence to lead. As an early-career teacher (CSBECT2) expressed that,

> "Sometimes there are conflicts between family and school... and misunderstandings and poor communication between teachers and parents affect our credibility and recognition from students and parents..." (CSBECT2)

Early-career teachers criticised the heavy workload that decreased teachers' time for participation in professional development. This was cemented by an early-career teacher (CSBECT3),

> "Busy schedule and heavy workload occupy my time in conducting classroom observations... attending mentor support…" (CSBECT3)

Large class sizes posed 'extra responsibilities' of the *Banzhuren* in class management. As an early-career teacher (CSBECT2) complained that,

> "When I came, there were more than 50 students in this class... when I teach the children, I feel nervous and find that there are so many things to handle..." (CSBECT2)

This view was resonated by an early-career teacher (CSBECT1),

> "Management is very difficult. Especially when students transfer in later. There are many children and a lack of concentration." (CSBECT1)

Particularly, the 'left-behind children' were a distinctive feature of CSB. The lack of education of parents required early-career teachers to take 'extra care' for students. For instance,

> "In this area, more people go to work in the city... many of the students are left-behind children and only their grandparents take care of them... many of them have poor class disciplines and bad habits, so the teaching and management are so difficult..." (CSBECT2)

Summary of CSB

Evidently, school culture of CSB is featured in relationships, care, needs, skills, focusing on empowerment and inspiration. Teachers encompassing early-career teachers were empowered and inspired by different levels in CSB. In school levels, teachers participated into various forms of learning and training opportunities, engaged in teacher collaboration and competition, and communicated openly for their professional development. In group levels, early-career teachers' ideas and opinions were respected, and they were cared by senior colleagues like a 'family'. In this harmonious and caring school environment, early-career teachers were willing and transparent to share and exchange their ideas in a professional manner, without concerns for interpersonal relationships. In classroom-levels, early-career teachers were empowered and inspired by school administrators to try innovative teaching instructions, and they had freedom to make decisions for their teaching and student-related issues. In such case, early-career teachers were confident in their leadership both within and beyond classrooms. From this perspective, teacher leadership

development of early-career teachers in CSB was 'further enhancing' in leadership knowledge and skills, or 'emerging' in taking up leadership roles after gaining more confidence in classrooms.

Summary of qualitative findings of three schools in City B

As above-mentioned qualitative findings of three schools in City B, a brief summary of teacher leadership development of early-career teachers is depicted in Table 6.1.2.

Table 6.1.2

Summary of Teacher Leadership Development of Early-Career Teachers

	School: PSB	**School: SSB**	**School: CSB**
School culture	Family Needs, skills, relationship, and empowerment	Structural Rules, roles, power, and competition	Family Relationship, care, skills, and inspiration
Leadership in school-levels	Principal empowers teachers at different levels Distributed and instructional leadership	Senior leadership team as line managers Independent leadership	Principal as the transformational leader Distributed and transformational leadership
Leadership in group-levels	Decisions of teachers are respected through 'discussion, consultation, and negotiation' Open and free communication with a professional and developmental focus	Decisions are prearranged by senior leadership team Harmonious relationship but less critical communication	Teachers' decisions are sought and respected 'Open and transparent communication and collaboration for professional development
Leadership in classroom-levels	Early-career teachers as instructional leaders	Restricted ownership in instructional leadership of early-career teachers	Early-career teachers as instructional leaders
Leadership readiness of early-career teachers	'Further enhancing' leadership knowledge and skills; 'Emerging' leadership upon opportunistic appointment	'Developing' professional competency and confidence to lead in classrooms	'Further enhancing' leadership knowledge and skills; 'Emerging' in taking up leadership roles after gaining confidence
Leadership strategies	Harmonious and comfortable; Cooperation and communicative skills	Taking initiatives	Taking the initiative; Respect, equal and humble attitudes
	Making friends; Emotional bonding	Making friends; Emotion bond; Trust building	Making friends; Balancing professional and personal relationship

	Avoid conflicts; Expressing not persuading;	Convenient communication approaches; Extra care for students	Communicate like friends
Influential factors	Motivational rewards A lack of mentor support Prior experience in rural schools Heavy workload; Busyness of *Banzhuren* Diverse students Large class size Complexity of parents; Passive parents; Migrant parents	Motivational rewards A lack of mentor support Prior experience in rural schools Tight schedule and heavy workload Personality change of students Complexity of parents	Motivational rewards Heavy workload Left-behind children Migrant parents

Chapter Seven

Discussions

Overview

Utilising an explanatory sequential mixed-methods design, the teacher leadership development of early-career teachers in Gansu Province, Mainland China was investigated in the present study. The quantitative phase has provided *what* the three facets of teacher leadership development of early-career teachers, which are: the teachers' perceptions of school culture in supporting teacher leadership, the early-career teachers' perceptions of their teacher leadership readiness, and the relationship between school culture and teacher leadership readiness of early-career teachers. Subsequently, the qualitative phase has discovered *how and why* findings, and unveiled detailed methods to enhance the patterns, relationships, and factors obtained from the quantitative findings. Predicated on the results, the teacher leadership development of early-career teachers was examined with regard to the relevant literature and five aspects derived from the research questions.

RQ1: **What are the teachers' perceptions of their school culture in supporting teacher leadership?**

Regarding the concept of teacher leadership in an Asian context, much has been mentioned in relation to the complexity and restrictions of applying teacher leadership in hierarchical, policy-driven, and top-down cultural settings, as remarked by numerous scholars (Bush and Ng, 2019; Dimmock and Walker, 2000; Hallinger, 2005; Cheng and Szeto, 2016; Szeto, 2020). Despite this, the present study has evidenced the plausibility and applicability of teacher leadership in Asian cultural contexts as teachers from schools in the two cities of Gansu Province claimed that their school culture supported teacher leadership. Similar findings were also observed in other Asian countries such as Iran, Malaysia, and the Maldives (Aliakbari and Sadeghi, 2014; Mohamed et al., 2018; Mansor et al., 2017; Yusof et. al., 2016), as teachers viewed their school cultures as highly supportive of teacher leadership development.

These empirical findings are promising and inspiring as they may indicate that teachers' school cultures support and recognise the leadership roles of teachers. Additionally, a group of researchers (Cheng and Szeto, 2016; Szeto, 2020; Lai and Cheung, 2015; Poekert, 2012) evidenced similar beliefs that teacher leadership can be practised in Asian contexts. Although these findings oppose the prominent features of bureaucratic and centralised Chinese education systems, which hinders teacher leadership (Bush and Ng, 2019; Ho and Tikly, 2012; Walker and Qian, 2015), the present study sheds light on the possibility of distributing leadership to teachers in Chinese schools. Notably, it adheres to the goals of the Chinese government's policy (MoE, 2010) regarding the teacher leadership development enhancing teacher quality, as Gu (2009), and Zhang and Pang (2016a) firmly stated.

Katzenmeyer and Moller (2009) believed that school culture serves a pivotal role in allowing teacher leadership to prosper, and teachers' perceptions of their school culture function as prerequisites for their readiness to assume leadership roles and enact leadership practices. In relation to Katzenmeyer and Moller's (2009) belief, the present study discovered certain aspects of school culture that encourage or impede teacher leadership development. As the quantitative results illustrate (refer to the Chapter Four), six factors of school culture were explicitly identified to support teacher leadership in a Chinese school context. The six factors are: *teacher ownership, professional development and recognition, open communication, school environment, participation in decision-making,* and *teacher collaboration.* The following discussions articulate the quantitative results, enhanced and supplemented by qualitative findings where appropriate.

Extent of teacher ownership

As argued by Kyza and Georgiou (2014), Bush and Ng (2019), and Ng et al. (2018), teacher ownership is a sense of belonging and the professional freedom to possess control over the work. Teacher ownership empowers teachers to achieve full mastery of their work, with teachers' professional knowledge and skills becoming easily transferred to their classroom teaching instructions. The quantitative findings has evidenced that teachers including early-career teachers viewed teacher ownership highly, especially from the three schools PSA, CSB, and PSB. In all the six schools,

assuming formal leadership roles was the prominent feature when possessing teacher ownership. Early-career teachers acknowledged that leadership opportunities, such as *Banzhurens*, developed their sense of responsibility and leadership capacity. This adheres to the Chinese education policy (MoE, 2010; 2016) as it encourages teachers to adopt leadership roles when developing and nurturing leadership, especially for young and early-career teachers. Despite the differences in assuming leadership roles, for instance, 'assigned' or 'self-initiated', early-career teachers stressed the benefits of *Banzhuren* leadership roles for their leadership development. This was explicitly evidenced for early-career teachers that worked as *Banzhurens*. Middle leadership opportunities, like grade leaders and *Banzhuren*, were prioritised for young and early-career teachers because formal leadership positions contributed to both early-career teachers' professional development in teaching pedagogy, leadership skills, and personal development like changing their personality from 'introverted to extroverted'.

Through experiential practices as a *Banzhuren*, it was observed that early-career teachers' teacher leadership has the potential to be 'nurtured'. These empirical findings firmly agree with Day and Gu's (2014a) and Papatraianou and Le Cornu's (2014) belief that early-career teachers can develop their leadership capacity when provided with leadership opportunities. Above all, teacher leadership is beneficial for teachers' development, both personally and professionally, as evidenced by the work conducted by Thien et al. (2021), Day and Gu (2010), and Hulpia and Devos (2010).

This may serve as a good indicator for the application of teacher leadership in classroom innovations. Katzenmeyer and Moller (2009), Ng et al. (2018), and Kyza and Georgiou (2014) argued that a high sense of teacher ownership contributes to potential behaviours, such as integrating teachers' innovative knowledge and ideas into classroom teaching practices and instructions, ultimately contributing to student learning and development. This belief was evidenced in all six schools. Nevertheless, the degree of ownership in classrooms varied from 'more' to 'less'. Early-career teachers in PSB and CSB stated that they possessed 'more freedom' in adjusting teaching instructions and in trying new innovative methods. Likewise, early-career teachers in PSA and CSA were free to make adjustments to their teaching instructions and content. Despite this, regarding schools SSA and SSB, early-career teachers had 'less and restricted' freedom in such domains due to the 'unsupportive' principal and a

'performance-driven' school culture. These observations exhibit the nature of the highly centralised educational system structure, in which teachers follow the standard national curriculum fixed by the MoE and adhere to formally compiled textbooks and teaching plans. Consequently, as Walker and Qian (2015) argued, teachers under the centralised educational system have less initiative, flexibility and autonomy to develop new capacities and skills. Significant attention should be paid towards these findings, especially since the Chinese government and its policies (MoE, 2001; 2010; 2016) have promoted quality education in students' holistic development. In this aspect, young and early-career teachers should be granted more ownership and autonomy, and should be empowered as curriculum leaders and designers with their innovative ideas and practices to lead such positive changes, as remarked by Zhang and Pang (2016a). This further aligns with the benefits of teacher leadership in acting as a catalyst to sustain curriculum reform efforts and school change, as strongly advocated by Hunzicker (2012), Harris et al. (2020) and Wenner and Campbell (2017).

Professional development and recognition

In accordance with Katzenmeyer and Moller's (2009) beliefs, teacher leadership develops when schools promote teachers' professional learning and development and recognise teachers as professionals along with their leadership efforts. The present study's quantitative data evidenced this when showing that *professional development and recognition* was ranked the highest among the constructs in school culture, as observed among the six schools in City A and City B. This finding reveals a school culture that enforces teachers' professional learning and development, recognises teachers' contributions, and facilitates teachers' leadership development. This aligns with Cheng and Szeto's (2016) study and is further supported by Bush and Ng's (2019) and Hallinger et al.'s (2017) work. In particular, it highly resonates with the constructivist theory proposed by Lambert (1998; 2003), who argued that leadership can be developed and constructed when schools function as professional learning organisations where teachers learn together. Additionally, the present study's findings agree with Poekert (2012), who believed that professional development is both a cause and an outcome of teacher leadership development.

How teacher leadership is developed and recognised during professional learning and development was evidenced in different schools through their own specific models of continuous professional development (CPD). The models provided by the different schools aimed to provide opportunities for teachers' professional competency and confidence to lead, encompassing certain training models, a professional learning community (PLC) model, and the mentor-mentee model.

Models of professional development: preferences, effectiveness, and frequency

The training models, such as online training, on-site training, and off-site training, were viable in all six schools. Teachers do have their preferred form of training opportunity. Teachers in PSB and CSB preferred to have on-site training because of its 'effectiveness' in leading classroom applications. On the other hand, in the other four schools, although teachers praised the online training and onsite training as 'convenient, flexible, and interactive', teachers regarded off-site training as the most 'beneficial, effective, and impressive' model for their professional and leadership development. Although the preferences for training opportunities varied, these findings are consistent with numerous scholars' (Hoban, 2002; Mansour et al., 2014; Opfer and Pedder, 2011; Rhodes, 2013) recognition that continuous professional development (CPD) is regarded as one of the most effective ways to develop teachers' professional capacity to lead.

Besides the training models, school-based professional learning communities (PLCs), and teaching and research group activities were observed as suitable for teachers' professional and leadership development. Nevertheless, the six schools differed in how teaching and research activities were organised. In the current study, teaching and research activities were 'routinely and regularly' organised in PSA, CSA, PSB, and CSB. Unfortunately, such activities were considered as 'not routinised' in SSA and 'less regular' in SSB. Consequently, teachers in SSA and SSB found it less conducive for teacher leadership development, due to the reduced developmental and collaborative chances for teachers to collaborate to update their knowledge and skills, and discuss and reflect on teaching and learning activities, with such views being shared by Hallinger and Liu (2016), Pang and Miao (2017), and Wang (2016).

The mentor support provided by schools is another prominent feature of professional and leadership development for early-career teachers. Among the six schools, four schools (PSA, SSA, CSA, and CSB) possessed mentor-mentee support to aid early-career teachers successfully transition as learners to teachers in leading classroom teaching. This aligns with Rhodes' (2013) findings that teacher leadership formation, teacher aspiration and motivation, and teacher self-efficacy are largely supported and encouraged through mentoring and coaching. Despite this, PSB and SSB lacked such mentor support opportunities due to time constraints, aligning with Wang's (2018) study in Mainland China which suggested mentoring support for novice teachers might be supportive but difficult to implement due to the overwhelming teaching and leading responsibilities. The lack of mentor support for early-career teachers' professional development at their initial career stage forced early-career teachers to rely on self-directed learning and development, particularly in SSB.

Recognition: professional expertise, ethics, and attitudes

Teachers who honed their professional expertise were recognised by others (Katzenmeyer and Moller, 2009). The high value associated with recognition was confirmed when the teachers stated that recognition of their professional knowledge and skills increased their confidence to lead (Katzenmeyer and Moller, 2009; Yusof et al., 2016). Experienced teachers and *Backbone teachers* in all six schools further confirmed this when they claimed they gained recognition for their rich experience, professional knowledge, pedagogical skills, leadership, and problem-solving skills. This finding is consistent with studies (Hairon and Dimmock, 2012; Wang and Zepeda, 2013; Zhang, 2011) that saw teacher leaders be respected and recognised by others for their professional pedagogical and leadership skills, the support they provide to other teachers, and their professional role modeling. Concurrently, young and early-career teachers were also recognised by their fast learning and proficient application of ICT, shown in PSA, CSA, PSB, and CSB. This also aligns with Morris' study (2012) that perceived young and early-career teachers as Net generations that are recognised for their mastery of ICT technologies.

PSA, CSA, and SSB attached substantial importance to teachers' good work ethics and morals, such as 'dedication, hardworking, and selflessness', when gaining recognition. Consequently, senior teachers were recognised as role models by their younger counterparts in these three schools. This finding is cemented by studies (Li, 2005; Vikaraman et al., 2020; Wang, 2013) that observed that teacher leaders are recognised for their personal virtues, and in China, senior and *Backbone teachers* are recognised by their exceptional work ethics and moral values when compared to younger teachers who are believed to lack work ethics, moral obligations, and initiative attitudes (Wang, 2018; Wahyu et al., 2021). In particular, adhering to these requirements, 'humble and modest' learning attitudes were further desired and recognised by PSA and CSA, especially for young and early-career teachers. This discovery highly resonates with the ideology of Confucianism, in which the Chinese cultural traits of strong discipline and high morality translate into a leadership style that characterises leaders as holistic, self-disciplined, and unselfish, a view shared by Militello and Berger (2010) and Farh and Cheng (2000).

This finding supports Hofstede and Bond (1988), and Yin et al.'s (2014) beliefs that, under the influence of a Chinese hierarchical and Confucian oriented society, relationships are characterised by high power distance, and the young should respect the old with obedience and less challenges and questions. Nevertheless, these findings fail to support the Chinese government's policies (MoE, 2001; 2010) that aim to empower *Backbone teachers* as mentors to encourage teachers' professional development and teacher quality for young and early-career teachers. Obedience, respect, and humbleness are promoted in order to maintain a harmonious relationship. As a result, the critical voices from younger colleagues that promote professional development are suppressed, a view also shared by Zhang and Pang (2016a).

Open communication

The present study also revealed the steep and profound influence of Chinese cultural characteristics on the leadership development of teachers, specifically the open communication among teachers. As Katzenmeyer and Moller (2009) argued, teachers' communication between each other entails sharing and exchanging professional experiences and ideas which are crucial for teachers' leadership development. When

teachers freely discuss their professional experiences and problems, teacher leadership naturally emerges with the gained professional knowledge and leadership skills in solving problems. In relation to this, PSB and CSB exhibited the highest levels of open communication while SSB and SSA suffered the lowest. Particularly, PSB was distinctive as it embraced both 'formal communication' in teaching and research activities and 'informal sharing' in staff rooms. Regarding the two combined schools, communication in CSA was 'open, free, equal, and straightforward', and 'open and harmonious' in CSB. On the other hand, communication between teachers in schools SSB, PSA, and SSA was more 'informal and private'. Consequently, the degree of open formal or informal communication between teachers influenced their levels of professional and leadership knowledge and skills.

Teachers in SSA and SSB even lacked frequent informal communication and reserved their opinions due to the 'power relationship' in SSA, and prioritised 'a harmonious relationship' in SSB. As a result, the critical voices required for professional and leadership development were concealed. The arguments by Day and Gu (2010), Qian and Walker (2019), and Tan and Liu (2018) are supported by this finding, as they believed that, with elements of Confucianism and collectivism in a Chinese cultural context, teacher communication and free expression are relatively low when maintaining a harmonious relationship with less conflicts. In this regard, teacher leadership development was restricted in SSA and SSB for the sake of maintaining harmonious communication, ultimately failing to achieve authentic discussions on improved instructional practices. This was particularly evident for early-career teachers who suffered insufficient experience and a lack of leadership positions, as Hofstede and Bond (1988) and Yin et al. (2014) argued.

School environment

A positive school environment yields a significant influence on the leadership development of teachers (Day and Gu, 2014a; Liu and Watson, 2020). Liu's (2021) study also yielded a similar finding, evidencing that a positive school environment facilitates teachers' sense of satisfaction, in turn encouraging teachers to be more committed to develop their efficacy to lead. The current study also observed that teachers from PSB, CSB, and PSA described their school environment as highly

supportive of teacher leadership. Early-career teachers from PSB, CSB, PSA, and CSA expressed their satisfaction with their school environment, and claimed that they felt respected by colleagues, students, and parents. In contrast, SSA's teachers expressed a less satisfying attitude towards the infrastructure of the school, and teachers in SSB complained about the low quality of teachers and students. Furthermore, SSA's early-career teachers implied that they were not respected by their colleagues and parents, thus contributing to their 'hopeless and helpless' attitudes and reduced efficacy. As attested by Muijs et al. (2013) and Gu and Day (2013), a negative school environment with less respect and satisfaction is detrimental to teachers' leadership development. Muijs et al. (2013) and Gu and Day (2013) stressed that teacher leadership is also interpreted as efficacious endeavour, which is context-based and environment-sensitive. A positive environment with respect from various stakeholders develops early-career teachers' efficacy to lead, and vice versa. This relationship closely aligns with Bandura's (1997) social cognitive theory, which stated that teachers' efficacy is mutually reciprocal with the specific contextual environment in which they lead.

It was also observed that the leadership of school administrators significantly impacted teachers' feelings of satisfaction with their schools' leadership. Numerous studies have also produced the same observations (Bush and Ng, 2019; Ng et al., 2018; Qian and Walker, 2019; Singh, 2020; Wang and Ho, 2019; Wang, 2018), articulating that it is the school principals who set the basic tones of the school environment in which teacher leadership will flourish. The present finding also resonates with the views of Day and Gu (2014a) and Wang (2018), who argued that, if the principal displays a directive and autocratic leadership style, as evidenced in SSA, teachers tend to show reduced efficacy and commitment to lead. Contrastingly, as Szeto and Cheng (2018) claimed, if principals encourage, inspire, and empower early-career teachers, like schools PSB and CSB, teacher leadership will be developed by principal-delegation and early-career teachers' self-initiation.

Participation in decision-making: school-level, group-level, or classroom-level

As articulated by Bush and Ng (2019) and Katzenmeyer and Moller (2009), decision-making is the distinctive feature of teacher leadership. Teacher leadership emerges when teachers participate in shared decision-making and have their voices and opinions heard in the wider school communities. Nevertheless, the present study observed that teachers' participation in decision-making was almost the least supported aspect by schools in the two cities. The evidence illustrates that school-level decisions adhered to a top-down approach in all the six schools, meaning the school principal held the dominant control. Although teachers in the two combined schools disclosed subtle clues of respect during decision making, such a process was done via 'consultation' in CSA and with 'bounded freedom' in CSB. Contrastingly, teachers in the other four schools gave no indications about making school-level decisions. Consequently, teacher leadership is restricted in the Chinese hierarchical system, with formal and senior leaders with positional power having the final say in school-wide decisions (Liu et. al., 2016; Qian and Walker, 2019; Wan et al., 2018; Wang, 2018). Teachers' motivation and willingness to participate and initiate tasks and be involved in decision-making is hindered by this high power distance. Therefore, the school-wide teacher leadership development of young and early-career teachers is restricted in Chinese school contexts.

Despite this, when making group-level decisions involving teaching and researching activities, though it was a weak form of decision-making, teachers' opinions were respected and sought via 'consultation, discussion, and negotiation' (Bush and Ng, 2019). Juxtaposing, group-level decisions were made by middle leaders in CSA and CSB, 'pre-arranged' by senior leaders in PSA and SSB, and 'tightly controlled' by SSA's principal. This finding supports the arguments from a variety of researchers (Harris, 2013; Katzenmeyer and Moller, 2009; McKenzie and Locke, 2014; Wang, 2008; Wan et al., 2018; Wang, 2018) who stressed that, if principals are reluctant and hesitant in distributing their power and leadership responsibilities to empower teachers in decision-making, teacher leadership is unlikely to flourish.

Despite the inability to be involved in decision making at school and group levels, teachers in PSB, CSB, and PSA could still make decisions relating to teaching and student related decisions. On the other hand, teachers from SSB and SSA had 'limited rights' in decision-making in their classrooms. Nonetheless, CSA's early-career teachers stood-out in making 'free and spontaneous' decisions for the benefits of their students. This observation reinforces Militello and Berger's (2010) belief that young and early-career teachers are more prone to remain as classroom instructional leaders with a lack of say in the wider school community but a more explicit voice in their classroom zones.

Teacher collaboration

The nature of teacher leadership is shared and collective (Harris, 2003; Katzenmeyer and Moller, 2009), and the degree of teacher collaboration varied across the six schools. SSA and CSA exhibited the highest degree of teacher collaboration while SSB and PSA suffered the lowest. This can potentially explain why CSA had 'frequent' teaching and research activities, whereas, due to the lack of regularly organised teaching and research activities, SSA, SSB, and PSA experienced 'frequent and mandate' peer observations for teacher collaboration. It must be highlighted that both SSB and CSB evidenced the existence of teacher collaboration and competition, although teachers in SSB viewed it negatively while teachers in CSB perceived it positively. The 'mandate' practice observed in schools SSA, SSB and PSA confirmed Wan et al. (2018) and Wang and Ho's (2019) findings, evidencing that, within a top-down school culture and a seniority structured organisation, teachers tend to be passive followers and reluctant to have spontaneous collaborations. Such contrived teacher collegiality, as articulated by numerous scholars (Loden, 2006; Militello and Berger, 2010; Wang, 2007; Yin et al., 2014), may result in early-career teachers missing the critical period for teacher leadership development, as there is no motivation and autonomy to participate in community level or school level activities.

An overall trend exists in which teachers in City B's schools perceived their school culture as more conducive and supportive for teacher leadership development, in comparison to teachers in City A's schools. These findings firmly resonated with studies conducted by Cheng and Szeto (2016) and Hallinger et al. (2017), who

concluded that a positive school culture which emphasises teachers' professional learning and development also encourages teacher leadership development. Notably, primary schools, such as PSB and PSA, tended to support teacher leadership more than secondary schools, particularly teacher ownership and participation in decision-making. This was most likely the case because the secondary schools SSA and SSB focused on students' academic results, causing teachers to suffer limited autonomy when adapting their teaching instructions to the performance-driven school environment. Similar observations were also articulated in Aliakbari and Sadeghi's (2014) study which found that teacher leadership in primary schools was practised differently and higher than that of secondary schools.

RQ2: **What are the early-career teachers' perceptions of their teacher leadership readiness?**

The teacher leadership readiness of early-career teachers is critical in their decisions to assume leadership roles and exert leadership influence. Early-career teachers in both cities perceived themselves as ready to adopt leadership roles, such as formal or informal teacher leaders, as they were aware of the leadership role and their level of competency and confidence to lead.

Teacher leadership awareness

Most early-career teachers in the present study reported that they were not familiar with the concept of teacher leadership, due to it originating from the west (Cheng and Szeto, 2016; Pang and Wang, 2016; Wang and Ho, 2019), making it largely unknown in Asian school contexts, particularly in China. Despite this, early-career teachers still provided their own understanding of teacher leadership. Early-career teachers from four of the schools (PSB, CSB, PSA, and CSA) stated that teacher leadership was for all teachers regardless of any formal leadership positions or official titles. This leadership awareness aligns with Grant (2006), Katzenmeyer and Moller (2009), and Nguyen et al.'s (2019) perception of teacher leadership, defining teacher leadership as inclusive of all teachers rather than their role descriptions and formal authorities. This sentiment was echoed by the early-career teachers in schools PSB, CSB, and CSA, espousing the ideas that teacher leadership was practised within classrooms as

instructional leaders, and enacted outside classrooms when leading students' extracurricular activities. This observation serves as evidence for Wang and Ho (2019) and York-Barr and Duke's (2004) systematic reviews of the concept of teacher leadership, with teacher leadership being stated as practised within classrooms as instructional leaders, and beyond classrooms when leading students' activities and building communities.

Constrastingly, early-career teachers from PSA and SSA only perceived teacher leadership in their classrooms when leading students. This finding possibly contradicts Wenner and Campbell's (2017) argument that teacher leadership is practised outside classrooms. However, it aligns with studies (Cheng and Szeto, 2016; Hofstede, 2010; Wang, 2018; Wang and Ho, 2019; Szeto, 2020) that found that early-career teachers suffered limited opportunities when participating in school-level leadership due to the centralised school culture.

Early-career teachers from PSA, SSA, and SSB attached great importance to teachers' leadership development when building relationships and influencing others. This finding cements numerous scholars' definition of teacher leadership (Gu and Day, 2007; Katzenmeyer and Moller, 2009; Militello and Berger, 2010; Wang and Ho, 2019; Szeto, 2020), with teacher leadership being defined as an influence on others in establishing constructive relationships. Early-career teachers in SSB particularly emphasised this, signifying that 'building trust' was central to building relationships with their colleagues. This finding supports Le Cornu (2013) and Zheng et al.'s (2020) argument that trust between colleagues helps maintain positive relationships and builds a sense of belonging and social bonds among teachers, which is particularly significant for young and early-career teachers. Notably, CSA's early-career teachers believed that teacher leadership is a nature that people were born with, but also something that can be nurtured through practice. This finding embodies the combined definition of teacher leadership as both a personal trait (Arpacı-Somuncu, 2016), and something that can be developed, views embraced by Katzenmeyer and Moller (2009), Lambert (1998; 2003), Wang and Ho (2019), and Wang (2018).

Teacher leadership competency and confidence

Early-career teachers claimed they were instructional leaders in their classrooms, reflecting their confidence in their professional competency and priority for their leadership development. This finding concurs with the results from investigations conducted by Day and Gu (2014a), Grant (2006), Katzenmeyer and Moller (2009), and Papatraianou and Le Cornu (2014), evidencing that early-career teachers are at the stage of developing their professional competency and confidence to lead in their classrooms. Furthermore, to achieve credibility and recognition from parents and colleagues, early career-teachers are highly committed to classroom teaching and students' achievements. This observation also resonates with the teacher leadership identity model (Poekert et al., 2016) because teachers develop as classroom teachers in making student-centred teaching instructions, mature as researchers who employ classroom-based evidence and data to adjust their teaching practices, and evolve as leaders in assuming leadership roles as instructional leaders. The present study collected evidence that shows early-career teachers are apt to develop as learners in enriching their professional expertise first in their classrooms prior to leading outside classrooms. Sinha and Hanuscin's model (2017) correlates with this finding as teacher leadership development is an alignment among teachers' leadership views, leadership practices, and leadership identity, which are influenced by their development priorities within or beyond classrooms. Consequently, from possessing a leadership identity as a learner, a teacher, a researcher, and a leader, these early-career teachers prioritise their classrooms in order to develop their professional expertise, and lead classroom instructions for their students.

Notably, besides the confidence in their professional expertise to lead, early-career teachers who are *Banzhurens* exhibited more confidence when further 'developing' and 'enhancing' their leadership capacity within and beyond classrooms. In comparison, those with no formal leadership positions were potential and 'emerging' teacher leaders in assuming formal roles as *Banzhuren* predicated on their readiness in professionalism and apportionment by schools. Overall, it was found that teacher leadership capacity can be developed with the formal leadership legitimacy and perceived benefits for development, supporting previous studies (Hunzicker, 2012; Margolis, 2012; Muijs and Harris, 2007; Ng et al., 2018).

The teacher leadership development of early-career teachers is a multi-faceted phenomenon involving leadership awareness, identity, capacity, and priority to lead within or beyond classrooms - summarised in Figure 7.1. The empirical findings detailed in Figure 7.1 support Grant's (2006) argument, who stated that teacher leadership development is a step-by-step process occurring in classrooms first, and then leading outside classrooms and collaborating with others, or assuming leadership roles formally or informally, resonating with Szeto and Cheng's (2018) beliefs.

Figure 7.1

Continuum of Teacher Leadership Development of Early-Career Teachers

Classroom-level   group-level   school level

Identity   Capacity   Priority

As a learner   As a teacher   As a researcher   As a leader
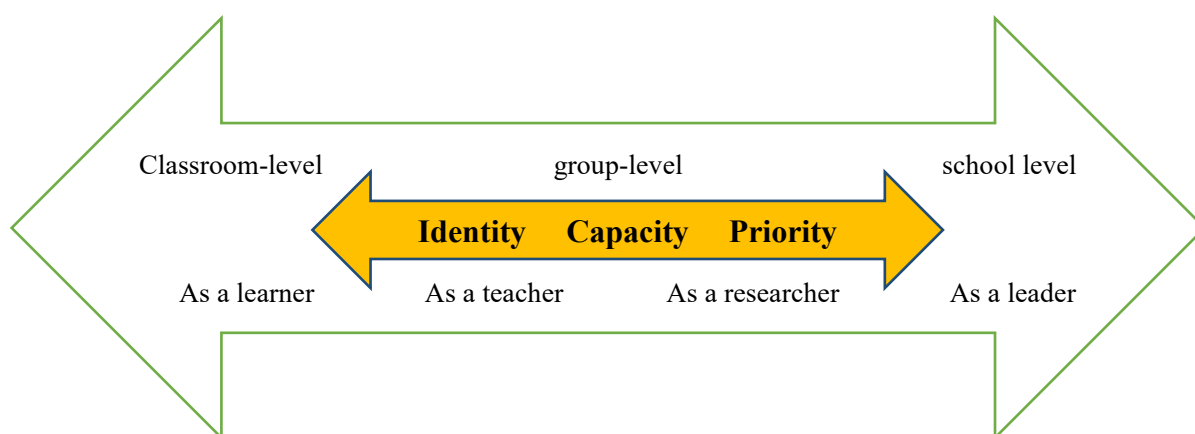
Note. Adapted from Bush (2007); Katzenmeyer and Moller (2009); Poekert et al. (2016); Sinha and Hanuscin (2017).

RQ3: **What is the relationship of school culture and teacher leadership readiness of early-career teachers?**

The teacher leadership development of early-career teachers is an interplay of school culture and teacher leadership readiness, with school culture denoting the external factors, and teacher leadership readiness symbolising the internal factors. In accordance with Katzenmeyer and Moller's (2009) findings, school culture serves an imperative role in the teacher leadership readiness of early-career teachers. The present study observed early-career teachers' leadership development as an interplay of school culture and early-career teachers themselves, adhering to a linear process. School culture functions as a strong and significant predictor of early-career teacher leadership development. These findings serve as evidence for numerous researchers'

(Cheng and Szeto, 2016; Katzenmeyer and Moller, 2009; Ng et al., 2018; Poekert et al., 2016; Szeto and Cheng, 2018; Szeto, 2020; Wang, 2018) beliefs that, with the improvement of school culture in supporting teacher leadership, the leadership readiness of early-career teachers will increase accordingly.

Among the six teacher leadership factors supported by school culture, *professional development and recognition* were the only significant and strong predictors of early-career teachers' leadership readiness. Similar observations were also collected from the Maldives (Mohamed et al., 2018), exhibiting that developmental focus was a significant predictor of teachers' professional learning in a school culture that supports teacher leadership. As Szeto and Cheng (2018) and Szeto (2020) argued, this was the case because a professional learning culture encouraged early-career teachers' leadership motivation and aspirations. The other four factors of school culture: *open communication*, *school environment*, *teacher ownership*, and *participation in decision-making* had a positive and moderate relationship with the leadership readiness of early-career teachers. This finding articulates that early-career teachers are more prone to lead with equal communication for their professional development in a horizontal collective culture, in which early-career teachers have a sense of ownership and make their voices heard in the wider school community, thus having increased motivation and efficacy to assume leadership positions and practise leadership beyond classrooms, ultimately supporting prior research (Ho and Tikly, 2012; Tricarico et al., 2015; Wan et al., 2018).

Teacher collaboration, the least supported factor as perceived by early-career teachers, has no significant relationship with the leadership readiness of early-career teachers. This result contradicts Mansor et al. (2017) and Poekert's (2012) findings, as it evidences that a school culture which promotes teacher collegiality and collaboration will develop the leadership of teachers. Despite this, this finding can potentially be used to support Poekert et al. (2016) and Tissington's (2008) leadership development models for early-career teachers. The models state that early-career teachers first develop as teachers and researchers in their own classrooms, then develop as leaders beyond their classrooms and interact in wider school communities, as evidenced from previous findings of leadership readiness of early-career teachers.

PSB and CSB shared the common features of 'family', 'human resource', and 'harmony', indicating the need to nurture teachers' needs, skills, and relationships through empowerment and inspiration from school administrators. Mangin (2007) and Muijs and Harris' (2006) findings draw significant parallels with the present results, as they articulated that principals directly influence the creation of a school environment with a culture of teacher cooperation and collaboration, close relationships among teachers, and the awareness of teacher leadership. The early-career teachers in these schools were empowered by the school principals at different levels. Regarding school levels, their decisions were sought and respected, making early-career teachers feel empowered when voicing their ideas and opinions. Regarding group levels, early-career teachers were encouraged to openly and freely share their experiences and problems with a professional and developmental focus. As a result, early-career teachers' professional competency to lead as instructional leaders in their classrooms was developed, helping them achieve recognition from others. For classroom levels, early-career teachers were granted ownership and freedom to make adjustments and innovative practices, thus developing their professional competency and confidence to lead their students. Consequently, early-career teachers showed readiness in assuming leadership roles and further enhanced their leadership capacity. From this perspective, under a 'harmonious family' school culture, the teacher leadership development of early-career teachers was further developed and enhanced.

When principals encouraged vision and provided inspiration, early-career teachers participated in different levels of communication and collaboration and developed their professional and leadership capacity. Accordingly, the professional knowledge and skills they gained enhanced their confidence to lead beyond classroom domains, leading to a wider scope of community relationships. Angelle and Teague (2014) articulated similar beliefs, highlighting that the principals' vision of sharing and integrating teachers' opinions when making decisions was also beneficial in developing teacher leadership capacities. In relation to this, within a 'symbolic theatre' school culture, identical to Bolman and Deal's Four Frame Model (2008), the teacher leadership development of early-career teachers is 'emerging' and 'developing', as evidenced within school CSA.

Contrastingly, a school culture with rules, roles, policies, power, and competition as its priorities led to early-career teachers' school-wide participation as 'prescribed and prearranged' by school senior leaders, meaning early-career teachers just adhere to the rules and become policy carriers, not initiators. This finding concurs with various researchers' (Bellibaş et al., 2020; Hui and Singh, 2020; Park and Ham, 2016; Wahab et al., 2020) observations of school principals in teacher leadership development, which found that principals directly influenced teacher leadership in terms of participating in decision-making and undertaking leadership practices. At group-levels, maintaining 'good and harmonious' interpersonal relationships essentially guaranteed the normal function and operation of the organisations, yet the lack of critical voices and opinions failed to develop early-career teachers' professional knowledge and skills. In this regard, under a 'structural agency' school culture, the teacher leadership development of early-career teachers was 'restricted' and 'emerging', as in the case of schools SSB and PSA.

SSA's 'administrative' school culture was characterised by the power, politics, authority, and isolation through a 'directive and autocratic' manner. The principal 'tightly controlled' the decision-making and participation of early-career teachers, meaning their voices and opinions were never sought and heard. Regarding group level, there was a sense of 'egalitarianism', in which the teachers felt that they were equal. Only those in administrative leadership posts such as principals were regarded as leaders. In consequence, early-career teachers were restricted to only performing leadership among colleagues. Collegial relationships adhered to 'seniority and power relationships', forcing early-career teachers to present a 'humble and modest' countenance during communication and collaboration with their seniors. Consequently, early-career teachers stepped back into the comfort zones of their classrooms with a sense of 'isolation'. However, this was of little comfort as early-career teachers' ownership in their classrooms was restricted as they had to 'strictly follow' the national curriculum, without any autonomy in making adjustments.

Therefore, early-career teachers in SSA felt less confident in performing leadership, possessed reduced efficacy in leading, and decided to leave the teaching profession after some time. This finding supports the studies (Day and Gu, 2014a; Wang, 2018) that observed that, if the principal presents their leadership in a directive and

autocratic manner, teachers tend to display reduced efficacy, lack of commitment and, burnout. Unfortunately, SSA's early-career teachers were significantly proficient in their content knowledge and teaching skills, presenting skillful techniques and ample professional expertise during lessons. Despite this, the unsupportive school culture impeded their leadership efficacy and influence, prohibiting early-career teachers' potential teacher leadership. As such, under the influence of an 'administrative island' school culture, the teacher leadership development of early-career teachers was 'reduced' and 'restricted'.

In brief, the relationship between school culture and teacher leadership readiness of early-career teachers is summarised in Figure 7.2 below, which has been adapted from Bolman and Deal's (2008) four aspect framework.

Figure 7.2

Models of School Culture and Teacher Leadership Readiness for Early-Career Teacher Leadership Development
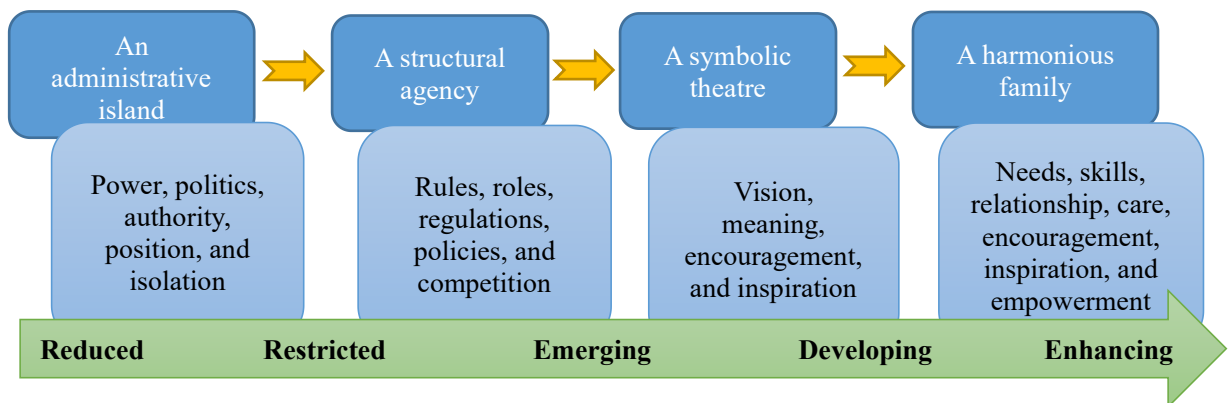
RQ4: What are the leadership strategies of early-career teachers in building relationships with various stakeholders?

Professional knowledge and skills serve as 'surviving skills' (Day and Gu, 2014a) for young and early-career teachers to remain as instructional leaders to lead students in their classrooms. In addition, they must equip effective influencing strategies or skills when establishing working relationships with various stakeholders in the wider school communities, as stressed by Katzenmeyer and Moller (2009). The present study

revealed that all schools define teacher leadership as an influence and method of relationship building and believe that essential leadership strategies or skills are imperative to lead effective relationships. When establishing exceptional working relationship with colleagues, 'open for diversity' (PSB), 'collaborative, communicative and negotiation skills' (CSB), and 'building a harmonious and cooperative relationship skills' (PSA) were effective and necessary leadership strategies for early-career teachers. Regarding SSA, CSA, and SSB's early-career teachers, 'taking the initiative' was essential. These leadership strategies are highly consistent with a number of researchers' (Bufalino, 2018; Crippen and Willows, 2019; Katzenmeyer and Moller, 2009; Webber and Nickel, 2021; Zhang, 2011) views, who proposed that listening with openness, and communicative and cooperative skills are effective leadership strategies when building exceptional working relationship with their teacher colleagues.

'Making friends' and 'emotional bonding' were epitomised by all early-career teachers as effective leadership strategies when building good relationships with students. In particular, early-career teachers in CSB stressed that 'showing care and love' helped build close teacher-student relationships, facilitating student engagement in classrooms. A variety of scholars (Bowman, 2005; Liu et al., 2018; Li and Liu, 2020; Katzenmeyer and Moller, 2009; Zhang, 2011) also echoed the same leadership strategies, believing that showing care, empathy, and creating emotional bonds are effective strategies to build relationships with students. Notably, these leadership strategies strongly agree with the servant leadership skills advocated by Crippen and Willows (2019), such as awareness and persuasion skills, and further support numerous scholars (Bufalino, 2018; Crippen and Willows, 2019; Vikaraman et al., 2020) who believe teacher leaders lead through a humanist, ethical, moral, and philosophical stance to establish positive relationships and influence others. In Mainland China, teacher education promotes a moral purpose (*de yu*) with civic and ethical virtues and values (Zhu and Xu, 2005). The servant and ethical leadership skills enacted by early-career teachers may establish effective relationships when leading students. Wahyu et al.'s (2021) study confirmed this finding, by evidencing that generation Y employees practised higher levels of servant leadership in their organisational behaviours than that of their senior counterparts. As a result, as Katzenmeyer and Moller (2009) and Ng et al. (2018) denoted, young and early-career

teachers should be recognised by their effective leadership practices and strategies in establishing positive relationships, rather than by their years of experience.

'Building trust' with students was critical for SSA's early-career teachers; 'balancing personal and professional relationship skills' were critical for early-career teachers in CSA and SSB; and 'close observation skills' were crucial for SSB and CSB's early-career teachers. Early-career teachers in SSB highlighted the importance of observing students' emotional status, with such skills helping them deal with students' problems. Regarding CSB's early-career teachers, observing students' family background was perceived as an effective strategy when leading students' engagement in classrooms. Furthermore, all schools mentioned communication and classroom management as the basic leadership strategies. These leadership strategies strongly embody the integration of servant leadership and teacher leadership skills for building exceptional relationships with students, resonating numerous scholars' (Crippen and Willows, 2019; Harris and Muijs, 2005; Katzenmeyer and Moller, 2009; Supovitz, 2018; Webber and Nickel, 2021) views that teachers, as servant leaders, employ effective listening, stewardship, and community building strategies to achieve the respect, trust, and the support from various stakeholders.

All early-career teachers emphasised building relationships with parents as the most difficult process, requiring leadership strategies to establish a close family-school relationship. The emphasis on 'communication, cooperation, and problem-solving skills' were agreed by all early-career teachers as effective leadership skills. Such skills required early-career teachers to communicate with parents 'like friends', in turn requiring the 'art of speaking' to effectively communicate with them. On the other hand, for PSA and SSA's early-career teachers, 'showing extra care' to students was an effective way to win parents' recognition and gain their support. Predicated on such findings, leadership strategies must be flexible and strategic to establish exceptional working relationships with various stakeholders. These findings signified and reinforced that teachers must act as servant leaders that employ ethical and moral leadership strategies, including a full range of servant leadership skills such as displaying respect, warmth, and empathy for parents' situations; displaying persuasion and conceptualisation strategies to solve problems and gain support from parents, and healing and commitment to growth for students' development skills to gain trust and

recognition from parents, as advocated by numerous scholars (Crippen, 2010; Greenleaf, 2003; Harris and Muijs, 2005; Supovitz, 2018; York-Barr and Duke, 2004).

Predicated on these empirical findings, combined with a number of researchers' (Bufalino, 2018; Crippen and Willows, 2019; Fried et al., 2015; Noland and Richards, 2015; Vikaraman et al., 2020) suggestions, early-career teacher leaders in Chinese school contexts must employ a range of leadership strategies to establish positive relationships so as to influence others. Remarkably, teachers serving as servant leaders employing ethical strategies resonated with the core values of Confucius, who emphasised the significance of individual morals, and believed noble and enlightened leaders should always be considerate of others and display a moral, ethical, and virtuous leadership style, views embraced by Liu et al. (2018) and Loden (2006).

RQ5: **What are the influential factors of early-career teacher leadership development?**

In the present study, one of the factors that facilitated the teacher leadership development of early-career teachers was motivational rewards like certificates and material incentives, with all six schools claiming that rewards would encourage their motivation and willingness to assume leadership roles and develop leadership. To illustrate, SSA's early-career teachers claimed that motivational rewards were a form of recognition and acknowledgement for early-career teachers' efforts and would assume leadership roles as *Banzhurens* if promoted and rewarded by schools. Similarly, early-career teachers in CSB remarked that 'either spiritual or material' rewards increased their 'self-recognition and confidence' for teaching and leading efforts. This finding supports Harris and Jones (2019) and Katzenmeyer and Moller's (2009) beliefs that teachers should be rewarded with flexible salaries and incentives for their leadership to occur. In addition, this finding is also consistent with Wahyu et al.'s (2021) research, who concluded that the cohort of generation Y (young and early-career teachers) has been characterised as ego-centric, short-term-oriented, and reward-driven, with them perceiving motivational rewards and incentives as effective methods to develop their leadership.

To a certain extent, such findings contradict the ideology of Confucianism, which has profoundly influenced the majority of Chinese people's mindset and way of life, especially the older generations, as reiterated by Dimmock et al. (2020) and Qian and Walker (2013). In respect to morality in action and self-cultivation of a Confucian-based leadership, Confucius emphasised the significance of individual morals as a collective and personal responsibility. In this case, one should not be extrinsically motivated by fame and rewards, but driven by altruistic motivation that is selfless and emphasises good deeds, a belief shared by Loden (2006), and Militello and Berger (2010). These opposite values may cause tensions between junior and senior teachers when recognising their leadership, as previously evidenced that older and senior teachers were more recognised by school administrators. Nonetheless, the present study evidenced that young and early-career teachers exhibited servant leadership characteristics. As a result, the school administrators should be strategic in motivating early-career teachers either with material rewards or spiritual encouragement to develop their leadership.

Despite this, various impediments were found to discourage teacher leadership development among early-career teachers. Seniority in PSA and SSA was the most substantial factor that destroyed early-career teachers' motivation to assume leadership roles and develop leadership. For instance, both schools promoted teachers predicated on the seniority, forcing young and early-career teachers to passively wait and accumulate years of experience. Professional training opportunities and incentives were prioritised to senior teachers in SSA, detrimentally influencing the professional development and efficacy of young and early-career teachers. This finding aligns with the cultural characteristics of Chinese contexts in attaching great importance to senior and elder teachers, thereby impeding the leadership development of young and early-career teachers, as Wang (2018), and Wang and Ho (2019) remarked.

The lack of the mentor support for young and early-career teachers during the beginning of their teaching profession caused them to rely heavily on self-directed study and learning, supporting studies (Hobson et al., 2009; Stanulis and Floden, 2009) that found that teachers were more eager to seek help and support from mentors during their early-career stage. Additionally, the studies found that, if young and early-career teachers were provided with an intensive mentoring structure, they felt

significantly more confident in their professional competency to lead their students, and vice versa. Likewise, in the three schools in City A, a lack of off-site training opportunities and limited educational resources were identified as the primary barriers when developing early-career teachers' professional knowledge and skills. This was reinforced by studies (Opfer and Pedder, 2011; Rhodes, 2013; Van den Bergh et al., 2014) evidencing that the lack of professional training reduced teachers' professional capacity and confidence to lead.

In all six schools, time constraints from heavy workloads and busy schedules discouraged early-career teachers' leadership development, especially *Banzhurens* suffering 'busyness'. Particularly, this was evident in the three schools in City A, as the administrative work had profoundly occupied early-career teachers' time for peer observations and professional development activities, thus impeding their professional confidence to lead. Hands' (2012) and Webber and Nickel's (2021) views are supported by this finding along with studies (Gu et al., 2015; Liu et al., 2018) that observed that the multiple roles and responsibilities in teaching, managing, and leading made teachers in China feel overwhelmed, with the action of assuming teacher leadership roles and responsibilities proving too much for them.

A lack of experience, confidence, and introverted personality traits were identified as barriers for the leadership development of early-career teachers, with a lack of experience and confidence being the often-cited reasons by most early-career teachers in the six schools. Early-career teachers who possessed introverted personality traits like 'shyness', as in the case of schools SSA and CSB, weren't confident enough to communicate with colleagues and parents, thus hindering their relationship building with the wider communities beyond classrooms. Regarding PSB and SSB's early-career teachers, their experience in rural schools with 'poor teacher quality and training' hindered their professional confidence to lead in their current schools. These empirical findings are accordant with studies (Durias, 2010; Friedman, 2011; Klinker et al, 2010; Muijs and Harris, 2006; Webber and Nickel, 2021) that articulated that various personal issues, such as introverted personality traits, reluctance and resistance to change, a lack of shared goals and vision, the absence of professional knowledge and skills, and insufficient group and teamwork skills, contributed to the hindrance of teacher leadership development among early-career teachers.

Lastly, certain characteristics of students and parents were identified as barriers to early-career teachers' confidence in their teacher leadership development. To illustrate, PSA and PSB's primary students were perceived as 'fragile and passive', meaning early-career teachers had to take extra efforts in taking care of their habit formation and personality development. Likewise, parents from these two schools were described as being 'protective and spoiling' and showed 'less trust' of young and early-career teachers. Contrastingly, secondary students' personality changes, gender differences, and diversity posed as obstacles for SSA, SSB, and CSA's early-career teachers when leading effective class management and student engagement due to a lack of leadership skills. Parents from the two secondary schools were described as 'performance-driven and passive', with an attitude that is 'skeptical' towards the professional knowledge and skills of young and early-career teachers. These findings are congruent with Wang's (2018) study that found that most Chinese parents held quite high expectations of their children and pressured teachers with demanding responsibilities of the development of students' education and personal lives.

For CSB's early-career teachers, the 'left-behind children' required 'extra care' due to the absence of parental education. As gathered from interviews, most parents in City B originated from rural places as migrant workers or went out of the city to work. Consequently, the lack of parental care and support posed more responsibility and difficulty for early-career teachers to discover effective ways to ensure 'no children left' and solve their students' problems. As a result, early-career teachers lacking the experience and problem-solving skills exhibited low efficacy in leading their students and were reluctant to assume leadership roles as *Banzhuren,* as being *Banzhuren* requires more interactions and communication with different kinds of parents. Similar results were also collected from Wang (2018), and Wang and Ho's (2019) studies.

As previously discussed, the lack of experience and skills frustrated young and early-career teachers when facing the 'complexity' of students and parents. This finding illustrates the characteristics of early-career teachers who face tremendous challenges and increased responsibilities during their initial phase of teaching and leading, which is the critical stage for developing professional and leadership capacity, knowledge, skills, and depositions. From this perspective, the organisational support, professional development, leadership opportunities, and conducive school cultures are imperative

for young and early-career teachers to survive, stay, and influence through leadership capacity building, with Katzenmeyer and Moller (2009) and Papatraianou and Le Cornu (2014) sharing supportive views.

Summary

The teacher leadership development of early-career teachers was influenced by a multitude of factors, ranging from macro, micro, and meso-levels. Such factors shed light on contextual similarities and variances across six different schools in two cities, showing that the teacher leadership development of early-career teachers was situational and contextual and subjected to multi-facets of influential factors, as summarised in Figure 7.3 below.

Figure 7.3

Early-Career Teacher Leadership Development through Ecological Framework
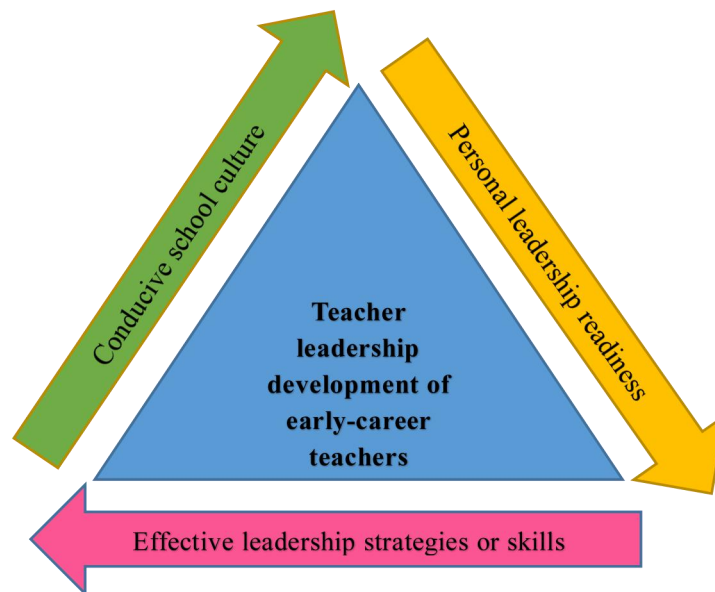
Note. Adapted from Bandura (1997); Bronfenbrenner (2005); Katzenmeyer and Moller (2009).

Chapter Eight

Conclusions

Overview

This chapter provides the concluding remarks of the study. It delineates the answers to address the research questions first, under the investigation of teacher leadership development of early-career teachers in public schools of Gansu Province, Mainland China. This is then followed by proposing a theoretical model to the realm of teacher leadership development of early-career teachers. In the end, a range of implications together with recommendations for the further studies are advocated for the future enquiry of teacher leadership development.

Answering the research questions

This study has investigated the perceptions and experiences of teacher leadership development of early-career teachers in Chinese cultural and school contexts, under five overarching research questions:

RQ1: What are the teachers' perceptions on school culture in supporting teacher leadership?

RQ2: What are the early-career teachers' perceptions on their teacher leadership readiness?

RQ3: What is the relationship between school culture and teacher leadership readiness of early-career teachers?

RQ4: What are the leadership strategies or skills of early-career teachers to build relationships with various stakeholders?

RQ5: What are the factors that facilitate or impede early-career teacher leadership development?

The previous conceptual framework of this study (refer to the Chapter One) was based on the ecological framework (Bronfenbrenner, 2005) in the investigation of teacher leadership development of early-career teachers from external (school culture), internal (teacher leadership readiness), to relational (teacher leadership strategies or skills) perspectives. Building on this framework and well informed by previous

chapters on the reviewed literature, empirical findings, and discussions, instead of answering these research questions individually, the following section outlines a summarising framework of teacher leadership development of early-career teachers (Figure 8.1 below) in answering the above research questions, following an interwoven and synthesised manner among multi-faceted factors in Chinese cultural and school contexts.

Figure 8.1

A Framework of Teacher Leadership Development of Early-Career Teachers
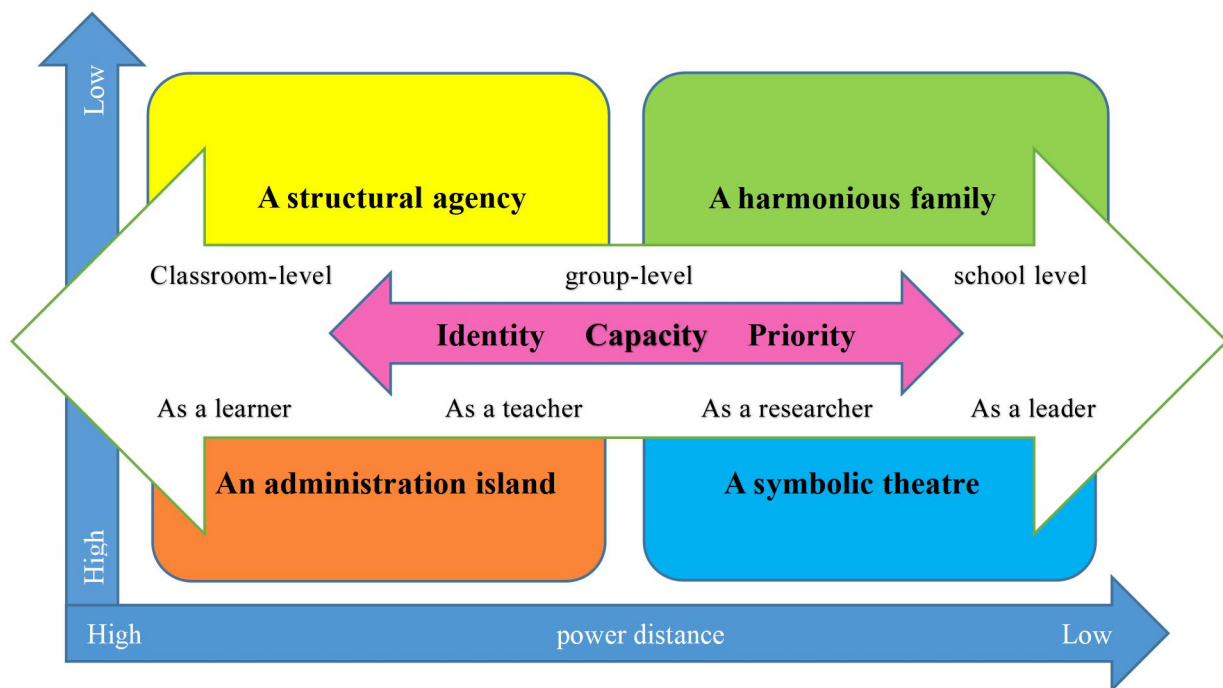
Note. Adapted from Bush (2007); Bolman and Deal (2008); Katzenmeyer and Moller (2009); Poekert et al. (2016); Sinha and Hanuscin (2017).

As seen from the Figure 8.1, teacher leadership development of early-career teachers in this study, without exception, is similar to the leadership development proposed by Bush (2007), which is a continuum evolving from classroom-level, group-level, to school-level. Such development of early-career teachers is an alignment under their perceptions of school cultures and teacher leadership readiness; their identifies as learners, as teachers, as researchers, and as leaders; and their teacher leadership development priorities with the centrality in capacity building in their knowledge, skills, and dispositions.

From the perspective of social cognitive theory (Bandura, 1997), how teacher leadership is practised and developed is dependent on how teachers perceive and understand the concept of teacher leadership. From the philosophical stance in understanding *what is the nature of teacher leadership?* Previous studies have elaborated that 'collaboration and decision-making' (Harris, 2013; Katzenmeyer and Moller, 2009), and 'influence and relationship' (Wang, 2018; Wang and Ho, 2019) are two predominant natures of teacher leadership, which reflect a shared and horizontal way of teacher leadership, as primarily rooted in distributed leadership (Bush, 2007; Muijs and Harris, 2007). Such flatted nature of teacher leadership is also embraced by early-career teachers in this study. They defined teacher leadership is for all teachers without regarding their formal leadership positions who can lead within or beyond classrooms, and build trusting relationships and exert positive influence on various stakeholders with ethics and morals. Such espoused definitions partly resonated Chinese government aspirations in developing teacher leadership to improve teacher quality (MoE, 2001; 2010), but through formal teacher leaders like *Backbone teachers* rather than for all teachers.

In addition, teacher leadership development of early-career teachers is mutually reciprocal with contextual factors where they lead (Bandura, 1997; Katzenmeyer and Moller, 2009; Wang and Ho, 2019). In this study, when examining the perceptions of school cultures that influenced teacher leadership development of early-career teachers, discrepancy occurred between the espoused nature of teacher leadership and enacted nature of teacher leadership. School culture, as evidenced in this study, is a significant and strong predictor of teacher leadership readiness of early-career teachers, which has explained more than half of the total variance of teacher leadership readiness of early-career teachers. It serves as the critical precondition that enables or disables teacher leadership to thrive, with the centrality for building capacity of early-career teachers in different levels.

Notably, as seen in Figure 8.1, it is the 'power distance' which defines different types of school cultures. Power distance has been defined as the power in organisations which is distributed unequally (Hofstede and Bond, 1988; Hofstede, 2010; Wang, 2018; Wang and Ho, 2019). The higher the power distance, the more power and authority that teachers have experienced (Hofstede, 2010; Wang, 2018). In this study,

four types of school cultures have been identified by incorporating Bolman and Deal's Four Frame Model (2008) in examining the characteristics of school cultures based on power distance, which are: a harmonious family with the lowest level of power distance; a symbolic theatre with the second lowest level of power distance; a structural agency with relatively high power distance, and an administrative island with the highest level of power distance.

In this study, schools in City B were more conducive than schools in City A in supporting teacher leadership development of early-career teachers. This is because schools PSB and CSB in City B experienced lower power distance, such as in a harmonious family, and focused more on teachers' needs, skills, and relationships, that is, building teachers' capacities. In contrast, schools SSA and PSA in City A were characterised as higher power distance like an administrative island and a structural agency, which emphasised on power, authority, rules, policies, and regulations. As a result, early-career teachers in City B were more ready for their teacher leadership than that of in City A. This explicitly revealed that the lower the power distance of the school culture, the more ready early-career teachers are for their teacher leadership development, and vice versa. Under the influence of power distance on different types of schools, teacher leadership development of early-career teachers were supported and developed at different levels in this study.

School-level of teacher leadership development of early-career teachers

Participation of decision-making is a distinctive feature of teacher leadership advocated in western contexts (Harris, 2013; Katzenmeyer and Moller, 2009). However, teachers' right in decision-making was relatively least supported by school cultures in this study. This study shows that the Chinese top-down structures affect teacher leadership development of early-career teachers (Liu et. al., 2016; Qian and Walker, 2019; Wan et al., 2018). Because in a Chinese system where hierarchy, rules, policies, and regulations were prescribed by school principals rather than initiated by middle leaders and teachers. In a hierarchical school system, for example, PSA and SSA, school principals were the top authority and managerial leaders in 'holding the control' of school-level decisions. In such case, the 'tight control' of school principals in PSA and SSA failed to develop early-career teachers' leadership capacity to lead

beyond their classrooms. In comparison, schools with lower hierarchical characteristic 'sought and respected' teachers' voices and opinions, for example, schools CSA and CSB, where early-career teachers had clear responsibilities and tasks to lead. Such principals practised allocated and distributed leadership (Bush and Ng, 2019; Harris, 2013), which developed early-career teachers' leadership capacity in coping with various tasks and dealing with problems with various stakeholders.

Group-level of teacher leadership development of early-career teachers

When it comes to the collective or group aspect of teacher leadership development of early-career teachers, it is the 'power relationship' which influenced the degree of teacher communication and collaboration. Power relationship has been defined as an unequal relationship with authority and hierarchy (Wang, 2018; Wang and Ho, 2019). This study has unveiled that teacher communication and collaboration were relatively marginally supported, and early-career teachers have experienced more power relationship among colleagues, especially in the face of senior counterparts. This is due to the profound and steep influence of Chinese cultural heritage of Confucianism and Chinese characteristics of collectivism. For example, two of the core values of these cultural characteristics were respecting the seniors in a humble and obedient manner and focus was on maintaining a harmonious interpersonal relationship avoiding conflicts (Hofstede and Bond, 1988; Yin et al., 2014). These characteristics imposed the high power relationship between younger and senior teachers.

Under such circumstances, young and early-career teachers tend to be passive listeners and followers and kept their critical voices to themselves for their own sake. This discouraged the mutual sharing and communicating for professional knowledge and skills, thus impeding professional capacity building and confidence to lead in group activities. As such, the lack of open communication and authentic collaboration push young and early-career teachers back to their comfort zones, their classrooms, to be individual teacher leaders. This was particularly explicit in schools PSA, SSA and SSB with higher power relationship. In these schools, respect for seniority was prioritised and 'taking the initiatives' strategies took a backseat in favour of building a collegial relationship. As such, early-career teachers showed reduced efficacy in exerting group-level leadership influence with 'reduced and restricted' teacher

leadership development.

In comparison, school cultures with lower level of power relationship showed teacher leadership capacity building at group level, such as schools PSB and CSB. This is because early-career teachers' voices and opinions were respected through 'consultation and negotiation' from school administrators, and teachers communicated more 'openly and freely' with a developmental focus in a professional manner. In this environment of low power distance and low power relationship, early-career teachers were 'emerging', 'developing', and 'enhancing' their leadership identity and capacity to lead wider communities with leadership strategies like servant leadership skills. This has led to building good working relationship with colleagues. With this, they were more confident in their leadership skills and this enabled them to deal with problems of 'diverse' students and the 'complexity' of parents.

Classroom-level of teacher leadership development of early-career teachers

Comparing with school-level and group-level of teacher leadership development of early-career teachers, this study has evidenced that early-career teachers although experienced less power relationship among colleagues, their classroom-level of teacher leadership development is closely associated to the extent of openness of school administrators with regards to their authority as Wang (2018) and Wang and Ho (2019) remarked. Authority openness indicated the degree of principals' open-mindedness to teachers' opinions and ideas (Wang, 2018; Wang and Ho, 2019). In schools with relatively lower power distance, school principals 'inspired, empowered, and encouraged' early-career teachers to devote themselves to professional learning and development; 'prioritised' and 'restructured' leadership opportunities for early-career teachers to build leadership capacity; and 'respected' early-career teachers to make decisions for their students. As such, this supported teacher ownership and professional development, which facilitated early-career teachers' confidence for their professional expertise to lead as instructional leaders with effective leadership strategies with 'care, emotional bond, and showing empathy'. Early-career teachers showed high efficacy in leading students' engagement and teaching instructions when facing the 'complexity' of students' in individual differences and diverse family backgrounds and parents. In such case, early-career teachers developed as classroom

instructional or pedagogical leaders and won the recognition by their professional expertise and effective leadership strategies from students and parents, and this was explicitly evident in schools PSB and CSB in City B.

In contrast, a high power distance school culture with principal showing little or no authority openness, there was little or no teacher leadership development among the early-career teachers, such as in the case of school SSA. Due to the restricted teacher autonomy and the absence of participation in decision-making in their classrooms, these early-career teachers had a 'just a teacher' syndrome and coupled with an egalitarian attitude, and they showed less confidence for their identity as instructional leaders for their students. Obviously, a lack of ownership in innovative instructions posed tensions on teacher-parent relationship and these early-career teachers were less recognised by parents. As such, early-career teachers must master more interpersonal skills like communication skills and build trust to win recognition from the parents and the students. Henceforth, early-career teachers were more comfortable staying in classrooms with the reduced and restricted efficacy to lead.

As seen above, it is the 'power' which defines the school cultures, school structures, and the influence and relationships of teacher leadership development of early-career teachers. With high power distance, leadership influence and relationships will be enacted as a high power relationship. As such, teacher leadership of early-career teachers is restricted to their classroom domains. In contrast, if power of leadership is exercised as a horizontal and flatted way with low power distance, the leadership influence and relationships will be featured as low power relationship with equal communication and participation in decision-making. In such a case, teacher leadership development of early-career teachers will be more evident in group or school levels. This traced back to the definition of power of teacher leadership from Katzenmeyer and Moller (2009), who defined that power can be either 'positional power' with formal positions and authorities, or 'personal power' with influencing strategies and building relationships. From this stance, how the power is enacted and distributed determines the extent of teacher leadership development of early-career teachers at different levels in Chinese schools.

Informed by this, a positive school culture conducive to teacher leadership development of early-career teachers has been featured as low power distance, low power relationship, and high authority openness, and vice versa (Figure 8.2), which has also been evidenced from Wang's (2018) study.

Figure 8.2

The Influence of School Culture on Teacher Leadership Development of Early-Career Teachers
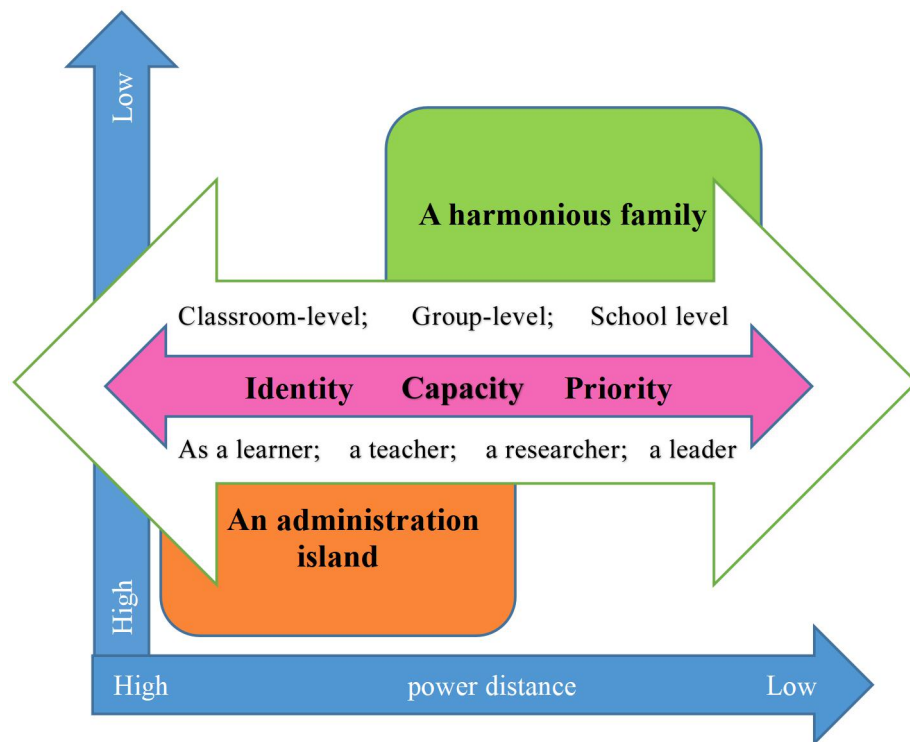
Note. Adapted from Bush (2007); Bolman and Deal (2008); Katzenmeyer and Moller (2009); Poekert et al. (2016); Sinha and Hanuscin (2017).

Theoretical model of the study

As informed by this study, building leadership capacity (knowledge, skills, and dispositions) is central to teacher leadership development of early-career teachers. It is the interplay among cognitive awareness of teacher leadership concept, emotional acceptance with the gained recognition from others, and behavioural practise of teacher leadership in taking up formal leadership roles and exerting leadership

influence. Early-career teachers viewed themselves as teacher leaders in forming a professional identity, developing leadership capacity through professional expertise and skills, practising teacher leadership potentially influenced by their perceived levels of teacher leadership, and deciding their teacher leadership development priority within and or beyond classrooms. These premises reflected early-career teachers' confidence for their professional competency to lead, and the recognition received by various stakeholders in schools, and self-recognition from themselves. If early-career teachers are not recognised for their leadership, they would be hesitant and reluctant to develop leadership capacity and reluctant in taking up leadership roles. As such, teacher leadership development of early-career teachers is a continuum of identity formation, capacity cultivation, and priority consideration, and the key is the *'professional expertition'* (see Figure 8.3), as grounded from this study, which serves as the guiding formula to develop early-career teachers as early-career teacher leaders.

Proposed model of early-career teacher leadership development

Figure 8.3

Model of Teacher Leadership Development of Early-Career Teachers

Professional expertise + recognition

= professional expertition

As indicated by the formula shown in Figure 8.3, armed with the mastery of professional knowledge and skills to lead as instructional leaders in classrooms, and their gained recognition from others, early-career teachers developed their confidence to lead in the wider school communities. Remarkably, this model of teacher leadership development of early-career teachers resonates with Javadi's (2017) study of examining leadership of middle leaders in international schools in Malaysia. In his study, he proposed a formula of *'expertonomy'*, which combined the expertise and autonomy in developing middle managers as middle leaders. From this perspective, the common ground of these two models in developing leadership is the expertise that teachers must possess. However, in this study, for young and early-career teachers, due to a lack of formal leadership position, legitimacy, power, and resources, they

seek for more recognition to build their leadership identity and confidence to lead within and beyond classrooms armed with effective leadership strategies or skills.

Implications of the study

Informed by the aforementioned results of this study, a number of implications are proposed to shed light on the domain of teacher leadership for educational policy, school leadership, and teacher leadership development in schools of Mainland China.

<u>Implications for educational policy</u>

The formal introduction and documentation of the concept of teacher leadership in explicit language is critical in increasing educators' cognitive awareness. This study has shown that the majority of teachers had no knowledge of teacher leadership concept. However, findings on investigating early-career teachers' perceptions and understandings of teacher leadership showed their definitions were closely aligned with the most current western literature (Katzenmeyer and Moller, 2009; Wenner and Campbell, 2017; Nguyen et al., 2019). Notably, if school administrators and teachers have knowledge and awareness of teacher leadership, they are more willing to create a positive environment for teachers' professional learning and collaborative sharing, offering leadership opportunities for teachers to lead and develop leadership identity, capacity and skills. Therefore, the concept of teacher leadership is suggested to be formally introduced in explicit language by educational policy makers through educational documents, pre-service and in-service teacher education and training, and professional learning and development activities at schools.

In such case, both school principal and teacher training should incorporate teacher leadership concept in their learning content, not just focusing on the pedagogical expertise and in the learning of specific subjects. As this study has informed, teacher leadership exerted a critical influence on building relationships with various stakeholders in the school community. Teacher leadership not only needs recognition for their professional competency, but also equips effective leadership skills to build constructive relationships. The findings of this study suggested leadership *per se* is a soft skill, and encompasses a number of soft skills like communicative, negotiation,

proactive skills, problem-solving and observing skills. In addition, leadership with ethics and morals featured as servant leadership was also evidenced in teacher leadership skills in student development. As such, the content of teacher leadership should include both hard skills like professional expertise, and soft skills such as servant leadership skills as aforementioned, encompassing listening with warmth and respect, showing empathy and awareness, using encouraging and communicative skills for persuasion, building community as stewards, and being committed to growth both for themselves and for others (Bufalino, 2018; Crippen and Willows, 2019; Greenleaf, 2003; Harris and Muijs, 2005; Katzenmeyer and Moller, 2009; Ng et al., 2018; Vikaraman et al., 2020; York-Barr and Duke, 2004).

In this study, continuing professional development (CPD) is featured as a significant and strong predictor of teacher leadership readiness of early-career teachers. As such, building schools as professional communities and reducing administrative burdens of teachers are strongly advocated to develop teachers as professionals focusing on teaching, learning, and leading. Since this study reflected teaching and researching group activities are formal platforms both for teacher professional development, and for teacher communication and teacher collaboration, as such, these activities should be routinised for teacher leadership development in building capacities.

Implications for school leadership

The importance of school principals must be emphasised as they set the basic tone of school cultures for teacher leadership development (Bush and Ng, 2019; Ng et al., 2018). Empirical findings of this study has suggested that school principals play an imperative role in shaping a school culture that is conducive to teacher leadership development. There are two approaches that school principals directly and indirectly facilitated leadership development of early-career teachers. The direct approach is to delegate or distribute leadership tasks and responsibilities for teachers to engage in collaborative learning activities, sharing and communicating their leadership experiences and practice. For example like PSB, the principal positively empowered teachers in participating in school-based professional learning communities in leading their own themed topics and content, thus developing teacher leadership competency, confidence, and approachability. Another direct approach is that the school principal

provides leadership opportunities for young and early-career teachers to assume leadership positions or leadership responsibilities, like the principal in PSB who prioritised *Banzhuren* leadership positions for young and early-career teachers. This direct principal-delegated approach facilitates teacher leadership development by 'empowering, encouraging, and allowing effect' (Cheng and Szeto, 2016; Szeto and Cheng, 2018; Szeto, 2020).

The indirect approach for teacher leadership development is to create a positive and productive school culture that supports professional learning and teacher collaboration, thus enhancing teachers' professional development for their leadership competency at professional group level. For instance, schools PSB and CSB in City B both highly supported teacher leadership development in providing routinely organised professional learning activities for teacher learning and collaboration, thus improving teachers' credibility and confidence to lead. In addition, the principals recognised and encouraged early-career teachers' innovative tryouts by 'encouraging and inspiring effect' (Cheng and Szeto, 2016; Szeto and Cheng, 2018; Szeto, 2020), thus facilitating individual-level of leadership development for early-career teachers.

In contrast, if school principals failed to provide these two direct and indirect approaches for early-career teachers, their teacher leadership development is discouraged at individual and professional level, and least possibility in school-level. The typical case is SSA, in which the principal poorly supported teachers' ownership and decision-making, as there is no regularly arranged professional learning community activities (PLCs). The principal was directive and left little space for teachers' innovative ideas on teaching instructions. As such, teachers' professional identities are not secured nor recognised, their leadership capacity was not fully developed, and their leadership priority was restricted in their own classrooms. In this regard, without a positive and supportive school culture and principal, teacher leadership development is difficult to flourish in group and school levels.

In extreme case, even with early-career teachers who are equipped with sufficient mastery of professional knowledge and skills, who are dedicated to self-development through self-directed learning, and without group-level collaboration and communication, and school-level support and encouragement, their confidence and

efficacy is reduced and they are very reluctant to step out of their own classrooms, thus leading to teacher isolation. The worst outcome is the teacher attrition at the very early stage of the teaching profession, as informed by an early-career teacher in SSA. Therefore, school principals are suggested to purposively either directly empower teachers in leadership engagement and involvement, or indirectly provide a positive and supportive school environment for teachers' professional learning and collaboration, and encouraging and recognising teachers' autonomy in innovative attempts, thus enhancing teachers' efficacy, confidence, and competency for their leadership development.

It is noteworthy that school principals are critical in shaping a school culture which encourages open communication and participation among teachers, and this is closely related to their leadership styles. For example, even teachers had no involvement in school-level decision-making in staff selection as it is prescribed by external party like local educational bureau and government, teachers' decision-making is dependent on how the principals providing them with the opportunities for it to happen. Principals who practice transformational and distributed leadership are 'trusting, respecting, caring, empowering, and encouraging' teachers in their classroom teaching and professional communication, would facilitate early-career teachers' autonomy and readiness in their leadership development. However, principal who is very directive, has tight control, and has the final say, will discourage early-career teachers' level of open communication in expressing their voices and ideas. Therefore, such principals are suggested to alter their leadership mindset and styles to give teachers more autonomy and space to develop, and they should trust teachers as professionals so that they are given the opportunity to develop teacher leadership. In this regard, professional training and programmes should not just only focus on pedagogical expertise and classroom management, but incorporate teacher leadership development.

Implications for teacher leadership development

Teacher leadership development is complicated and fluid; might be recursive and synergistic; and can be seen as individual-level, professional-level, and school-level development (Katzenmeyer and Moller, 2009; Poekert et al., 2016; Sinha and Hanuscin, 2017; Szeto and Cheng, 2018; Szeto, 2020; Wang and Ho, 2019).

Additionally, early-career teacher leadership development requires multidimensional support from school principals, school culture, professional culture, personal readiness, and leadership skills.

Henceforth, it is strongly advocated that the young and early-career teachers should be knowingly aware that they are the change agents for their own teacher leadership development. They should be responsible and agile for their development rather than being the passive followers and reluctant recipients. Firstly, early-career teachers should be cognitively aware of the teacher leadership concept to have a basic understanding of the roles, characteristics, practices, influence, and domains of teacher leadership. Secondly, young and early-career teachers must develop their professional knowledge and skills to successfully survive in their classrooms as competent instructional or pedagogical leaders. Meanwhile, young and early-career teachers should unleash their 'impact power', effective leadership strategies or skills to win the recognition, build the rapport, and exert positive influence with various stakeholders in school communities. To make such 'impact power' explicit, these young and early-career teachers should be proactive and take the initiative to learn from others and build a collegial and professional relationship. Most importantly, apart from being recognised by others, young and early-career teachers should recognise themselves as teacher leaders in consciously leading their self-development, and build efficacy and resilience to lead the daily chaos in the face of the increasing accountability and complexity of students and parents. In such case, self-readiness of teacher leadership acts as the inner drive to awaken these sleeping giants cognitively, emotionally, and behaviourally.

Recommendations for future research

This study was conducted in only two cities of Gansu Province, Mainland China. It is strongly advocated that future research can cover more cities in Gansu Province across different K-12 school settings, in order to add more enriched and representative empirical findings. Meanwhile, as China is a vast country with various contextual characteristics and variances, future research can be also be conducted in other regions, such as the provinces in the Eastern, Central, and the Western part of the country, to have a cross regional comparisons of teacher leadership development of

teachers. In addition, different areas like rural, urban, and suburban schools can further provide various contexts, thus contributing to developing a national-wide policy for teacher leadership development in China.

Due to the limited number of early-career teachers in each school in this study, the findings of teacher leadership readiness (*TLRI*) of early-career teachers was difficult to be generalised. The small sample sizes are potential limitations. As such, future studies can select schools with more early-career teachers to with a larger sample size, thus achieving generalisation goals.

This study has shown that teacher leadership development is a complicated continuum which can be linear, iterative or recursive. It is found that the teacher leadership development of early-career teachers can be at the individual-level, group-level, and school-level. It shows that the teacher leadership development can take place cognitively, psychologically, but not instant behaviorally. Henceforth, a longitudinal research design with exploratory stance is recommended to further investigate the change process of behaviours and practices of teacher leadership development of early-career teachers, as also suggested by Wang and Ho (2019) and Wang (2018). Meanwhile, teachers at their early-, mid-, and late-career stages can be investigated to find out the similarities and differences in their teacher leadership practices and influence in their schools.

This study has unveiled that teachers can be instructional or pedagogical leaders, transformational leaders, and servant leaders. As such, future study can employ theoretical frameworks in instructional leadership, transformational leadership, and servant leadership to further understand roles, characteristics, practices, and influence of teacher leadership in bringing about positive development in schools. In addition, as evidenced in this study, *Banzhuren* leadership and *Backbone* leadership are recognised as role models in practising teacher leadership. Future studies can also focus on these two groups of middle teacher leaders to examine how and why they are recognised as teacher leaders in contributing to student development and school improvement. For example, studies can investigate how *Banzhurens* interact with subject teachers and parents in socialising teacher leadership, or how *Backbone teachers* mentor the early-career teachers in leading professional relationship.

School culture plays a significant predictor of teacher leadership readiness of early-career teachers, which explained more than half of the total variance. This finding inspires further study to investigate possible mediators between school culture and teacher leadership readiness of early-career teachers. Psychological constructs like trust, efficacy, or teachers' emotions, as well as professional development and recognition emerged as a significant predictors of leadership readiness of early-career teachers. Informed by this, future study can investigate the influence of instructional leadership of principals on building a school culture that supports teacher leadership, with principals as instructional leaders to promote learning-centred leadership.

China and Malaysia shared many common features in teacher leadership development, such as high perceptions of school culture in supporting teacher leadership (Mohamed et al., 2018; Mansor et al., 2017; Yusof et. al., 2016); an allocative and delegated leadership style from school administrators (Bush and Ng, 2019); a hierarchical culture of respecting the positional leaders with authority in making decisions (Bush and Ng, 2019; Javadi, 2017); and professional development as the significant predictor in building teacher leadership capacity (Mansour et al., 2014; 2017). In such case, the future studies of comparing teacher leadership development in two countries are proposed to illuminate more empirical evidence of the teacher leadership development in Asian contexts.

Summary

In summary, this study has provided empirical evidence of teacher leadership development in Chinese school contexts. It expands the scope of understanding of perceptions and experiences of teacher leadership development of early-career teachers, which is located in a nexus of western concept and Chinese cultural characteristics. It has informed that teacher leadership development of early-career teachers is a continuum from classroom-level to school-level, and from a learner to a leader, under the interplay of external, internal, and relational factors through ecological lens. This study has also proposed a number of implications and recommendations and shed lights on the further investigation of teacher leadership development in Chinese school contexts.

This thesis has proposed a theoretical model of teacher leadership development of early-career teachers in Chinese school contexts, featuring with low power distance, low power relationship, and high authority openness, as shown in Figure 8.4.

Figure 8.4

Teacher Leadership Development of Early-Career Teachers
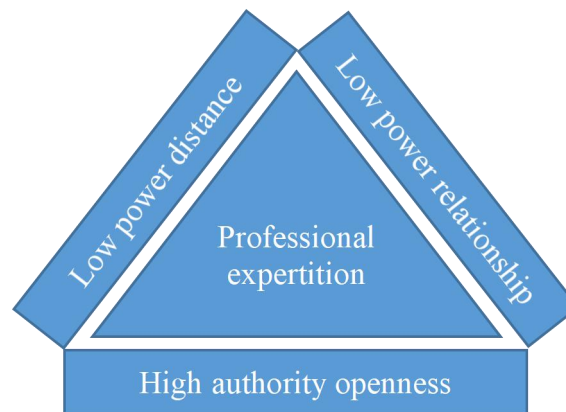
Within such a conducive cultural environment, early-career teachers' capacity is scaffolded both in professional knowledge and skills to lead as instructional or pedagogical leaders, and with effective leadership strategies to build good working relationship with various stakeholders. As such, the gained *professional expertition* (professional expertise and recognition) further enhances early-career teachers' confidence and efficacy to lead within classrooms and beyond in wider school communities. The encapsulated teacher leadership from early-career teachers bears the premise to lead as change agents to drive teacher quality, school improvement, and most importantly, students' learning and development. As Wang and Ho (2019) appealed to that, there is a quest for teacher leadership in 21st century in Chinese school contexts to drive teacher development and school effectiveness. It also strongly resonates the original and primary purpose of promoting teacher leadership:

> "Within every school there is a sleeping giant of teacher leadership that can be a strong catalyst for making changes to improve student learning by using the energy of teacher leaders as agents of school change, public education will stand a better chance of ensuring that every child has a high-quality teacher". (Katzenmeyer and Moller, 2009, p.2)

A List of References

Ali, T. (2014). Development of teacher leadership: a multi-faceted approach to bringing about improvements in rural elementary schools in Pakistan. *Professional Development in Education, 40*(3), 352-375. DOI: 10.1080/19415257.2013.828238

Aliakbari, M., & Sadeghi, A. (2014). Iranian teachers' perceptions of teacher leadership practices in schools. *Educational Management Administration & Leadership, 42*(4), 576-592.

Allen, D. (2016). The resourceful facilitator: teacher leaders constructing identities as facilitators of teacher peer groups. *Teachers and Teaching*, *22*(1), 70-83. DOI: 10.1080/13540602.2015.1023029

AL-OMARI, A. (2013). Leadership Frame Preference of Jordanian Schools Principals' as Perceived by their Teachers: The Bolman and Deal Four Frames Model. *European Journal of Social Sciences, 38*(2), 252-262.

Anderson, K. D. (2004). The nature of teacher leadership in schools as reciprocal influences between teachers and principals. *School Effectiveness and School Leadership, 15*(1), 97-113. https://doi.org/10.1076/sesi.15.1.97.27489

Angelle, P., & Teague, G. (2014). Teacher leadership and collective efficacy: Teacher perceptions in three US school districts. *Journal of Educational Administration, 52*(6), 738-753.

Anney, V. N. (2014). Ensuring the quality of the findings of qualitative research: Looking at trustworthiness criteria. *Journal of Emerging Trends in Educational Research and Policy Studies, 5*(2), 272-281.

Arpacı-Somuncu, D. (2016). The influence of pre-service teacher identity and personality traits on teacher self-efficacy. *International Journal of Social Sciences and Education Research, 2* (4), 1290-1296.

Asiamah, N., Mensah, H. K., & Oteng-Abayie, E. (2017). General, Target, and Accessible Population: Demystifying the Concepts for Effective Sampling. *The Qualitative Report, 22*(6), 1607-1621.

Avidov-Ungar, O., Friedman, I., & Olshtain, E. (2014). Empowerment amongst teachers holding leadership positions. *Teachers and Teaching, 20*(6),704-720.

Babbie, E. (2010). *The Practice of Social Research* (12th edition). USA: Wadsworth, Cengage Learning.

Bandura. A. (1997). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*, 191-215.

Bangs, J., & Frost, D. (2015). Non-positional Teacher Leadership: Distributed leadership and self-efficacy in R. Kneyber and J. Evers (Eds.) *Flip the System: Changing Education from the Ground Up.* London: Routledge.

Bauman, C. (2015). A refreshing perspective on teacher leadership: how teacher leaders effectively combine the use of autonomy and collaboration to enhance school improvement. *Leading and Managing, 21*(2), 46-59.

Bell, (2014). Rethinking quality in qualitative research. *AJRH, 22* (3), 90-91.

Bellibaş, M.Ş., Gümüş, S., & Kılınç, A.Ç. (2020). Principals supporting teacher leadership: the effects of learning-centered leadership on teacher leadership practices with the mediating role of teacher agency. *European journal of education, 55* (2), 200–216. doi:10.1111/ejed.12387

Bencsik, A., & Machova, R. (2016). Knowledge sharing problems from the viewpoint of intergeneration management. *ICMLG2016-4th International Conference on Management, Leadership and Governance: ICMLG2016*, 42.

Berry, B. (2013). Teacherpreneurs: A bold brand of teacher leadership for 21st Century teaching and learning. *Science*, *340*(6130), 309-310.

Berry, B., Daughtrey, A., & Wieder, A. (2010). A better system for schools: Developing, supporting and retaining effective teachers. *New York and Hillsborough, NC: Teachers Network and the Center for Teaching Quality*, 1997-1999.

Bogdan, R. C., & Biklen, S. K. (2007). *Research for education: An introduction to theories and methods.* New York: Pearson.

Bolman, L., & Deal, T. (2008). *Reframing Organizations 4th Edition.* San Francisco. Jossey-Bass.

Bowman, R. F. (2005). Teacher as servant leader. The Clearing House: A Journal of Educational Strategies. *Issues and Ideas, 78*(6), 257-260.

Boylan, M. (2018). Enabling adaptive system leadership: Teachers leading professional development. *Educational Management Administration & Leadership, 46*(1), 86–106.

Brenton, A. L., & Driskill, G. W. (2010). *Organizational culture in action: a cultural analysis workbook.* Thousand Oaks: Sage Publications.

British Educational Research Association. (2018). *Ethical Guidelines for Educational Research.* London: BERA.

Bronfenbrenner, U. (2005). *Making human beings human: Bioecological perspectives on human development*. Thousand Oakes, CA: Sage Publications.

Brooks, J., Scribner, J., & Eferakorho, J. (2004). Teacher leadership in the context of whole school reform. *Journal of School Leadership, 14*, 242–265.

Brown, M. E., & Treviño, L. K. (2006). Ethical leadership: a review and future directions. *The Leadership Quarterly, 17*(6), 595–616.

Brundrett, M., & Rhodes, C. (2014). *Researching educational leadership and management.* London: Sage Publications.

Bryk, A. S., & Schneider, B. (2003). Trust in schools: A core resource for school reform. *Educational Leadership, 60*(6), 40-44.

Bufalino, G. (2018). *Servant-leadership as an effective model for teacher leadership.* doi: 107346/-fei-XV-02-17_12

Burke, C. S., Sims, D. E., Lazzara, E. H., & Salas, E. (2007). Trust in leadership: A multi-level review and integration. *The Leadership Quarterly, 18*, 606–632.

Bush, T. (2007). Educational leadership and management: Theory, policy, and practice. *South African Journal of Education, 27*(3), 391-406.

Bush, T. (2011). *Theories of Educational Leadership and Management* (4th edition). Sage, London.

Bush, T. (2012). Authenticity in research: reliability, validity and triangulation. In: Briggs, A. R. J., Coleman, M., & Morrison, M. (2012). *Research methods in educational leadership and management.* London: Sage Publications.

Bush, T. (2014). Instructional and transformational leadership: alternative and complementary models? *Educational Management Administrative and Leadership, 45*(2), 193-195.

Bush, T. (2016). School leadership and management in England: the paradox of simultaneous centralisation and decentralisation. *Research in Educational Administration and Leadership*, *1* (1), 1-23.

Bush, T. (2018). Distributed leadership and bureaucracy: changing fashions in educational leadership. *Educational Management, Administration and Leadership, 47*(1), 3-4.

Bush, T., Glover, D., Ng, A.Y. M., & Romero, M. J. (2016). Master teachers as teacher leaders: evidence from Malaysia and the Philippines. *International Studies in Educational Administration*, *43*(2),19-40.

Bush, T., & Ng, A.Y. M. (2019). "Distributed leadership and the Malaysia Education Blueprint: From prescription to partial school-based enactment in a highly centralised context". *Journal of Educational Administration*, *57*(3), 279-295. https://doi.org/10.1108/ JEA-11-2018-0206

Bush, T., & Qiang, H.Y. (2002). Leadership and culture in the Chinese education in Walker and Dimmock, C. (Eds.) *School Leadership and Administration: Adopting a Cultural Perspective.* Routledge Falmer, New York, NY and London, 173-186.

Carpenter, D. (2015). School culture and leadership of professional learning communities. *International Journal of Educational Management, 29*(5), 682-694.

Cawthon, D. L. (1996). Leadership: The great man theory revisited. *Business Horizons*, *39*(3), 1-4. doi:10.1016/S0007- 6813(96)90001-4

Chen, J. (2019). Teacher emotions in their professional lives: implications for teacher development. *Asia-Pacific Journal of Teacher Education.* DOI: 10.1080/1359866X.2019.1669139

Chen, Z., & Lu, N. (2010b). Zhongguo neidi jiaoshi lingdao de zhang'ai yu tiaojian [Impediments and conditions for teacher leadership in the Mainland China]. *Fudan Education Forum, 8*(3), 54-57.

Cheng, A. Y. N., & Szeto, E. (2016). Teacher leadership development and principal facilitation: Novice teachers' perspectives. *Teaching and Teacher Education,* Elsevier Ltd, *58*, 140–148.

Cheng, T., Chen, J., & Bryant, D. A. (2021). Teacher Leaders' Emotions Mirror Teacher Professionalism via Collegial Trust. *Asia-Pacific Education Researcher.* https://doi.org/10.1007/s40299-021-00551-3

Chesnut, S. R., & Cullen, T. A. (2014). Effects of self-efficacy, emotional intelligence, and perceptions of future work environment on preservice teacher commitment. *The Teacher Educator, 49*(2), 116–132. doi:10.1080/08878730.2014.887168

Choi, A., & Tam, F. (2018). Conceptualizing Distributed Leadership: Diverse Voices of Positional Leaders in Early Childhood Education. *Leadership and Policy in Schools.* DOI: 10.1080/15700763.2018.1513156

Chow, A.W. (2016). Teacher learning communities: the landscape of subject leadership. *International Journal of Educational Management, 30*(2), 287-307.

Coleman, M. (2012). Interviews. In: Briggs, A. R. J., Coleman, M., & Morrison, M. (2012). *Research methods in educational leadership and management.* London: Sage Publications.

Costa, V. (2016). Correlation and regression. *Fundamentals of Statistical Hydrology,* 391-440.

Creswell, J. W. (2013). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches,* London: Sage.

Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches* (4th ed.). Thousand Oaks, CA: Sage.

Creswell, J. W., & Clark, V. L. P. (2011). *Designing and conducting mixed methods research* (2nd ed.): Sage Publications, Inc.

Creswell, J. W., & Miller, L. D. (2000). Determining Validity in Qualitative Inquiry. *Theory Into Practice, 39*(3), 124-130.

Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). Thousand Oaks, CA: Sage.

Crippen, C. (2010). Serve, teach, and lead: It's all about relationships. *In Sight: A Journal of Scholarly Teaching, 5*, 27-36.

Crippen, C., & Willows, J. (2019). Connecting Teacher Leadership and Servant Leadership: A Synergistic Partnership. *Journal of Leadership Education, 18*(2), 171-178.

Crowther, F., Ferguson, M., & Hann, L. (2009). *Developing teacher leaders: how teacher leadership enhances school success.* Thousand Oaks, CA: Corwin Press.

Day, C., & Gu, Q. (2010). *New Lives of Teachers*. London: Routledge.

Day, C., & Gu, Q. (2014a). *Resilient teachers, resilient schools.* London, UK: Routledge.

Day, C., Harris, A., Hadfield, M., Tolley, H., & Berrisford, J. (2000). *Leading Schools in Times of Change.* Maidenhead: Open University Press.

Denscombe, M. (2007). *The Good Research Guide: for small-scale social research projects.* (3rd edition) Maidenhead: Open University Press.

Demir, K. (2015). The effect of organizational trust on the culture of teacher leadership in primary schools. *Educational Sciences: Theory and Practice, 15*(3), 621-634.

Dimmock, C., Tan, C. Y., Nguyen, D., Tran, T. A., & Dinh, T. T. (2020). Implementing education system reform: Local adaptation in school reform of teaching and learning. *International Journal of Educational Development*, 80. doi: 10.1016/j.ijedudev.2020.102302

Dimmock, C., & Walker, A. (2000). School culture and school leadership: Charting the way ahead. *Asia-Pacific Journal of Education, 20*(2), 110–116.

Donaldson, M. L., Johnson, S. M., Kirkpatrick, C. L., Marinell, W. H., Steele, J. L., & Szczesiul, S. A. (2008). Angling for access, bartering for change: How second-stage teachers experience differentiated roles in schools. *The Teachers College Record, 110* (5), 1088-1114.

DuFour, R., & Marzano, R. (2011). Leaders of learning: *How district, school and classroom leaders improve student achievement.* Bloomington, IN: Solution Tree Press.

Durias, R. F. (2010). *Teacher leaders of color: the impact of professional development on their leadership.* Retrieved from https://search.proquest.com/docview/819911603?pq-origsite=gscholar on 20 November 2017

Evans, L. (2011). What Research Administrators Need to Know about Researcher Development: Towards a New Conceptual Model. *Journal of Research Administration, 42*(1), 15-37.

Evans, L. (2014). Leadership for professional development and learning: enhancing our understanding of how teachers develop. *Cambridge Journal of Education, 44*(2), 179-198.

Fairman, J., & Mackenzie, S. (2012). Spheres of teacher leadership action for learning. Retrieved from https://doi.org/10.1080/19415257.2012.657865 acceSSBd on 22 November 2017

Farh, J. L., & Cheng, B. S. (2000). A cultural analysis of paternalistic leadership in Chinese organizations, in: J. T. Li, A. S. Tsui, and E. Weldon (eds) *Management and Organizations in the Chinese Context* (London: Macmillan), 94–127.

Fitzgerald, T. (2012). Documents and documentary analysis. In: Briggs, A. R. J., Coleman, M., & Morrison, M. (2012). *Research methods in educational leadership and management.* London: Sage Publications.

Fred, A., & Singh, G. S. B. (2021). Instructional Leadership Practices in Under-Enrolled Rural Schools in Miri, Sarawak. *Asian Journal of University Education, 11*(7),165-176.

Fried, L., Mansfield, C., & Dobozy, E. (2015). Teacher emotion research: introducing a conceptual model to guide future research. *Issues in Educational Research, 25*(4), 415‐441.

Friedman, H. (2011). The myth behind the subject leader as a school key player. *Teachers and Teaching, 17*, 289-302. Retrieved from file:///C:/Users/kabznym/Desktop/The%20myth%20behind%20the%20subject%20leader%20as%20a%20school%20key%20player.pdf accessed on 15 November 2017

Frost, D. (2008). 'Teacher leadership': Values and voice. *School Leadership and Management, 28* (4), 337-352.

Frost, D. (2012). From professional development to system change: teacher leadership and innovation. *Professional Development in Education, 38*(2), 205-227. DOI: 10.1080/19415257.2012.657861

Fruehauf, J., Al-Khalifa, F., & Coniker, J. (2015). Using the Bolman and Deals Four Frames in Developing a Data Governance Strategy. *Issues In Information Systems, 16*, 161-167.

Fullan, M. (2004). *Leadership and sustainability: some thinkers in action.* Thousand Oaks, CA: Corwin.

Gibbs, G. (2007). *Analysing qualitative data*. Los Angeles, CA: Sage.

Glesne, C. (2006). Becoming qualitative researchers: *An introduction* (3rd ed.). Boston, MA: Pearson.

Grant, C. (2006). Emerging Voices on Teacher Leadership: Some South African Views. *Educational Management Administration & Leadership*, *34*(4), 511–532.

Gray, D. E. (2013). *Doing research in the real world.* Sage.

Greenleaf, R. (2003). *The servant leader within: A transformative path.* Mahwah, NJ: Paulist Press.

Gu, L. M., Chen J., & Li, J. C. (2015). The leadership of banzhuren in Chinese school: Based on the sample survey in Changzhou City of China. *Journal of Education and Human Development, 4*(4), 102–114. doi: 10.15640/jehd.v4n4a13

Gu, M. Y. (2009). Teachers should become educators. *Journal of the Chinese Society of Education, 3*, 35-38. [In Chinese]

Gu, Q., & Day, C. (2007). Teachers resilience: A necessary condition for effectiveness. *Teaching and Teacher Education, 23*, 1302–1316. doi:10.1016/j.tate.2006.06.006

Gu, Q., & Day, C. (2013). Challenges to teacher resilience: conditions count. *British Educational Research Journal, 39*, 22–44.

Gu, Y. Q., & Wu, Y.A. (2014). Voices from Chinese teacher-educators. *Language Teaching Research, 18*(2), 146-151.

Guba, E. G. (1990). *The paradigm dialog.* New-bury Park, CA: Sage.

Guetterman, T. C., & Fetters, M. D. (2018). Two Methodological Approaches to the Integration of Mixed Methods and Case Study Designs: A Systematic Review. *American Behavioral Scientist, 62*(7), 900 – 918.

Gul, T., Demir, K., & Criswell, B. (2019). Constructing Teacher Leadership Through Mentoring: Functionality of Mentoring Practices in Evolving Teacher Leadership. *Journal of Science Teacher Education, 30(*3), 209-228. DOI: 10.1080/1046560X.2018.1558655

Hairon, S., & Dimmock, C. (2012). Singapore Schools and Professional Learning Communities: Teacher Professional Development and School Leadership in an Asian Hierarchical System. *Educational Review, 64* (4), 405–424.

Hairon, S., Goh, J. W. P., & Chua, C. S. K. (2015). Teacher leadership enactment in professional learning community contexts: towards a better understanding of the phenomenon. *School Leadership & Management, 35*(2), 163-182. doi:10.1080/13632434.2014.992776

Hallam, P., Chou, P., Hite, J., & Hite, S. (2012). Two contrasting models for mentoring as they affect retention of beginning teachers. *NASSP Bulletin*, *96*(3), 243-278.

Hallinger, P. (2005). Instructional leadership and the school principal: A passing fancy that refuses to fade away. *Leadership and Policy in Schools, 4*(3), 221- 239.

Hallinger, P., & Huber, S. (2012). School leadership that makes a difference: international perspectives. *School Effectiveness and School Improvement, 23*(4), 359-367. DOI: 10.1080/09243453.2012.681508

Hallinger, P., & Liu, S. (2016). Leadership and teacher learning in urban and rural schools in China: Meeting the dual challenges of equity and effectiveness. *International Journal of Educational Development*, *51*, 163–173. https://doi.org/10.1016/j.ijedudev.2016.10.001

Hallinger, P., Walker, A., Nguyen, D. T. H., Truong, T., & Nguyen, T. T. (2017). Perspectives on principal instructional leadership in Vietnam: a preliminary model. *Journal of Educational Administration, 55*(2), 222-239. doi:10.1108/JEA-11-2015-0106

Hallinger, P., Wang, W. C., & Chen, W. C. (2013). Assessing the measurement properties of the Principal Instructional Management Rating Scale. *A meta-analysis of reliability studies. Educational Administration Quarterly, 49*(2), 272–309.

Hands, C. M. (2012). Supporting teacher leadership for partnership. In S. Auerbach (Ed.). *School Leadership for Authentic Family and Community partnership,* 173-192. New York: NY: Tylor & Francis.

Harris, A. (2003). Teacher leadership a distributed leadership: heresy, fantasy or possibility? *School Leadership and Management, 23*(3), 313-324. Retrieved from https//doi.org/10.1080/1363243032000112801 accessed on 20 November 2017.

Harris, A. (2010). *Distributed leadership: evidence and implications.* In T. Bush, L. Bell, & D. Middlewood (Eds.), *The principles of educational leadership and management* (2nd ed., pp.). London: Sage.

Harris, A. (2013). Distributed Leadership: Friend or Foe? *Educational Management Administration and Leadership, 41*(5), 545-554.

Harris, A., & Jones, M. (2019). Leading professional learning with impact. *School Leadership & Management, 39*(1), 1-4. DOI: 10.1080/13632434.2018.1530892

Harris, A., & Jones, M. (2019). Teacher leadership and educational change. *School Leadership & Management, 39*(2), 123-126. DOI: 10.1080/13632434.2019.1574964

Harris, A., Jones, M., & Crick, T. (2020). Curriculum leadership: a critical contributor to school and system improvement. *School Leadership & Management, 40*(1), 1-4. DOI: 10.1080/13632434.2020.1704470

Harris, A., & Muijs, D. (2005). *Improving schools through teacher leadership.* New York, NY: Open University Press.

Harrison, C., & Killion, J. (2007). Ten roles for teacher leaders. *Educational Leadership, 65*(1), 74-77.

Hasan, N. (2020). *Multiple Regression Using SPSS Presented by Nasser Hasan - Statistical Supporting Unit.* DOI:10.13140/RG.2.2.30372.71049

He, P., & Ho, D. (2017). Leadership for school-based teacher professional development: The experience of a Chinese preschool. *International Journal of Leadership in Education, 20*(6), 717-732.

Hibberts, M. F., & Johnson, R. B. (2012). Mixed methods research. In: Briggs, A. R. J., Coleman, M., & Morrison, M. (2012). *Research methods in educational leadership and management.* London: Sage Publications.

Ho, D., & Tikly, L.P. (2012). Conceptualizing teacher leadership in a Chinese, policy-driven context: a research agenda. *School Effectiveness and School Improvement, 23*(4), 401-416.

Hoban, G. F. (2002). *Teacher Learning for Educational Change: A Systems Thinking Approach.* Buckingham: Open University Press.

Hobson, A., Ashby, P., Malderez, A., & Tomlinson, P. (2009). Mentoring beginning teachers: What we know and what we don't. *Teaching and Teacher Education, 25*, 207–216.

Hochstetler, D. (2014). John R. Wooden, Stephen R. Covey and Servant Leadership. *International Journal of Sports Science & Coaching*, *9* (1), 45-48.

Hofstede, G. (2010). *Cultures and organizations.* New York, NY [u.a.]: McGraw-Hill.

Hofstede, G. (2011). Dimensionalizing cultures: The Hofstede model in context. *Online Reading in Psychology and Culture, 2*(1), 2-26.

Hofstede, G., & Bond, M.H. (1988). The Confucius connection: from cultural roots to economic growth. *Organizational Dynamics, 17*, 4–21.

Hong, J. Y. (2012). Why do some beginning teachers leave the school, and others stay? Understanding teacher resilience through psychological lenses. *Teachers and Teaching: Theory and Practice, 18*(4), 417–440. doi:10.1080/13540602.2012.696044

Hoy, W. K., & Tschannen-Moran, M. (2003). The conceptualization and measurement of faculty trust in schools: The omnibus T-Scales. *Studies in Leading and Organizing Schools, 181-2008.* Retrieved from http://mxtsch.people.wm.edu/research_tools.php

Huang, L., & Pang, N. S. K. (2018). Relationship between teacher capacity of professional learning and teacher self-efficacy: Evidence from structural equation modelling. *New Trends and Issues Proceedings on Humanities and Social Sciences* [Online], *5*(1), 141–147. Available from: www.prosoc.eu

Hudson, P. (2012). How Can Schools Support Beginning Teachers? A Call for Timely Induction and Mentoring for Effective Teaching. *Australian Journal of Teacher Education, 37*(7). http://dx.doi.org/10.14221/ajte.2012v37n7.1

Huerta, J., Watt, K.M., & Alkan, E., (2008). Exploring the relationship between AVID professional development and teacher leadership. *Academic leadership, 6* (1), 1–10.

Hui, L. S., & Singh, G. S. B. (2020). The influence of instructional leadership on learning organisation at high performing primary schools in Malaysia. *Asian Journal of University Education, 16*(2), 69-76.

Hulpia, H., & Devos, G. (2010). How distributed leadership can make a difference in teachers' organizational commitment? A qualitative study. *Teaching and Teacher Education, 26*, 565 – 575.

Hunzicker, J. L. (2012). Professional development and job-embedded collaboration: How teachers learn to exercise leadership. *Professional Development in Education, 38*(2), 267-289.

Hunzicker, J. L. (2017). Using Danielson's Framework to Develop Teacher Leaders. *Kappa Delta Pi Record, 53*(1), 12-17.

Ismail, N., Kinchin, G., & Edwards, J. (2018). Pilot Study, Does It Really Matter? Learning Lessons from Conducting a Pilot Study for a Qualitative PhD Thesis. *International Journal of Social Science Research, 6*(1), 1-17.

Javadi, V. (2017). *Middle Leadership in Malaysian International Secondary Schools: The Intersection of Instructional, Distributed and Teacher Leadership.* Electronic Theses and Dissertations. Unpublished paper, University of Nottingham, Semenyih, Malaysia.

Javadi, V., Bush, T., & Ng, A. Y. M. (2017). Middle leadership in international schools: evidence from Malaysia. *School leadership and management, 37*(5), 476–499.

Jin, J. (2007). *Research on teacher leadership in elementary and secondary school.* Unpublished PhD dissertation. Northwest Normal University. [In Chinese].

Johnson, S. M. (2004). The Project on the Next Generation of Teachers. *Finders and keepers: Helping new teachers survive and thrive in our schools.* Jossey-Bass.

Johnson, S. M. (2019). *Where teachers thrive: Organizing schools for success.* Harvard Education Press.

Johnson, R. B., & Christensen, L. (2014). *Educational Research: qualitative, quantitative and mixed approaches.* California: Sage Publications.

Jurasaite-Harbison, E., & Rex, L. A. (2010). School cultures as contexts for informal teacher learning. *Teaching and Teacher Education, 26* (2), 267-277.

Katzenmeyer, M., & Moller, G. (2009). *Awakening the sleeping giant: Helping teachers develop as leaders.* Thousand Oaks, CA: Sage.

Kelchtermans, G. (2004). CPD for Professional Renewal: Moving beyond knowledge for practice. In Day, C. and Sachs, J. (eds.) I*nternational Handbook on the Continuing Professional Development of Teachers. Maidenhead, England*: Open University Press.

Kennedy, A. (2005). Models of Continuing Professional Development: a framework for analysis. *Journal of In-service Education, 31* (2), 235-250.

Klassen, R. M., & Chiu, M. (2011). The occupational commitment and intention to quit of practicing and pre-service teachers: Influence of self-efficacy, job stress, and teaching context. *Contemporary Educational Psychology, 36*, 114–129.

Klassen, R. M., Tze, V. M. C., Betts, S. M., & Gordon, K. A. (2011). Teacher efficacy research 1998-2009: signs of progress or unfulfilled promise? *Educational Psychology Review, 23*, 21-43. doi:10.1007/s10648-010-9141-8

Klinker, J.F.,Watson, P.A., Furgerson., Halsey, P. & Janisch, C. (2010). "Tipping" teachers toward change: developing leadership characteristics through book club. *Teacher Education and practice, 23,* 103-119.

Kouhsari, M., & Bush, T. (2020). Coming on board: problems facing novice principals in Iran. *International Journal of Leadership in Education.* DOI: 10.1080/13603124.2020.1797179

Kyza, E. A., & Georgiou, Y. (2014). Developing in-service science teachers' ownership of the PROFILES pedagogical framework through a technology-supported participatory design approach to professional development. *Science Education International, 25* (2), 57-77.

Lai, E., & Cheung, D. (2015). Enacting teacher leadership. *Educational Management Administration & Leadership, 43*(5), 673-692.

Lambert, L. (1998). *Building leadership capacity in schools.* Alexandria, VA: Association for Supervision and Curriculum Development.

Lambert, L. (2003). Leadership redefined: An evocative context for teacher leadership. *School Leadership & Management, 23*(4), 421-430.

Lancaster, G.A., Dodd, S., & Williamson, P. R. (2004). Design and analysis of pilot studies: recommendations for good practice. *J Eval Clin Pract, 10* (2), 307–12.

Le Cornu, R. (2013). Building early career teacher resilience: The role of relationships. *Australian Journal of Teacher Education, 38*, 1–16.

Leithwood, K., Harris, A., & Hopkins, D. (2020). Seven strong claims about successful school leadership revisited. *School Leadership & Management, 40* (1), 5-22. DOI: 10.1080/13632434.2019.1596077

Leithwood, K., Janti, D., Dimmock, C., Goh, J.W.P., Mulford, B., Kendall, D., & Hadfield, M. (2012). School leaders: challenging roles and impact on teacher and school effectiveness. *Educational Management Administration & Leadership, 42*(3), 37-41.

Leithwood, K., & Mascall, B. (2008). Collective leadership effects on student achievement. *Educational administration quarterly, 44* (4), 529–561.

Lewicki, R., & Tomlinson, E. (2003). *Trust and trust building. Beyond Intractability.* Retrieved from http://www.beyondintractability.org/essay/trust-building

Li, J. (2006). *Analysis of the implementation of teacher education policy in China since the 1990s: A case study.* (Doctoral dissertation, University of Maryland). Retrieved from http://drum.lib.umd.edu/bitstream/1903/4150/1/umi-umd-3945.pdf

Li, L., & Liu, Y. (2020). An integrated model of principal transformational leadership and teacher leadership that is related to teacher self-efficacy and student academic performance. *Asia Pacific Journal of Education.* https://doi.org/10.1080/02188791.2020.1806036

Li, L., Worch, E., Zhou, Y., & Aguiton, R. (2015). How and Why Digital Generation Teachers Use Technology in the Classroom: An Explanatory Sequential Mixed Methods Study. *International Journal for the Scholarship of Teaching and Learning, 9*(2), 1-11.

Li, Q. (2005). Hezuo: Jiaoshi zhuanye fazhan de lixianghua moshi [Collaboration: An ideal developing model for teacher professional development]. *Educational Theory and Practice, 8*(1), 16-20.

Liang, J. G., & Wang, F. Y. (2019). Teacher Leadership? Voices of Backbone Teachers in China. *Journal of School Leadership, 29* (3), 229-247.

Liao, W., & Yuan, R. (2017). Understand an emerging "failure" of an equality-oriented teacher policy in China: A job search perspective. *International Journal of Educational Research, 81*, 71–82.

Lieberman, A. (2015). Introduction to: Creating the conditions for learning: Teachers as leaders. *The Educational Forum, 79*(1), 3–4. DOI:10.1080/00131725.2015.972795

Limon, İ., Dilekçi, Ü., & Demirer, S. (2021). The mediating role of initiative climate on the relationship between distributed leadership and organizational resilience in schools. *International Journal of Contemporary Educational Research, 8*(1), 128-144. DOI: https://doi.org/10.33200/ijcer.829411

Liu, P. (2021). Understanding the relationship between teacher leadership and collective teacher efficacy in Chinese urban primary schools. *International Journal of Leadership in Education.* DOI: 10.1080/13603124.2021.1884748

Liu, P., Liu, L., & Xie, Y. (2018). Leadership of class teachers (Banzhuren) in improving student learning: Case studies of Chinese primary schools. *Frontiers of Education in China, 13*(1), 28-55.

Liu, S. N., Hallinger, P. & Feng, D. M. (2016). Learning-centered leadership and teacher learning in China: does trust matter? *Journal of Educational Administration, 54*(6), 661-682.

Liu, S., Xu, X., Grant, L., Strong, J., & Fang, Z. (2017). Professional standards and performance evaluation for principals in China: a policy analysis of the development of principal standards. *Educational Management Administration & Leadership, 45*(2), 238–259.

Liu, Y., Bellibas, M. S., & Printy, S. (2018). How school context and educator characteristics predict distributed leadership: A hierarchical structural equation model with 2013 TALIS data. *Educational Management Administration & Leadership,46* (3), 401–423.

Liu, Y., & Watson, S. (2020). Whose leadership role is more substantial for teacher professional collaboration, job satisfaction and organizational commitment: a lens of distributed leadership, *International Journal of Leadership in Education.* DOI: 10.1080/13603124.2020.1820580

Loden, T. (2006). *Rediscovering Confucianism: A Major Philosophy of Life in East Asia* (UK: Global Oriental Ltd).

Lodhi, A. S. (2012). A pilot study of researching the research culture in Pakistani public universities: the academics' perspective. *Procedia - Social and Behavioral Sciences 31,* 473 – 479.

Lord, R. G., & Hall, R. J. (2005). Identity, deep structure and the development of leadership skill. *The Leadership Quarterly, 16*(4), 591-615.

Lu, N., & Chen, Z. (2007). Empowering teachers: Teacher leadership in teacher professional development. *Teacher Education Research,* (4), 1–5.

Ma, K., & Trevethan, R. (2020). Efficacy Perceptions of Preservice and Inservice Teachers in China: Insights Concerning Culture and Measurement. *Frontiers of Education in China, 15* (2), 332-368.

Mangin, M. (2007). Facilitating elementary principals' support for instructional teacher leadership. *Educational Administration Quarterly, 43*(3), 319-357.

Mangin M. M., & Stoelinga, S. R. (2008). *Effective teacher leadership: Using research to inform and reform.* New York, NY: Teachers College Press.

Mansor, A. N., Nasaruddin, M.Z.I.M., & Hamid, A.H.A. (2021). The effects of school climate on sixth form teachers' self-efficacy in Malaysia. *In Sustainability (Switzerland), 13*(4), 1-14.

Mansor, A.N., Vikaraman, S.S., Medina, N.I., & Alias, B.S. (2019). Managing school-based assessment: Challenges and solutions for educational practice. *International Journal of Innovation, Creativity and Change, 7*(7), 63-84.

Mansor, M., Yusuf, H., Norwani, N.M., & Jalil, N.A. (2017). Models for Professional Learning: An Imperative for Enhancing Teacher Leadership. *International Journal of Academic Research in Business and Social Sciences, 7* (9). ISSN: 2222-6990.

Mansour, N., Heba, E. D., Alshamrani, S., & Aldahmash, A. (2014). Rethinking the theory and practice of continuing professional development: science teachers' perspectives. *Research in Science Education,*1-25.

Margolis, J. (2012). Hybrid teacher leaders and the new professional development ecology. *Professional Development in Education, 38*(2), 291-315.

McKenzie, K.B., & Locke, L.A. (2014). Distributed leadership: a good theory but what if leaders won't, don't know how, or can't lead. *Journal of School Leadership, 24*(1), 164-188.

Merriam, S. B., & Tisdell, E. J. (2016). *Qualitative research: A guide to design and implementation* (4th ed.). San Francisco, CA: Jossey-Bass.

Militello, M., & Berger, J. (2010). Understanding educational leadership in North‐west China. *International Journal of Leadership in Education: Theory and Practice, 13*(2), 185-202.

Ministry of Education (2001). *The curriculum reform guidelines for the nine-year compulsory education (trial version).* Retrieved from http://edu.cn/20010926/3002911.shtml (accessed 12 Jan 2018).

Ministry of Education (2010, July 29). *National Education Reform and Development of Long- and-middle-term Planning (2010-2020).* Beijing: MoE. [In Chinese].

Ministry of Education. (2016). Enhancing your strengths — career tracks. Retrieved from https://www.moe.gov./careers/teach/career-information

Ministry of Education (2017). *National Educational Development the 13th Five-year Plan.* Beijing: MoE. [In Chinese].

Mohamed, A., Razak, A., & Abdullah, Z. (2018). Teacher leadership and teacher professional learning in schools of Maldives. *International Online Journal of Educational Leadership, 2* (2), 36-50.

Morgan, D. L. (2007). Paradigms lost and pragmatism regained: Methodological implications of combining qualitative and quantitative methods. *Journal of Mixed Methods Research, 1*(1), 48-76.

Morris, N. (2012). *Learning and teaching with emerging technologies: Preservice pedagogy and classroom realities.* Electronic Theses and Dissertations.

Muijs, D. (2012). Surveys and Sampling. In: Briggs, A. R. J., Coleman, M., & Morrison, M. (2012). *Research methods in educational leadership and management,* London: Sage Publications.

Muijs, D., Chapman, C., & Armstrong, P. (2013). Can Early Careers Teachers Be Teacher Leaders? A Study of Second-year Trainees in the Teach First Alternative Certification Programme. *Educational Management Administration & Leadership*, *41*(6), 767–781.

Muijs, D., & Harris, A. (2003). Teacher Leadership – Improving through Empowerment? An Overview of the Literature. *Educational Management & Administration, 31* (4), 437–448. doi:10. 1177/0263211X030314007

Muijs, D., & Harris, A. (2006). Teacher led school improvement: Teacher leadership in the UK. *Teaching and Teacher Education, 22*(8), 961-972.

Muijs, D., & Harris, A. (2007). Teacher leadership in action. *Educational Management Administration & Leadership, 35*(1), 111-134.

Mullen, C. A., & Browne-Ferrigno, T. (2018). Teacher Leadership and Teaming: Creativity within Schools in China. *Research in Educational Administration & Leadership, 3* (2), 231-255.

Murphy, J. (2005) *Connecting teacher leadership and school improvement.* Thousand Oaks, CA: Corwin Press.

Murphy, J., & Torres, D. (2014). *Creating Productive Cultures in Schools for Students, Teachers, and Parents.* Corwin Press, Thousand Oaks, CA.

Nappi, J.S. (2014). The teacher leader: Improving schools by building social capital through shared leadership. *Delta Kappa Gamma Bulletin, 80*(4), 29–34.

National Bureau of Statistics of China (2017). http://www.stats.gov.cn/2017

National Bureau of Statistics of China (2019). http://www.stats.gov.cn/2019

Neumerski, C. M. (2013). Rethinking instructional leadership, a review: What do we know about principal, teacher, and coach instructional leadership, and where should we go from here? *Educational Administration Quarterly, 49,* 310-347.

Ng, A. Y. M. (2017). School leadership preparation in Malaysia: Aims, content and impact. *Educational Management Administration and Leadership, 45*(6), 1002 – 1019. https://doi.org/ 10.1177/1741143216662922

Ng, A. Y. M., Subramaniam, G., & Li, L. (2018). Teacher leadership within and outside the classroom. In: Adams, D. (eds) *Mastering theories of educational leadership and management.* University of Malaya Press.

Nguyen, D., Harris, A., & Ng, D. (2019). A review of empirical research on teacher leadership (2003-2017). *Journal of Educational Administration.* https://DOI10.1108/JEA-02-2018-0023

Nolan, B., & Palazzolo, L. (2011). New teacher perceptions of the 'teacher leader' movement. *NASSP Bulletin, 95*(4), 302–318.

Noland, A., & Richards, K. (2015). Servant Teaching: An Exploration of Teacher Servant Leadership on Student Outcomes. *Journal of the Scholarship of Teaching and Learning, 15* (6), 16-38.

O'Dwyer, L.M., & Bernauer, J.A. (2013). *Quantitative research for the qualitative researcher.* Thousand Oaks, CA: Sage.

OECD. (2017). *Education at a glance 2017.* Paris: Organisation for Economic Co-operation and Development.

Opfer, V.D., & Pedder, D. (2011). "Conceptualizing teacher professional learning". *Review of Educational Research*, *8*(3), 376-407.

Pang, N. S., & Miao, Z. (2017). The Roles of Teacher Leadership in Shanghai Education Success. Current Business and Economics Driven Discourse and Education: *Perspectives from Around the World BCES Conference Books*, 15, 93-101.

Pang, N. S. K., & Wang, T. (2016). Professional Learning Communities: Research and Practices across Six Educational Systems in the Asia-Pacific Region. *Asia Pacific Journal of Education, 36*(2), 193-201.

Papatraianou, L. H., & Le Cornu, R. (2014). Problematising the Role of Personal and Professional Relationships in Early Career Teacher Resilience. *Australian Journal of Teacher Education, 39*(1). http://dx.doi.org/10.14221/ajte.2014v39n1.7

Park, J.H., & Ham, S.H. (2016). Whose perception of principal instructional leadership? Principal–teacher perceptual (dis)agreement and its influence on teacher collaboration. *Asia Pacific Journal of Education, 36*(3), 450–469.

Peng, W. J., McNess, E., Thomas, S., Wu, X. R., Zhang, C., Li, J. Z., & Tian, H. S. (2014). Emerging Perceptions of Teacher Quality and Teacher Development in China. *International Journal of Educational Development, 34*, 77–89.

Poekert, P. E. (2012). Teacher leadership and professional development: examining links between two concepts central to school improvement. *Professional Development in Education, 38*(2), 169-188.

Poekert, P., Alexandrou, A. & Darbianne, S. (2016). How Teachers become Leaders: an Internationally Validated Theoretical Model of Teacher Leadership Development. *Research in Post-Compulsory Education, 21*(4), 307-329.

Polatcan, M. (2021). An exploration of the relationship between distributed leadership, teacher agency, and professional learning in Turkey. *Professional Development in Education,* DOI: 10.1080/19415257.2021.1905050

Ponder, J. S. (2006). Transformational classroom leadership: The fourth wave of teacher leadership. *Educational Management Administration & Leadership, 34*(4), 533-545.

Ponomarenko, T. (2020). Investigating Teacher Leadership: Fractions of Teacher Lifeworld Experience. SOCIETY. INTEGRATION. EDUCATION. *Proceedings of the International Scientific Conference, 3*, 505.

Ponte, E., & Twomey, S. (2014). Veteran teachers mentoring in training: negotiating issues of power, vulnerability and professional development, *Journal of Education for Teaching, 40*(1), 20-33. DOI: 10.1080/02607476.2013.864015

Price, H. E. (2012). Principal–teacher interactions: How affective relationships shape principal and teacher attitudes. *Educational Administration Quarterly, 48*, 39–85.

Qian, H., & Walker, A. (2013). How principals promote and understand teacher development under curriculum reform in China. *Asia-Pacific Journal of Teacher Education, 41(*3), 304-315. DOI: 10.1080/1359866X.2013.809050

Qian, H., & Walker, A. (2019). Reconciling top-down policy intent with internal accountability: the role of Chinese school principals. *Educational Assessment, Evaluation and Accountability, 31* (4), 495-517.

Qian, H., Walker, A., & Yang, X. (2016). Building and leading a learning culture among teachers: a case study of a Shanghai primary school. *Educational Management Administration & Leadership,* 1-22. doi: 10.1177/1741143215623785.

Reeves, T. D., & Lowenhaupt, R. J. (2016). 'Teachers as leaders: Pre-service teachers' aspirations and motivations'. *Teaching and Teacher Education.* Elsevier Ltd, *57,* 176–187.

Rhodes, C. P. (2012b). Mentoring and Coaching for Leadership Development in Schools, in Fletcher, S.J., and Mullen, C.A. (eds.) *The Sage Handbook of Mentoring and Coaching in Education,* London: Sage.243-256.

Rhodes, C.P. (2013). *The Transformation of Educational Practitioners into Educ ationalResearchers: A view Through a Different Lens. International Studies in Educational Administration, 41*(3), 1-16.

Saldaña , J. (2009). *The coding manual for qualitative researchers.* London: Sage.

Scott, D. (2012). Research design: frameworks, strategies, methods and technologies. In: Briggs, A. R. J., Coleman, M., & Morrison, M. (2012). *Research methods in educational leadership and management.* London: Sage Publications.

Scott, D., & Morrison, M. (2005). *Key ideas in educational research.* London: Continuum International Publishing Group.

Shrestha, N. (2021). Factor Analysis as a Tool for Survey Analysis. *American Journal of Applied Mathematics and Statistics, 9* (1), 4-11. doi: 10.12691/ajams-9-1-2

Singh, G. S. B. (2020). Restructuring the National Professional Qualification for Educational Leaders (NPQEL) in Malaysia: A Summary Report. *International Online Journal of Educational Leadership, 3*(2), 4-21.

Sinha, S., & Hanuscin, D.L. (2017). Development of teacher leadership identity: A multiple case study. *Teaching and Teacher Education, 63*, 356-371.

Smylie, M. A., & Eckert, J. (2018). Beyond superheroes and advocacy: The pathway of teacher leadership development. *Educational Management Administration & Leadership, 46*(4), 556–577. DOI:10.1177/1741143217694893

Spillane, J. P. (2005). *Distributed leadership*. The Educational Forum 69 (Winter): 143–150.

Spillane J. P., Camburn, E., & Lewis, G. (2006). *Taking a distributed perspective in studying school leadership and management: epistemological and methodological trade-offs.* Paper presented to the AERA annual meeting, San Francisco, 2006.

Spillane, J. P., & Healey, K. (2010). Conceptualizing school leadership and management from a distributed perspective: an exploration of some study operations and measures. *The Elementary School Journal, 111*(2), 253-281.

Stanulis, R., & Floden, R. (2009). Intensive mentoring as a way to help beginning teachers develop balanced instruction. *Journal of Teacher Education,* 60, 112–122.

Stein, L. (2014). Leadership: The teacher's imperative. *Journal of Leadership Education, 13*(2), 162-168.

Stone-Johnson, C. (2014). Not cut out to be an administrator: Generations, change, and the career transition from teacher to principal. *Education and Urban Society, 46*(5), 606-625.

Supovitz, J.A. (2018). Teacher leaders' work with peers in a Quasi-formal teacher leadership model. *School Leadership & Management, 38*(1), 53-79. https://doi.org/10.1080/13632434.2017.1389718

Szeto, E. (2020). Influence of professional cultures and principal leadership effects on early-career teacher leadership development in Hong Kong schools. *Professional Development in Education.* DOI: 10.1080/19415257.2020.1770837

Szeto, E., & Cheng, A.Y.N. (2018). Principal–teacher interactions and teacher leadership development: beginning teachers' perspectives. *International Journal of Leadership in Education, 21*(3), 363-379. DOI: 10.1080/13603124.2016.1274785

Tahir, L.M., Musah, M. B., Al-Hudawi, S. H. V., & Daud, K. (2020). Becoming a teacher leader: exploring Malaysian in-service teachers' perceptions, readiness, and challenges. *Education and Science, 45* (202), 283-310.

Tan, C., & Liu, D. (2018). What is the influence of cultural capital on student reading achievement in Confucian as compared to non-Confucian heritage societies? *Compare, 48* (6), 896-914.

Taylor, M., Yates, A., Meyer, L. H., & Kinsella, P. (2011). Teacher professional leadership in support of teacher professional development. *Teaching and Teacher Education, 27*(1), 85-94.

Taylor, P. C., & Medina, M.N.D. (2013). Educational research paradigms: From positivism to multiparadigmatic. Journal for Meaning-Centered Education,1. http://www.meaningcentered.org/journal/volume-01/educational *research-paradigms-from-positivism-to-multiparadigmatic.* Accessed in 11th, June, 2018.

Thien, L.M., Adams, D., & Koh, H.M. (2021). Nexus between distributed leadership, teacher academic optimism and teacher organisational commitment: a structural equation modelling analysis. *International Journal of Educational Management.* DOI 10.1108/IJEM-05-2020-0278

Tissington, L. (2008). A Bronfenbrenner ecological perspective on the transition to teaching for alternative certification. *Journal of Instructional Psychology, 34*(4), 106–110.

Tricarico, K. M., Jacobs, J., & Yendol-Hoppey, D. (2015). Reflection on their first five years of teaching: understanding staying and impact power. *Teachers and Teaching, 21*(3), 237-259. DOI: 10.1080/13540602.2014.953821

Tsai, K. C. (2015). A preliminary meta-analysis of teacher leadership. *Journal of Education and Literature, 3*, 131-137.

Tsai, Y. (2011). Relationship between organizational culture, leadership behavior and job satisfaction. *BMC Health Services Research, 11*(1), 1-9.

Tschannen-Moran, M., & Barr, M. (2004). Fostering student learning: The relationship of collective teacher efficacy and student achievement. *Leadership and Policy in Schools, 3*(3), 187-207. doi: 0.1080/15700760490503706

Tschannen-Moran, M., & Woolfolk Hoy, A. (2001). Teacher efficacy: capturing an elusive construct. *Teaching and Teacher Education,* 17, 783-805.

Tschannen-Moran, M., Woolfolk Hoy, A., & Hoy, W. K. (1998). Teacher efficacy: Its meaning and measure. *Review of Educational Research, 68*, 202–248.

Tschannen-Moran, M., Woolfolk Hoy, A., & Hoy, W. K. (2007). The differential antecedents of self-efficacy beliefs of novice and experienced teachers. *Teaching and Teacher Education, 23*(6), 944-956.

Van Den Bergh, L., Ros, A., & Beijaard, D. (2014). Improving teacher feedback during active learning: effects of a professional development program. *American Educational Research Journal, 51*(4), 772-809.

Van Driel, J. H., & Berry, A. (2012). Teacher professional development focusing on pedagogical content knowledge. *Educational Researcher, 41*(1), 26-28.

Vangrieken, K., Dochy, F., Raes, E., & Kyndt, E. (2015). Teacher collaboration: A systematic review. *Educational research review, 15*, 17-40.

Vermulst, A. A., & Gerris, J.R.M. (2005). *QBF: Quick Big Five Personality Test Manual.* Leeuwarden, The Netherlands: LDC Publications.

Vikaraman, S. S., Mansor, A. N., Hamzah, M. I. M., Medina, N. I., Gurusamy, V., & Nor, M. Y. M. (2020). Understanding the practice of ethical leadership amongst school principals: Evidence from Malaysia. *International Journal of Innovation, Creativity and Change,* (4), 374-388.

Wahyu, I., Moeins, A., & Sunaryo, W. (2021). Enhancing the Organizational Citizenship Behavior: Comparative Research and Ex-Post-Facto Method on Generation X and Generation Y. *International Journal of Science and Management Studies (IJSMS), 4*(1), 22-30. DOI: 10.51386/25815946/ijsms-v4i1p103

Wahab, J. A., Mansor, A. Z., Hussin, M., & Kumarasamy, S. (2020). Headmasters' instructional leadership and its relationship with teachers performance. *Universal Journal of Educational Research, 8*(11), 97-102.

Walker, A., & Qian, H. Y. (2015). Review of research on school principal leadership in mainland China, 1998-2013: Continuity and change. *Journal of Educational Administration, 53* (4), 467-491. https://doi.org/10.1108/JEA-05-2014-0063

Wan, S.W.Y. (2011). *Teachers' Perceptions and Experiences of Continuing Professional Development (CPD): Opportunities and Needs in Hong Kong Primary Schools.*UK: Doctoral dissertation, University of Nottingham.

Wan, S.W.Y., Law, E. H. F., & Chan, K. K. (2018). Teachers' perception of distributed leadership in Hong Kong primary schools. *School Leadership & Management, 38*(1), 102–141.

Wan, S. W.Y., Tse, Y.S., Tsang, W.K., Lee, T., Wong, Y., Wan, A., & Wan, W. (2020). 'Who can support me?': Studying teacher leadership in a Hong Kong primary school. *Educational Management Administration & Leadership, 48*(1), 133-163.

Wang, D., Wang, J., Li, H., & Li, L. (2017). School context and instructional capacity: A comparative study of professional learning communities in rural and urban schools in China. *International Journal of Educational Development,* 52, 1-9.

Wang, F. Y. (2013). *The development of backbone teachers as teacher leaders in mainland China.* Unpublished PhD dissertation, University of Georgia.

Wang, F., & Zepeda, S. (2013). A Comparative Study of Two Schools: How School Cultures Interplay the Development of Teacher Leadership in Mainland China. *Creative Education, 4* (9), 63-68.

Wang, M. (2018). *Perceptions and Its Influencing Factors of Teacher Leadership in Early Childhood Education in China: A Mixed-Methods Study in Xiamen City.* Unpublished PhD dissertation, The Education University of Hong Kong.

Wang, M., & Ho, D. (2019). A quest for teacher leadership in the twenty-first century – emerging themes for future research. *International Journal of Educational Management, 34*(2), 354-372.

Wang, Q.Y. (2008). "Student-facilitators' roles of moderating online discussions". *British Journal of Educational Technology, 39* (5), 859-74.

Wang, T. (2007). Understanding Chinese educational leaders' conceptions in an international education context. *International Journal of Leadership in Education, 10*(1), 71–88.

Wang, T. (2015). Contrived collegiality versus genuine collegiality: Demstifying professional learning communities in Chinese schools. *Compare, 45*(6), 908–930.

Wang, T. (2016). School leadership and professional learning community: case study of two senior high schools in Northeast China. *Asia Pacific Journal of Education*, *36*(2), 202–216. https://doi.org/10.1080/02188791.2016.1148849

Ware, H., & Kitsantas, A. (2007). Teacher and collective efficacy beliefs as predictors of professional commitment. *Journal of educational research, 100*, 303–310.

Watt, K.M., Huerta, J., & Mills, S.J., (2010). Advancement via individual determination (AVID) professional development as a predictor of teacher leadership in the United States. *Professional development in education, 36* (4), 547–562.

Webber, C. F. (2018). *A rationale and proposed design for researching teacher leadership.* Paper presented to the International Research Conference, hosted by the Faculty of Education at Guangxi Normal University in Guilin, China, May 26–27, 2018.

Webber, C., & Nickel, J. (2021). Sustainable teacher leadership. *Research in Educational Administration and Leadership, 6* (1), 277-311.

Wenner, J. A., & Campbell, T. (2017). The theoretical and empirical basis of teacher leadership: A review of the literature. *Review of Educational Research, 87*(1), 134–171.

Wilson, J. (2010). *Essentials of business research: A guide to doing your research project.* London: Sage.

Wong, J. L. N. (2010). Searching for good practice in teaching: A comparison of two subject-based professional learning communities in a secondary school in Shanghai. *Compare: A Journal of Comparative and International Education, 40*(5), 623–639.

Woodhouse, J., & Pedder, D. (2016). Early career teachers' perceptions and experiences of leadership development: balancing structure and agency in contrasting school contexts. *Research Papers in Education, 32*(5), 553-577. DOI: 10.1080/02671522.2016.1225794

Xiao, L. (2016). *Creating a collaborative ESL classroom through teacher leadership : A case study in Guizhou Province , China.* Unpublished Master dissertation, University of Jyväskylä.

Yin, H., Lee, J. C. K., & Wang, W. (2014). Dilemmas of leading national curriculum reform in a global era: A Chinese perspective. *Educational Management Administration & Leadership, 42*(2), 293-311.

Yin, R. K. (2014). *Case study research: design and methods* (5th ed). California: Sage Publications.

York-Barr, J., & Duke, K. (2004). What do we know about teacher leadership? Findings from two decades of scholarship. *Review of Educational Research, 74,* 255–316.

Yost, D. S., Vogel, R., & Liang, L. L. (2009). Embedded teacher leadership: Support for a site-based model of professional development. *International Journal of Leadership in Education, 12*, 409–433.

Yusof, H., Osman, M., & Noor, M. (2016). School Culture and Its Relationship with Teacher Leadership. *International Journal of Academic Research in Business and Social Sciences, 6* (11). ISSN: 2222-6990.

Zhang, J., & Pang, N. S. K. (2016a). Investigating the development of professional learning communities: Compare schools in Shanghai and Southwest China. *Asia Pacific Journal of Education, 36*(2), 217-230.

Zhang, Y. (2011). *Principals' and Teacher Leaders' Perceptions of Their Role and Interaction Under Current Chinese Reform: a Case Study in Shandong.* Unpublished PhD dissertation, Queensland University of Technology.

Zhang, Y. X., & Yin, H. B. (2019). Collaborative cheating among Chinese college students: the effects of peer influence and Individualism-Collectivism orientations. *Assessment & Evaluation in Higher Education.* https://doi.org/10.1080/02602938.2019.1608504

Zhao, Q. (2012). Ruhe pingjia xiaozhang de jiaoxue lingdaoli [How to evaluate principals' instructional leadership]. *Zhongxiaoxue guanli[Primary and Secondary Schools Management]*, 6, 8–11.

Zheng, X., Shen, A., & Yin, H. (2018). What professional learning community do Chinese teachers need? An investigation on teachers' job satisfaction and teaching efficacy. *Global Education, 47* (12), 77–88. (in Chinese).

Zheng, X., Shi, X., & Liu, Y. (2020). Leading teachers' emotions like parents: Relationships between paternalistic leadership, emotional labor and teacher commitment in China. *Frontiers in Psychology, 11*, 519. https://doi.org/10.3389/fpsyg.2020.00519

Zheng, X., Yin, H. B., & Liu, Y. (2020). Are professional learning communities beneficial for teachers ? A multilevel analysis of teacher self-efficacy and commitment in China. *School Effectiveness and School Improvement,* 1-21. https://doi.org/10.1080/09243453.2020.1808484

Zheng, X., Zhang, J., & Wang, W. (2019). Teacher learning as boundary crossing: a case study of Master Teacher Studios in China. *Teachers and Teaching.* DOI: 10.1080/13540602.2019.1673358

Zheng, Y., Walker, A. & Chen, S. (2013). Change and continuity: a critical analysis of principal development policy in Mainland China (1989-2011). *Educational Management Administration and Leadership, 41*(4), 484-503.

Zheng, X., Yin, H. B., & Liu, Y. (2020). Are professional learning communities beneficial for teachers? A multilevel analysis of teacher self-efficacy and commitment in China. *School Effectiveness and School Improvement,* 1-21. https://doi.org/10.1080/09243453.2020.1808484

Zhu, X. Y., & Xu, S. X. (2005). *Zhongxi Wenhua Gailun [Introduction to Chinese and Western Cultures]*. China Light Industry Press, Beijing.

Appendix-A

<div align="center">

PARTICIPANT CONSENT FORM
参与者同意表

Faculty of Arts and Social Sciences
School of Education
人文社科系，教育学院

</div>

Project Title: Teacher Leadership: An Investigation of Early-Career Teacher Leadership Development in Public Schools in Northwest China, Gansu Province

课题名称： 教师领导力：关于中国西北部甘肃省公立学校职初教师领导力发展的调查

Researcher: Li Lin
研究员：李琳　学校电子邮箱：sbxll3@nottingham.edu.my

Supervisor: Prof. Dr. Ganakumaran Subramaniam
导师： Ganakumaran Subramaniam 教授
学校电子邮箱：Ganakumaran.Subra@nottingham.edu.my

Associate Prof. Dr. Ashley Ng Yoon Mooi
导师：Ashley Ng Yoon Mooi 副教授
学校电子邮箱：Ashley.Ng@nottingham.edu.my

Ethics Approval Reference Number: …. *[to be inserted following ethical review]*
道德批准参考编号：

- Have you read and understood the Participant Information?　　YES/NO
  您是否已阅读并理解参与者信息？　　　　　　　　　　　　　　是 / 否

- I agree to answer the questionnaire, take part in an interview or observation that will be recorded or noted.　　　　　　　　YES/NO
  我同意回答调查问卷，参加将被记录的访谈或观察。　　　　　　　　是 /
否

- Do you know how to contact the researcher if you have questions about this study?
  　　　　　　　　　　　　　　　　　　　　YES/NO
  如果您对本研究有疑问，您知道如何联系研究人员吗？　　　　　　　是 /
否

- Do you understand that you are free to withdraw from the study without giving a reason?
  　　　　　　　　　　　　　　　　　YES/NO
  您明白您可以在没有理由的情况下自由退出研究吗？　　　　　　是 / 否

- Do you understand that for anonymous questionnaire studies, once you have completed the study and submitted your questionnaire, the data cannot be withdrawn? YES/NO
  您是否了解，对于匿名问卷调查，一旦您完成了研究并提交了调查问卷，数据就无法
撤回？
  <div align="center">是 / 否</div>

<div align="center">230</div>

- Do you understand that once you have been interviewed it may not be technically possible to withdraw your data unless requested within a certain timeframe? YES/NO

  您是否理解，一旦您接受了采访，除非在特定时间范围内提出要求，否则可能无法撤回您

  的数据？   是 ／ 否

- Do you give permission for your data from this study to be shared with other researchers in the future provided that your anonymity is protected?
                                            YES/NO

  如果您的匿名受到保护，您是否允许将此研究中的数据与其他研究人员共享？ 是 ／ 否

- Do you understand that non-identifiable data from this study might be used in academic research reports or publications?   YES/NO

  您是否了解本研究中的不可识别数据可能会用于学术研究报告或出版物？   是 ／ 否

Signature of the Participant……………………………………. Date: …….
参与者签名：   日期：

Name (in block capitals) ………………………………………..
姓名（用大写字母）

This consent form will be detached from the completed questionnaire and stored separately. Your answers will not be identifiable.
该同意书将与完成的问卷分开并单独存储。您提供的答案不会被识别。

Appendix-B

PARTICIPANT INFORMATION SHEET
参与者信息表

Faculty of Arts and Social Sciences
School of Education
人文社科系，教育学院

Project Title: Teacher Leadership: An Investigation of Early-Career Teacher Leadership Development in Public Schools in Northwest China, Gansu Province

课题名称： 教师领导力：关于中国西北部甘肃省公立学校职初教师领导力发展的调查

Researcher: Li Lin
研究员：李琳　学校电子邮箱：sbxll3@nottingham.edu.my

Supervisor: Prof. Dr. Ganakumaran Subramaniam
导师：　Ganakumaran Subramaniam 教授
学校电子邮箱：Ganakumaran.Subra@nottingham.edu.my

Associate Prof. Dr. Ashley Ng Yoon Mooi
导师：Ashley Ng Yoon Mooi 副教授
学校电子邮箱：Ashley.Ng@nottingham.edu.my

Ethics Approval Reference Number: …. *[to be inserted following ethical review]*
道德批准参考编号：

This is an invitation to take part in a research study about the investigation of teacher leadership and early-career teacher leadership development in public schools, northwest China, Gansu province. This information is designed to tell you what it will involve.

此信息表诚邀您参加一项关于中国西北地区甘肃省公立学校教师领导和职初教师领导力发展调查的研究。此信息旨在告诉您该项研究将涉及的内容。

Your participation is voluntary, and you may change your mind about being involved, or decline to answer a particular question or (for interview studies) stop the recording at any time, and without giving a reason. You are free to withdraw at any point before or during the study. For anonymous questionnaires, once you have finished the questionnaire and submitted your answers it is not possible to withdraw the data.

您的参与是自愿的，您可能会改变主意参与，或拒绝回答特定问题或（采访研究）随时停止录制而无需给出理由。您可以在研究开始之前或期间随时退出。对于匿名问卷，一旦您完成调查问卷并提交了答案，数据将无法撤回。

What is the project about?
该研究的内容是什么？

This research aims to investigate early-career teacher leadership development in public schools of northwest China, Gansu province. Conceptualised on the basis of the teacher leadership development model, this study specifically examines the degree of school culture, personal teacher leadership assessment, leading strategies and influential factors that facilitate and inhibit early-career teacher

leadership development in China.

本研究旨在调查中国西北地区甘肃省公立学校的早期教师（职初教师）领导力的发展。本研究以教师领导力发展模板为基础，具体研究学校文化，个人教师领导力评估，领导力策略以及影响职初教师领导力发展的因素。

Who is being asked to take part, and why?
参与者及选择标准

There are two criteria to select participants in each school. The first criterion is random sampling. When distributing the first questionnaire *TLSS*, full-time in-service teachers from any ranks are randomly selected by the principals while in the selection of participants to respond to the second questionnaire *TLRI,* purposive sampling strategy will be employed, which specifically select early-career teachers who have seven years of in-service teaching experience in the current school.

In the qualitative data collection stage, purposive sampling strategy is adopted to select participants for interviews and observations. Therefore, three groups of participants will be purposively selected. The first group is composed of school principals, the second group of participants will consist of middle and senior teacher leaders who are at their mid or late professional life phases and the third group will be early-career teachers in their first seven years of teaching.

每个学校选择参与者有两个标准。第一个标准是随机抽样。在分发第一份问卷 *TLSS* 时，校长随机选择任何级别的全职教师。 在选择参与者回答第二份问卷 *TLRI* 时，目的的抽样策略将被采用以具体选择在当前学校拥有七年在职教学经验的早期职业生涯教师（职初教师）。

在定性数据收集阶段，目的性抽样策略将被采用来选择参与者进行访谈和观察。因此，三组参与者将被选择性抽样。第一组由学校校长组成，第二组参与者将由处于中期或后期职业生涯阶段的中高级教师领导组成，第三组由教龄在约七年的职初教师组成。

What will I be asked to do?
参与事项

This study encompasses two questionnaires, interviews and observations. The first questionnaire *TLSS* consists of 49 items and the second *TLRI* includes 25 items, which should not take more than 20 minutes for you to fill out. It will take approximately 45 minutes for the interview and observation. Your consent to participate into the study will be requested and all data collection will be conducted at the proper place in your convenience.

该研究包括两个调查问卷，访谈和观察。第一份问卷 *TLSS* 包含 49 项，第二份 *TLRI* 包括 25 项，您填写的时间不应超过 20 分钟。面试和观察大约需要 45 分钟。我们将征求您的同意参与该研究，并且所有数据收集将在您方便的时间和地点进行。

Will the research be of any personal benefit to me?
参与研究的个人获益

It is hoped that this study sets out to establish the strong awareness of the concept of teacher leadership among various stakeholders encompassing the government, the Ministry of Education (MOE), policy makers, principals, teachers across their professional life phases, students and their parents in Mainland China. It also attempts to enhance teachers' professionalism and efficacy in improving their professional knowledge and skills, instructional techniques in teaching and learning, leadership competency and capacity within and beyond their classroom boundaries, as well as their beliefs to improve students' performance and achievements.

希望这项研究能够在各个利益相关者中建立对教师领导力概念的强烈意识，包括政府，教育部（MOE），政策制定者，校长，教师，学生及其父母。与此同时，该研究试图提高教师的专业性和有效性，以提高他们的专业知识和技能，教学和学习的教学技巧，课堂内外的教师领导力，以及提升教师们改善学生的表现和成就的信念和自信力。

What will happen to the information I provide?
参与者提供的信息处理

This research will be conducted according to the ethical procedures adhered to by the University of Nottingham and to the guidelines of the British Educational Research Association (BERA, 2018). Ethics procedure include informed consent, where a consent form must be signed by the participants after reading the information sheet provided by the researcher. The information sheet will provide a detailed information about the study that is to be carried out. It will be emphasised that their participation is entirely voluntary and they can withdraw from taking part in the study any time.

Meanwhile, this research will be conducted within the guidelines of confidentiality, anonymity and privacy. Information from questionnaires and interviews provided by the participants will be treated confidentially and kept in password-protected computer that can be accessed by the researcher only. The participants' identities will be kept anonymous and private in interview transcriptions.

该研究将根据诺丁汉大学遵守的道德程序和英国教育研究协会的指导方针（BERA，2018）进行。道德程序包括知情同意书（在阅读研究人员提供的信息表后，参与者必须签署同意书）以及信息表（有关研究流程的详细信息）。需要强调的是，参与者参与调查研究完全是自愿的，他们可以随时退出参与调查研究。

同时，本研究将在保密，匿名和确保隐私的指导下进行。参与者提供的问卷和访谈的信息将被保密，并保存在受密码保护的计算机中，只能由研究人员访问。参与者的身份将在面试转录中保持匿名和私密。

What will you do with the data?
数据处理

Information and findings of this research project will be analysed and summarised in the form of a written report and a number of journal publications and conference papers. It is also anticipated the report of the study will enable government officials in China to increase their awareness and efficacy to develop teacher leadership.

本研究项目的信息和调查结果将以书面报告和一些期刊出版物和会议论文的形式进行分析和总结。此外，该研究报告将预期提升中国政府官员发展教师领导能力的意识及其效力。

If you have any questions or concerns, please don't hesitate to ask. We can be contacted before and after your participation at the above address.

如果您在参与研究前后有任何问题或疑虑，请务必参照上述邮箱和地址联系我们。

THANK YOU FOR YOUR PARTICIPATION

If you have any queries or complaints about this study, please contact the student's supervisor in the first instance. If this does not resolve the query to your satisfaction, please write to the Administrator to FASS Research Ethics Committee (Norhidayah.MohdNoor@nottingham.edu.my, 03-8924 8742) who will pass your query to the Chair of the Committee.

非常感谢您的参与

如果您对本研究有任何疑问或投诉，请首先联系学生的导师。如果解决方案无法使您满意，请写信给人文社科系研究伦理委员会的管理员（Norhidayah.MohdNoor@nottingham.edu.my，03-8924 8742）他会将您的问题转交给委员会主席。

We believe there are no known risks associated with this research study; however, as with any online related activity the risk of a breach is always possible. We will do everything possible to ensure your answers in this study will remain anonymous. We will minimize any risks by ensuring that all data will be stored securely on password protected computers. Data will be stored in a way that makes it non-traceable to individuals and only the researcher has the right of access to the data provided by you. All raw data will be destroyed after seven years of research completion.

我们认为这项研究没有已知风险;但是，与任何在线相关活动一样，可能存在风险。我们将尽力确保您在本研究中的答案保持匿名。我们将确保所有数据安全地存储在受密码保护的计算机上，从而将风险降至最低。数据将以一种不可追溯的方式存储，只有研究人员才有权访问您提供的数据。研究完成七年后，所有原始数据将被销毁。

***Insert version number in the footer: Every time you make changes to the participant information sheet you will need to update the version number.

Appendix-C

Information Letter for School Principals

Dear Principal,

This letter is an invitation for your school to consider participating in a study. I would like to provide you with more information about this project and what your involvement would entail if you decide to take part.

The advocacy of teacher leadership bears the premise that teacher leadership serves as a catalyst to promote teacher professionalism, school effectiveness and student performance. However, the actual operationalisation of teacher leadership is contextual and situational, such as school culture and power relationship. Therefore, the teacher leadership model requires more empirical evidence to validate its effectiveness.

This research aims to investigate early-career teacher leadership development in public schools of northwest China, Gansu province. Conceptualised on the basis of the teacher leadership development model, this study specifically examines the degree of school culture, personal teacher leadership assessment, leading strategies and influential factors that facilitate and inhibit early-career teacher leadership development in China.

There are two criteria in selecting participants in each school. The first criterion is random sampling. When distributing the first questionnaire *TLSS*, full-time in-service teachers from any ranks are randomly selected by the principals while in the selection of participants to respond to the second questionnaire *TLRI,* purposive sampling strategy will be employed, which specifically select early-career teachers who have seven years of in-service teaching experience in the current school.

In the qualitative data collection stage, purposive sampling strategy is adopted to select participants for interviews and observations. Therefore, three groups of participants will be purposively selected. The first group is composed of school principals, the second group of participants will consist of middle and senior teacher leaders who are at their mid or late professional life phases and the third group will be early-career teachers in their first seven years of teaching.

This study encompasses two questionnaires, interviews and observations. The first questionnaire *TLSS* consists of 49 items and the second *TLRI* includes 25 items, which should not take more than 20 minutes for you to fill out. It will take approximately 30 minutes for the interview and observation. Your consent to participate into the study will be requested and all data collection will be conducted at the proper place at your convenience.

Meanwhile, this research will be conducted within the guidelines of confidentiality, anonymity and privacy. Information from questionnaires and interviews provided by the participants will be treated confidentially and kept in password-protected computer that can be accessed by the researcher only. The participants' identities will be kept anonymous and private in interview transcriptions.

It is hoped that this study sets out to establish the strong awareness of the concept of teacher leadership among various stakeholders encompassing the government, the Ministry of Education (MOE), policy makers, principals, teachers across their professional life phases, students and their parents in Mainland China. It also attempts to enhance teachers' professionalism and efficacy in improving their professional knowledge and skills, instructional techniques in teaching and learning, leadership competency and capacity within and beyond their classroom boundaries, as well as their beliefs to improve students' performance and achievements.

If you have any questions regarding this study, or would like additional information to assist you in reaching a decision about participation, please contact the researcher.

We look forward to your participation in this project.

Yours sincerely,

Li Lin: sbxll3@nottingham.edu.my

致校长信息函

亲爱的校长，

此信息函旨在邀请您的学校参加该项研究。我将向您提供有关此研究的更多信息，以及参与研究的具体流程。

教师领导力是促进教师专业化，学校效率和学生表现的催化剂。然而，教师领导力的实际运作是需要考量具体的情境，如学校文化和权力关系。因此，教师领导模型需要更多的经验证据来验证其有效性。

本研究旨在调查中国西北地区甘肃省公立学校的早期教师（职初教师）领导力的发展。本研究以教师领导力发展模板为基础，具体研究学校文化，个人教师领导力评估，领导力策略以及影响职初教师领导力发展的因素。

每个学校选择参与者有两个标准。第一个标准是随机抽样。在分发第一份问卷 *TLSS* 时，校长随机选择任何级别的全职教师。 在选择参与者回答第二份问卷 *TLRI* 时，目的的抽样策略将被采用以具体选择在当前学校拥有七年在职教学经验的早期职业生涯教师（职初教师）。

在定性数据收集阶段，目的性抽样策略将被采用来选择参与者进行访谈和观察。因此，三组参与者将被选择性抽样。第一组由学校校长组成，第二组参与者将由处于中期或后期职业生涯阶段的中高级教师领导组成，第三组由教龄在约七年的职初教师组成。

该研究包括两个调查问卷，访谈和观察。第一份问卷 *TLSS* 包含 49 项，第二份 *TLRI* 包括 25 项，您填写的时间不应超过 20 分钟。面试和观察大约需要 30 分钟。我们将征求您的同意参与该研究，并且所有数据收集将在您方便的时间和地点进行。
同时，本研究将在保密，匿名和确保隐私的指导下进行。参与者提供的问卷和访谈的信息将被保密，并保存在受密码保护的计算机中，只能由研究人员访问。参与者的身份将在面试转录中保持匿名和私密。

希望这项研究能够在各个利益相关者中建立对教师领导力概念的强烈意识，包括政府，教育部（MOE），政策制定者，校长，教师，学生及其父母。与此同时，该研究试图提高教师的专业性和有效性，以提高他们的专业知识和技能，教学和学习的教学技巧，课堂内外的教师领导力，以及提升教师们改善学生的表现和成就的信念和自信力。

如果您对本研究有任何疑问，或希望获得更多信息以帮助您做出有关参与的决定，请联系研究人员。我们期待您参此项目。

此致敬礼！

李琳：sbxll3@nottingham.edu.my

Appendix-D

Survey Invitation Letter
调查参与邀请函

Dear Participant,

This research aims to investigate early-career teacher leadership development in public schools of northwest China, Gansu province. Conceptualised on the basis of the teacher leadership development model, this study specifically examines the degree of school culture, personal teacher leadership assessment, leading strategies and influential factors that facilitate and inhibit early-career teacher leadership development in China.

This study encompasses two questionnaires, interviews and observations. The first questionnaire *TLSS* consists of 49 items and the second *TLRI* includes 25 items, which should not take more than 20 minutes for you to fill out. It will take approximately 45 minutes for the interview and observation. Your consent to participate into the study will be requested and all data collection will be conducted at the proper place in your convenience.

Meanwhile, this research will be conducted within the guidelines of confidentiality, anonymity and privacy. Information from questionnaires and interviews provided by the participants will be treated confidentially and kept in password-protected computer that can be accessed by the researcher only. The participants' identities will be kept anonymous and private in interview transcriptions.

Kind regards,

Li Lin: sbxll3@nottingham.edu.my

亲爱的参与者，

本研究旨在调查中国西北地区甘肃省公立学校的早期教师（职初教师）领导力的发展。本研究以教师领导力发展模板为基础，具体研究学校文化，个人教师领导力评估，领导力策略以及影响职初教师领导力发展的因素。

该研究包括两个调查问卷，访谈和观察。第一份问卷 *TLSS* 包含 49 项，第二份 *TLRI* 包括 25 项，您填写的时间不应超过 20 分钟。面试和观察大约需要 45 分钟。我们将征求您的同意参与该研究，并且所有数据收集将在您方便的时间和地点进行。

同时，本研究将在保密，匿名和确保隐私的指导下进行。参与者提供的问卷和访谈的信息将被保密，并保存在受密码保护的计算机中，只能由研究人员访问。参与者的身份将在面试转录中保持匿名和私密。

此致敬礼！

李琳：sbxll3@nottingham.edu.my

Appendix-E

Ethics Approval Letter

The University of
Nottingham

UNITED KINGDOM · CHINA · MALAYSIA

FASS2018-0027/SoEdu/LLN20007472

The University of
Nottingham

UNITED KINGDOM · CHINA · MALAYSIA

Li Lin
School of Education
Faculty of Arts and Social Sciences

3 January 2019

Faculty of Arts and Social Sciences
Jalan Broga
43500 Semenyih
Selangor Darul Ehsan
Malaysia
Tel +6(03) 8924 8000
Fax +6(03) 8924 8019
www.nottingham.edu.my

Dear Li Lin,

FASS Research Ethics Committee Review

Thank you for submitting your proposal on *"Teacher Leadership: An Investigation of Early-Career Teacher Leadership Development in Public Schools in Northwest China, Gansu Province"* This proposal has now been reviewed by the FASS Research Ethics Committee to the extent that it is described in your submission.

I am happy to tell you that the Committee has found no problems with your proposal and able to give approval.

If there are any significant changes or developments in the methods, treatment of data or debriefing of participants, then you are obliged to seek further ethical approval for these changes.

We would remind all researchers of their ethical responsibilities to research participants. If you have any concerns whatsoever during the conduct of your research then you should consult those Codes of Practice relevant to your discipline and contact the FASS Research Ethics Committee.

Independently of the Committee procedures, there are also responsibilities for staff and student safety during projects. Some information can be found in the Safety Office pages of the University web site. Particularly relevant may be:
    Section 6 of the *Safety Handbook*, which deal with working away from the University,
    http://www.nottingham.ac.uk/safety/handbook/general-precautions.aspx
    Specific safety guidance on:
    Fieldwork http://www.nottingham.ac.uk/safety/documents/fieldwork-policy.pdf
    Lone working http://www.nottingham.ac.uk/safety/documents/lone-working.pdf
    Overseas travel/work http://www.nottingham.ac.uk/safety/documents/overseas-travel.pdf
    Risk management http://www.nottingham.ac.uk/safety/policies-and-guidance/guides-and-support.aspx
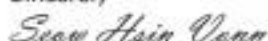
Responsibility for compliance with the University/National Data Protection Policy and Guidance also lies with the principal investigator or project supervisor.

The FASS Research Ethics Committee approval does not alter, replace or remove those responsibilities, nor does it certify that they have been met.

Sincerely

Seow Hsin Vonn

Dr Seow Hsin Vonn
On behalf of the FASS Research Ethics Committee

The University of Nottingham
In Malaysia Sdn Bhd (A73530-E)

MSC-Status
Company

The University of Nottingham

UNITED KINGDOM · CHINA · MALAYSIA

Questionnaire 1: Teacher Leadership School Survey *(TLSS)*

Dear Teacher,

This research is undertaken to ascertain the teacher leadership and early-career teacher leadership development of your school.

In line with this, I would like to invite you to participate as a respondent for this study. I hope that you can find some time to respond frankly and honestly to all the questions of this questionnaire. All information and responses will be held in the strictest confidence and strict anonymity will be strictly accorded in the reporting of any findings. Confidentiality will be maintained and your anonymity is guaranteed. I truly appreciate your cooperation and would like to take this opportunity to thank you very much for your participation, time, co-operation and your help in this research.

Yours sincerely,

Li Lin: sbxll3@nottingham.edu.my

问卷 1： 教师领导力学校调查

敬爱的老师，

本研究旨在调查您所在学校的教师领导能力和早期职业（职初）教师领导力的发展。

为此，我想邀请您作为本研究的参与者。我希望您能找到一些时间坦率而诚实地回答本调查问卷的所有问题。所有信息和回复都将严格保密，并且在报告任何调查结果时将严格保持机密性并保证您的匿名性。我非常感谢您的合作，并借此机会非常感谢您的参与，时间，合作以及您对本研究的帮助。

此致敬礼！

李琳：sbxll3@nottingham.edu.my

Teacher Leadership School Survey *(TLSS)*
教师领导力学校调查

Part 1: Please provide the following information about yourself.
部分 1：请提供您的有关信息

1. Number of years of experience as a teacher. 作为教师的工作年限:
   ≦7 years ☐   8-23 years ☐   ≧24 years ☐
   七年及以内   8 至 23 年   24 年及以上

2. Number of years of experience as a teacher in this school: 作为该校教师的工作年限。
   ≦7 years ☐   8-23 years ☐   ≧24 years ☐
   七年及以内   8 至 23 年   24 年及以上

3. Gender. 性别:
   Male ☐   Female ☐
   男   女

4. Race. 民族:
   Han ☐   Minority ☐
   汉族   少数民族

5. Position Held. 所属职位（二选一）:

With formally designated positions:
(such as Backbone teachers, head of departments, teaching and researching group ☐
leader, grade leader, home classroom teacher, etc)
有正式委派的职位：（如骨干教师，学科组长，教研组长，年级组长，班主任等）。

Ordinary teachers without any formally designated positions. ☐
普通教师：没有任何正式委派的职位。

6. School Level. 所在学校的级别：
   Primary School   Secondary School   Combined School
   小学 ☐   中学 ☐   一贯制学校 ☐

7. Educational Background: 教育背景：
   Vocational College Bachelor   Master   PhD   Others
   本科以下 ☐   本科 ☐   硕士 ☐   博士 ☐ 其他 ☐

Part 2: *Teacher Leadership School Survey (TLSS)*
第二部分：教师领导力学校调查

Use the following rating scale. Tick the scale that is most suitable for each item.
Tick ONE *number only. Please answer ALL the questions.*
请根据描述勾选最适合您答案的选项。每项仅限**勾选一项**（√）。请回答所有问题。

Please respond to the following statements in terms of how frequently each Statement is descriptive of your school.
请根据以下对学校情形的频次描述做出相应回答。

		1 Never 从不	2 Rarely 很少	3 Sometimes 有时	4 Often 经常	5 Always 总是
1	At my school administrators and teachers try hard to help new teachers be successful. 我校管理人员和教师致力于帮助新老师获得成功。	1 从不	2 很少	3 有时	4 经常	5 总是
2	At my school, teachers are provided with assistance, guidance or coaching if needed. 我校为教师所需提供协助，指导或者辅导。	1 从不	2 很少	3 有时	4 经常	5 总是
3	Administrators at my school actively support the professional development of faculty and staff. 我校管理人员积极支持教职员工的专业发展。	1 从不	2 很少	3 有时	4 经常	5 总是
4	We gain new knowledge and skills through staff development and professional reading. 我们通过员工发展和专业阅读获得新的知识与技能。	1 从不	2 很少	3 有时	4 经常	5 总是
5	We share new ideas and strategies we have gained with each other. 我们与彼此分享获得的新的想法与策略。	1 从不	2 很少	3 有时	4 经常	5 总是
6	Teachers at my school are supportive of each other personally and friendly. 我校教师个人而友好地互相支持。	1 从不	2 很少	3 有时	4 经常	5 总是
7	Teachers at my school are engaged in gaining new knowledge and skills. 我校教师致力于获取新的知识与技能。	1 从不	2 很少	3 有时	4 经常	5 总是
8	The administrators at my school have confidence in me. 我校管理人员对我很有信心。	1 从不	2 很少	3 有时	4 经常	5 总是
9	My professional skills and competence are recognised by the administrators at my school. 我的专业技术与能力获得了我校管理人员的认可。	1 从不	2 很少	3 有时	4 经常	5 总是
10	Other teachers recognise my professional skills and competence. 其他教师认可我的专业技术与能力。	1 从不	2 很少	3 有时	4 经常	5 总是

11	It is apparent that many of the teachers at my school can take leadership roles. 很明显，我校许多教师能担任领导力的角色。	1 从不	2 很少	3 有时	4 经常	5 总是
12	The ideas and opinions of teachers are valued and respected at my school. 我校重视并尊重教师的想法和意见。	1 从不	2 很少	3 有时	4 经常	5 总是
13	At my school we celebrate each other's success. 在我校，我们庆祝彼此的成功。	1 从不	2 很少	3 有时	4 经常	5 总是
14	Many of the faculty and staff at my school are recognised for their work. 我校很多教职员工的工作都获得了认可。	1 从不	2 很少	3 有时	4 经常	5 总是
15	In my role as a teacher, I am free to make judgements about what is best for my students. 作为老师，我可以自由地判断什么对我的学生最有利。	1 从不	2 很少	3 有时	4 经常	5 总是
16	At my school, I have freedom to make choices about the use of time and resources. 在我校，我可以自由选择时间和资源的使用。	1 从不	2 很少	3 有时	4 经常	5 总是
17	I know that we will bend the rules if it is necessary to help children learn. 我知道如果是有必要于帮助孩子学习的，我们会调整规则。	1 从不	2 很少	3 有时	4 经常	5 总是
18	Teachers are encouraged to take initiatives to make improvements for students. 教师们被鼓励主动采取措施来取得学生的进步。	1 从不	2 很少	3 有时	4 经常	5 总是
19	I have input in developing a vision for my school and its future. 我有意为我的学校及其未来制定愿景。	1 从不	2 很少	3 有时	4 经常	5 总是
20	At my school teachers can be innovative if they choose to be. 在我校，若其愿意，教师们可以创新。	1 从不	2 很少	3 有时	4 经常	5 总是
21	Administrators and other teachers support me in making changes in my instructional strategies. 管理人员和其他教师会支持我在教学指导策略上做出改变。	1 从不	2 很少	3 有时	4 经常	5 总是
22	Teachers at my school discuss strategies and share materials. 我校教师会讨论策略与分享材料。	1 从不	2 很少	3 有时	4 经常	5 总是
23	Teachers at my school influence one another's teaching. 我校教师影响彼此的教学。	1 从不	2 很少	3 有时	4 经常	5 总是

24	Teachers in my school observe one another's work with students. 我校教师观察其他老师与学生的工作。	1 从不	2 很少	3 有时	4 经常	5 总是
25	I talk with other teachers in my school about my teaching and the curriculum. 在我校，我可以和其他老师谈论我的教学与课程。	1 从不	2 很少	3 有时	4 经常	5 总是
26	Teachers and administrators work together to solve students' academic and behaviour problems. 教师和管理人员一起工作以解决学生的学习和行为问题。	1 从不	2 很少	3 有时	4 经常	5 总是
27	Other teachers at my school have helped me find creative ways to deal with challenges I have faced in my classes. 我校其他老师帮助我找寻创造性的方法来应对我在课堂上面临的挑战。	1 从不	2 很少	3 有时	4 经常	5 总是
28	Conversations among professionals at my school are focused on students. 我校专业人士的谈话都聚焦在学生上。	1 从不	2 很少	3 有时	4 经常	5 总是
29	Teachers have input to decisions about school change. 教师对学校变革的决策有所贡献。	1 从不	2 很少	3 有时	4 经常	5 总是
30	Teachers have a say in what and how things are done. 教师们对事情的内容处理与方式有发言权。	1 从不	2 很少	3 有时	4 经常	5 总是
31	Teachers and administrators share decisions about how time is used and how the school is organised. 教师们和管理人员对于时间的使用和学校的组织分享意见与决策。	1 从不	2 很少	3 有时	4 经常	5 总是
32	Teachers and administrators at my school understand and use the consensus process. 我校教师和管理人员理解并使用共识流程。	1 从不	2 很少	3 有时	4 经常	5 总是
33	Teachers participate in screening and selecting new faculty and/or staff at my school. 教师参与筛选和选择我校的新教师和/或教职员工。	1 从不	2 很少	3 有时	4 经常	5 总是
34	My opinions and ideas are sought by administrators at my school. 我校管理人员会寻求我的意见和想法。	1 从不	2 很少	3 有时	4 经常	5 总是
35	We try to reach consensus before making important decisions. 我们试图在做出重要决定之前达成共识。	1 从不	2 很少	3 有时	4 经常	5 总是
36	Because teachers and administrators share idea about our work, I stay aware of what is happening. 因为教师和管理员分享我们工作上的想法，所以我会留意到正在发生的事情。	1 从不	2 很少	3 有时	4 经常	5 总是

37	At my school everybody talks freely and openly about feelings and opinions they have. 在我校，每个人都自由而公开地谈论他们的感受和意见。	1 从不	2 很少	3 有时	4 经常	5 总是
38	Faculty and staff at my school share their feelings and concerns in productive ways. 我校的教职员工以富有成效的方式分享他们的感受和忧虑。	1 从不	2 很少	3 有时	4 经常	5 总是
39	Teachers at my school discuss and help one another solve problems. 我校教师互相讨论和帮助以解决问题。	1 从不	2 很少	3 有时	4 经常	5 总是
40	Faculty and staff talk about ways to better serve our students and their families. 教职员工谈论有关方式以更好地服务于我们的学生及其家人。	1 从不	2 很少	3 有时	4 经常	5 总是
41	When things go wrong at our school, we try not to blame, but talk about ways to do better the next time. 当我校出现问题时，我们尽量不要责备，而是探讨下次做得更好的方法。	1 从不	2 很少	3 有时	4 经常	5 总是
42	Faculty meeting time is used for discussions and problem solving. 教师会议时间用于讨论和解决问题。	1 从不	2 很少	3 有时	4 经常	5 总是
43	Teachers are treated as professionals at my school. 教师在我的学校被视为专业人士。	1 从不	2 很少	3 有时	4 经常	5 总是
44	Teachers at my school look forward to coming to work every day. 我校教师期待每天来工作。	1 从不	2 很少	3 有时	4 经常	5 总是
45	There is a general satisfaction with the work environment among teachers at my school. 我校教师的工作环境普遍令人满意。	1 从不	2 很少	3 有时	4 经常	5 总是
46	Teachers and administrators at my school work in partnership. 我校教师和管理人员以合作伙伴的关系工作。	1 从不	2 很少	3 有时	4 经常	5 总是
47	Teachers at my school are respected by parents, students and administrators. 我校教师被家长，学生和管理人员尊敬。	1 从不	2 很少	3 有时	4 经常	5 总是
48	The principal, faculty and staff at my school work as a team. 我校的校长，教职员工以团队的形式工作。	1 从不	2 很少	3 有时	4 经常	5 总是
49	We feel positive about the ways we are responding to our students' needs. 我们对我们应对学生需求的方式持积极态度。	1 从不	2 很少	3 有时	4 经常	5 总是

Thanks for Your Participation!
感谢您的参与！

The University of
Nottingham

UNITED KINGDOM · CHINA · MALAYSIA

Questionnaire 2: Teacher Leadership Readiness Instrument *(TLRI)*

Dear Teacher,

     This research is undertaken to ascertain the teacher leadership and early-career teacher leadership development of your school.

In line with this, I would like to invite you to participate as a respondent for this study. I hope that you can find some time to respond frankly and honestly to all the questions of this questionnaire. All information and responses will be held in the strictest confidence and strict anonymity will be strictly accorded in the reporting of any findings. Confidentiality will be maintained and your anonymity is guaranteed. I truly appreciate your cooperation and would like to take this opportunity to thank you very much for your participation, time, co-operation and your help in this research.

Yours sincerely,

Li Lin: sbxll3@nottingham.edu.my

问卷 2： 教师领导力准备程度调查

敬爱的老师，

本研究旨在调查您所在学校的教师领导能力和早期职业（职初）教师领导力的发展。

为此，我想邀请您作为本研究的参与者。我希望您能找到一些时间坦率而诚实地回答本调查问卷的所有问题。所有信息和回复都将严格保密，并且在报告任何调查结果时将严格保持机密性并保证您的匿名性。我非常感谢您的合作，并借此机会非常感谢您的参与，时间，合作以及您对本研究的帮助。

此致敬礼！

李琳：sbxll3@nottingham.edu.my

Teacher Leadership Readiness Instrument *(TLRI)*
教师领导力准备程度调查

Part 1: Please provide the following information about yourself.
部分 1：请提供您的有关信息

1. Number of years of experience as a teacher. 作为教师的工作年限。
   ≦3 years ☐   4-7 years   ☐
   3 年及以内   4-7 年

2. Number of years of experience as a teacher in this school.作为该校教师的工作年限。
   ≦3 years ☐   4-7 years   ☐
   3 年及以内   4-7 年

3. Gender: 性别：
   Male ☐   Female   ☐
   男   女

4. Race: 民族
   Han ☐   Minority   ☐
   汉族   少数民族

5. Position Held: 所属职位（二选一）：

With formally designated positions:
(such as Backbone teachers, head of departments, teaching and researching group ☐
leader, grade leader, home classroom teacher, etc)
有正式委派的职位：（如骨干教师，学科组长，教研组长，年级组长，班主任等）。

Ordinary teachers without any formally designated positions. ☐
普通教师：没有任何正式委派的职位。

6. School Level. 所在学校的级别：
   Primary School   Secondary School   Combined School
   小学 ☐   中学 ☐   一贯制学校 ☐

7. Educational Background: 教育背景：
   Vocational College   Bachelor   Master   PhD   Others
   本科以下 ☐   本科 ☐   硕士 ☐   博士 ☐ 其他 ☐

Part 2: Teacher Leadership Readiness Instrument *(TLRI)*
第二部分：教师领导力准备程度调查

Use the following rating scale. Tick the scale that is most suitable for each item.
Tick ONE *number only. Please answer ALL the questions.*
请根据描述勾选最适合您答案的选项。每项仅限**勾选一项**（√）。请回答所有问题。

Respond to the following statements in terms of how strongly you agree or disagree.请根据以下
同意或不同意的强烈程度做出相应回答。

		1 Strongly Disagree 非常 不同意	2 Disagree 不同意	3 No Opinion 没有 意见	4 Agree 同意	5 Strongly Agree 非常 同意
1.	My work as a teacher is both meaningful and important. 作为老师我的工作既有意义又重要。					
2.	Individual teachers should be able to influence how other teachers think about, plan for, and conduct their work with students. 每个老师都应该能够影响其他老师如何思考，计划，还有与学生工作。					
3.	Teachers should be recognised for trying new teaching strategies whether they success or fail. 无论成功还是失败，老师们都应该为尝试新的教学策略而受到认可。					
4.	Teachers should decide on the best methods of meeting educational goals set by policymaking groups (e.g., school boards, state departments of education). 老师们应该决定最佳方案来满足由政策制定小组 （例如学校董事会，国家教育部门）制定的教育目标。					
5.	I am willing to observe and provide feedback to fellow teachers. 我愿意观察并为同行老师提供反馈。					
6.	I would like to spend time discussing my values and beliefs about teaching with my colleagues. 我愿意花时间与同事讨论我的教学价值观与信念。					
7.	It is important to me to have the respect of the administrators and other teachers at my school. 于我而言， 获得学校管理人员和其他老师的尊重是非常重要的。					
8.	I would be willing to help a colleague who was having difficulty with his or her teaching. 我愿意帮助在教学上有困难的同事。					

9.	I can see the points of view of my colleagues, parents and students. 我可以理解我的同事，家长和学生们的观点。	1 Strongly Disagree 非常 不同意	2 Disagree 不同意	3 No Opinion 没有 意见	4 Agree 同意	5 Strongly Agree 非常 同意
10.	I would give my time to help select new faculty members for my school. 我会花时间帮我的学校选择新的教职员工。	1 Strongly Disagree 非常 不同意	2 Disagree 不同意	3 No Opinion 没有 意见	4 Agree 同意	5 Strongly Agree 非常 同意
11.	I try to work as a facilitator of the work of students in my classroom and of colleagues in meetings at my school. 在课堂上和学校的会议中，我尝试协助学生和同事们达成/完成他们的工作。	1 Strongly Disagree 非常 不同意	2 Disagree 不同意	3 No Opinion 没有 意见	4 Agree 同意	5 Strongly Agree 非常 同意
12.	Teachers working collaboratively should be able to influence practice in their schools. 相互合作的老师应该能影响他们学校的惯例。	1 Strongly Disagree 非常 不同意	2 Disagree 不同意	3 No Opinion 没有 意见	4 Agree 同意	5 Strongly Agree 非常 同意
13.	I can continue to serve as a classroom teacher and become a leader in my school. 在我校，我可以继续担任课任老师并且成为领导。	1 Strongly Disagree 非常 不同意	2 Disagree 不同意	3 No Opinion 没有 意见	4 Agree 同意	5 Strongly Agree 非常 同意
14.	Cooperating with my colleagues is more important than competing with them. 与同事们合作比与他们竞争更重要。	1 Strongly Disagree 非常 不同意	2 Disagree 不同意	3 No Opinion 没有 意见	4 Agree 同意	5 Strongly Agree 非常 同意
15.	I would give my time to help plan professional development activities at my school. 我会花时间帮助计划学校的专业发展活动。	1 Strongly Disagree 非常 不同意	2 Disagree 不同意	3 No Opinion 没有 意见	4 Agree 同意	5 Strongly Agree 非常 同意
16.	My work continues to the overall success of our school program. 我的工作能为学校取得全面的成功尽一分力。	1 Strongly Disagree 非常 不同意	2 Disagree 不同意	3 No Opinion 没有 意见	4 Agree 同意	5 Strongly Agree 非常 同意
17.	Mentoring new teachers is part of my responsibility as a professional teacher. 指导新老师是我作为专业老师的职责之一。	1 Strongly Disagree 非常 不同意	2 Disagree 不同意	3 No Opinion 没有 意见	4 Agree 同意	5 Strongly Agree 非常 同意
18.	School faculty and university faculty can mutually benefit from working together. 学校老师和大学老师可以从合作中共同受益。	1 Strongly Disagree 非常 不同意	2 Disagree 不同意	3 No Opinion 没有 意见	4 Agree 同意	5 Strongly Agree 非常 同意
19.	I would be willing to give my time to participate in making decisions about such things as instructional	1 Strongly Disagree	2 Disagree 不同意	3 No Opinion 没有	4 Agree 同意	5 Strongly Agree

	materials, allocation of resources, student assessments, and the organisation of the school day. 我愿意花时间参与各项决策，例如教学材料，资源分配，学生评估和举办学校日。	非常 不同意		意见		非常 同意
20.	I value time spent working with my colleagues on curriculum and instructional matters. 我很重视与同事讨论/探讨/实践学习课程和教学事宜的时间。	1 Strongly Disagree 非常 不同意	2 Disagree 不同意	3 No Opinion 没有 意见	4 Agree 同意	5 Strongly Agree 非常 同意
21.	I am very effective in working with almost all of my colleagues. 我能与我几乎所有的同事有效地共事。	1 Strongly Disagree 非常 不同意	2 Disagree 不同意	3 No Opinion 没有 意见	4 Agree 同意	5 Strongly Agree 非常 同意
22.	I have knowledge, information, and skills that can help students be successful. 我拥有可以帮助学生取得成功的知识，信息和技能。	1 Strongly Disagree 非常 不同意	2 Disagree 不同意	3 No Opinion 没有 意见	4 Agree 同意	5 Strongly Agree 非常 同意
23.	I recognise and value points of view that are different from mine. 我认可并重视与我不同的观点。	1 Strongly Disagree 非常 不同意	2 Disagree 不同意	3 No Opinion 没有 意见	4 Agree 同意	5 Strongly Agree 非常 同意
24.	I am very effective in working with almost all of my students. 我能与我几乎所有的学生有效地共事。	1 Strongly Disagree 非常 不同意	2 Disagree 不同意	3 No Opinion 没有 意见	4 Agree 同意	5 Strongly Agree 非常 同意
25.	I want to work in an environment where I am recognised and valued as a professional. 我想在一个以专业人士被认可并重视的环境中工作。	1 Strongly Disagree 非常 不同意	2 Disagree 不同意	3 No Opinion 没有 意见	4 Agree 同意	5 Strongly Agree 非常 同意

Thanks for Your Participation!

感谢您的参与！

The University of Nottingham
UNITED KINGDOM · CHINA · MALAYSIA

Interview Protocol for School Principals
校长采访草案

A. *Introduction about the research, including aims and methods.*

介绍研究，目标以及方法。

B. *School background and context, including founding date, student and teacher numbers, student backgrounds, etc.*

请简要描述学校背景，包括创立时间，学生和教师人数，学生背景等。

1. Please tell me about your career trajectory?
[prompts: qualification, principal training, teaching, principalship, leadership style, belief, mission and vision about the case study school]

请告诉我您的职业发展生涯？
[提示：学历，校长培训，教学经验，校长领导力，领导风格，对学校的信念，使命和愿景]

2. Please tell me what you know and understand by teacher leadership?
[probes: where have you read it?; what are the most significant points?]

请告诉我您对教师领导力的认知和理解？
[提示：您在哪里接触到教师领导力？您认为教师领导力最重要的是什么？]

3. Please tell me what you understand about the teacher professional career at different stages?
[probes: teacher career ladder, roles, tasks, characteristics, power and influences of different stages of teaching career, problems and difficulties of teachers at different stages]

请告诉我您对教师职业生涯不同阶段的理解？
[提示：教师职业发展阶梯，角色，任务，特点，权力和不同阶段教师职业的影响，不同段教师的问题和困难]

4. *Please tell me what you know about educational reforms and policy of China?*
[probes:Long-and-Middle-Term Planning of National Education Reform and Development 2010-2020, 'the Belt and the Road' initiative, The 13th Five-Year Plan of National and Educational Development, Confucianism and Education in China, Backbone teachers]
请告诉我您对中国教育改革和政策的了解？
[提示：**2010 - 2020** 年国家教育改革与发展的中长期规划，"一带一路"倡议，国家与教育

发展"十三五"规划，中国儒教教育，骨干教师]

5. What do you think about your school culture?
[probes: developmental focus, autonomy, recognition, participation, collegiality, open communication, positive environment]

您对您的学校文化有什么看法？
[探索：学校的发展重点，教师自主性，认可度，参与度，合作度，开放式沟通，积极环境]

6．*How you think your school supports the development of teacher leaders, especially for early-career teachers?*
[probes: professional learning and development, teacher training, mentoring and coaching, relationship, time and space]

您认为您的学校如何支持教师领导力的发展，特别是对于早期职业教师（职初教师）？
[探索：专业学习和发展，教师培训，指导和支持，人际关系，时间和空间]

7. What do you think about the factors that encourage or impede the teacher leadership development in your school?
[probes: culture, finance, policy, resources, workload of teachers, training, salary, promotion, empowerment]

您如何看待鼓励或阻碍学校教师领导力发展的因素？
[探讨：文化，财政，政策，资源，教师的工作量，培训，工资，奖惩制度，决策权]

8. Is there anything more you would like to add about teacher leadership development in your school?

有关学校大展教师领导力，您还有什么需要补充的吗？

Thanks for Your Participation!

非常感谢您的参与！

Appendix G-2

Interview Schedule for School Middle Leaders
学校中层教师领导采访草案

A. *Introduction about the research, including aims and methods.*

介绍研究， 目标以及方法。

B. *School background and context, including founding date, student and teacher numbers, student backgrounds, etc.*

请简要描述学校背景，包括创立时间，学生和教师人数，学生背景等。

1. Please tell me about your career trajectory?
[prompts: qualification, teacher training, teaching experience, teaching style, belief, mission and vision about the teaching and learning]

请告诉我您的职业发展生涯？
[提示：学历，教师培训，教学经验，教学风格，对学校教学的信念，使命和愿景]

2. Please tell me what you know and understand by teacher leadership?
[probes: where have you read it?; what are the most significant points?]

请告诉我您对教师领导力的认知和理解？
[提示：您在哪里接触到教师领导力？您认为教师领导力最重要的是什么？]

6. Please tell me what you understand about the teacher professional career at different stages?
[probes: teacher career ladder, roles, tasks, characteristics, power and influences of different stages of teaching career, problems and difficulties of teachers at different stages]

请告诉我您对教师职业生涯不同阶段的理解？
[提示：教师职业发展阶梯，角色，任务，特点，权力和不同阶段教师职业的影响，不同阶段教师的问题和困难]

7. Please tell me what you know about educational reforms and policy of China?
[probes:Long-and-Middle-Term Planning of National Education Reform and Development 2010-2020, 'the Belt and the Road' initiative, The 13th Five-Year Plan of National and Educational Development, Confucianism and Education in China, Backbone teachers]
请告诉我您对中国教育改革和政策的了解？

8. What do you think about your school culture?
[probes: developmental focus, autonomy, recognition, participation, collegiality, open communication, positive environment]

您对您的学校文化有什么看法？
[探索：学校的发展重点，教师自主性，认可度，参与度，合作度，开放式沟通，积极环境]

6．How you think your school supports the development of teacher leaders, especially for early-career teachers?
[probes: professional learning and development, teacher training, mentoring and coaching, relationship, time and space]

您认为您的学校如何支持教师领导力的发展，特别是对于早期职业教师（职初教师）？
[探索：专业学习和发展，教师培训，指导和支持，人际关系，时间和空间]

8. What do you think about the factors that encourage or impede the teacher leadership development in your school?
[probes: culture, finance, policy, resources, workload of teachers, training, salary, promotion, empowerment]

您如何看待鼓励或阻碍学校教师领导力发展的因素？
[探讨：文化，财政，政策，资源，教师的工作量，培训，工资，奖惩制度, 决策权]

8. Is there anything more you would like to add about teacher leadership development in your school?

有关学校大展教师领导力， 您还有什么需要补充的吗？

Thanks for Your Participation!

非常感谢您的参与！

The University of Nottingham

UNITED KINGDOM · CHINA · MALAYSIA

Interview Schedule for Early-Career Teachers

学校职业早期教师（职初教师）采访草案

A. *Introduction about the research, including aims and methods.*

介绍研究，目标以及方法。

B. *School background and context, including founding date, student and teacher numbers, student backgrounds, etc.*

请简要描述学校背景，包括创立时间，学生和教师人数，学生背景等。

1. Please tell me about your career trajectory?
[prompts: qualification, teacher training, teaching experience, teaching style, belief, mission and vision about the teaching and learning]

请告诉我您的职业发展生涯？
[提示：学历，教师培训，教学经验，教学风格，对学校教学的信念，使命和愿景]

2. Please tell me what you know and understand by teacher leadership?
[probes: where have you read it?; what are the most significant points?]

请告诉我您对教师领导力的认知和理解？
[提示：您在哪里接触到教师领导力？您认为教师领导力最重要的是什么？]

9. Please tell me what you understand about the teacher professional career at different stages?
[probes: teacher career ladder, roles, tasks, characteristics, power and influences of different stages of teaching career, problems and difficulties of teachers at different stages]

请告诉我您对教师职业生涯不同阶段的理解？
[提示：教师职业发展阶梯，角色，任务，特点，权力和不同阶段教师职业的影响，不同阶段教师的问题和困难]

10. *Please tell me what you know about educational reforms and policy of China?*
[probes:Long-and-Middle-Term Planning of National Education Reform and Development 2010-2020, 'the Belt and the Road' initiative, The 13th Five-Year Plan of National and Educational Development, Confucianism and Education in China, Backbone teachers]

请告诉我您对中国教育改革和政策的了解？

[提示：**2010 - 2020** 年国家教育改革与发展的中长期规划，"一带一路"倡议，国家与教育发展"十三五"规划，中国儒教教育，骨干教师**]**

11. What do you think about your school culture?
[probes: developmental focus, autonomy, recognition, participation, collegiality, open communication, positive environment]

您对您的学校文化有什么看法？
[探索：学校的发展重点，教师自主性，认可度，参与度，合作度，开放式沟通，积极环境]

6. How you think your school supports the development of teacher leaders, especially for early-career teachers?
[probes: professional learning and development, teacher training, mentoring and coaching, relationship, time and space]

您认为您的学校如何支持教师领导力的发展，特别是对于早期职业教师（职初教师）？
[探索：专业学习和发展，教师培训，指导和支持，人际关系，时间和空间]

9. What do you think about the factors that encourage or impede the teacher leadership development in your school?
[probes: culture, finance, policy, resources, workload of teachers, training, salary, promotion and empowerment]

您如何看待鼓励或阻碍学校教师领导力发展的因素？
[探讨：文化，财政，政策，资源，教师的工作量，培训，工资，奖惩制度，决策权]

8. Is there anything more you would like to add about teacher leadership development in your school?

有关学校大展教师领导力，您还有什么需要补充的吗？

Thanks for Your Participation!

非常感谢您的参与！

Observation Protocol

观察草案

Classroom observation schedule of teacher leadership within classroom

课堂内教师领导力观察表

Date 日期		
Time 时间		
Lesson 课程		
Student 学生		
Context 情境		
Observation **观察**	**Field-notes** 记录	**Comments** 点评
Roles 角色		
Tasks 任务		
Teaching styles 教学风格		
Teaching instructions 教学指导		
Interaction with students 与学生的互动		
Attitudes and emotions 态度与积极性		
Personality Traits 性格特点		
Classroom management skills 课堂管理技巧		

Observation Protocol

观察草案

Observation schedule of teacher leadership beyond classroom

教师领导力课堂外的观察表

Date 日期		
Time 时间		
Activity 活动		
Group 群组		
Context 情境		
Observation **观察**	**Field-notes** **记录**	**Comments** **点评**
Roles 角色		
Tasks 任务		
Participation in decision-making 决策参与		
Autonomy 主动性		
Interaction with peers 同事间互动		
Attitudes and emotions 态度与情绪		
Personality Traits 性格特点		
Interpersonal relationship 人际关系		
Power relationship 权力关系		
Environment 环境		
Communication 交流		

The University of
Nottingham

UNITED KINGDOM · CHINA · MALAYSIA

The University of Nottingham

UNITED KINGDOM · CHINA · MALAYSIA
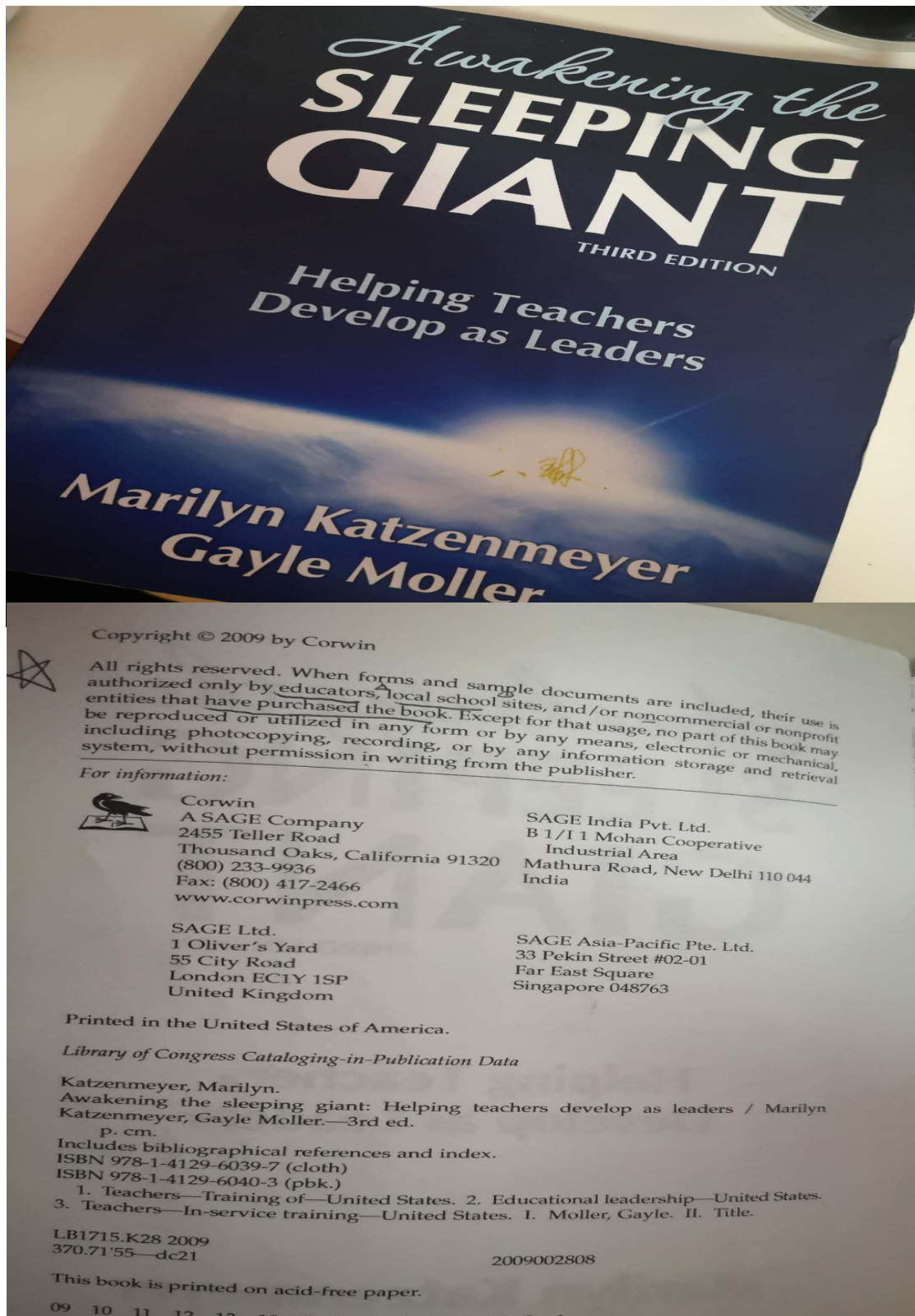
Code-book

Teacher leadership development of early-career teachers

RQ1: what are the teachers' perceptions of **school culture** in supporting teacher leadership?

RQ2: what are the early-career teachers' perceptions of **leadership readiness** of teacher leadership?

RQ3: what is the **relationship** between school culture and teacher leadership readiness of early-career teachers?

RQ4: what are the **leadership strategies** of early-career teachers to build working relationship with others?

RQ5: what are the **influential factors** that facilitate or impede teacher leadership development of early-career teachers?

Categories	Themes	Codes *Concept-drive: predetermined*	Codes *Data-driven: emerging*
School culture	Teacher ownership	*Teachers take leadership roles* *Free to make judgements for students* *Take initiatives for students* *Administrators' support for teachers*	*Banzhuren leadership roles* *Make adjustments on teaching instructions;* *Make judgement on teaching content* *Take initiatives to communicate with parents* *Support teacher innovation*
	Professional development and recognition	*Gain new knowledge and skills through staff development (CPD)* *Teachers engage in new knowledge and skills*	*Various forms of training;* *Online, on-site, off-site training;* *Gradual and reflective off-site training;* *Mentor-mentee partnership;* *Teaching and researching activities* *Self-directed learning and development;* *Improve educational qualifications*

		Professional competency and skills are recognised (behavioral professionalism)	*Fast learning and ICT application* *Work ethics and morality are recognised;* *Relationship building is recognised* *Learning attitudes are recognised (attitudinal professionalism)*
	<u>Open communication</u>	*Freely and openly talk opinions* *Discuss and help problem-solving* *Meetings for discussions and problem-solving*	*Informal communication* *Release emotion burdens* *Benefits of teaching and researching activities*
	<u>School environment</u>	*A satisfaction with work environment* *Teachers are respected by parents, students, administrators* *Teachers feel positive*	*Advanced teaching facilities* *Cooperative parents with high levels;* *Respect from students* *Encouraging culture*
	<u>Participation in decision-making</u>	*Selecting new staff* *Ideas and opinions are sought by administrators*	*No participation* *Classroom-related decisions;* *Pre-arranged teaching and researching activities*
	<u>Teacher collaboration</u>	*Teacher influence on teaching* *Peer classroom observations*	*Mandatory peer observations*
Teacher leadership readiness	<u>Beliefs</u>	*Work of teacher is important and meaningful* *Individual teachers can influence others*	*Beliefs on students' holistic development;* *Beliefs on students' habit formation* *Leadership for all;* *Lead and influence others;* *Team leadership;* *Lead relationship building;* *Lead classrooms;* *Lead self-*

			development; *Benefits of teacher leadership*
	Competency	*Willingness to observe and comment others' classes*	*Peer observations*
		Value time working with curriculum and instructions	*Make judgement and adjustments on teaching content and instructions*
	Confidence	*Effective working with colleagues*	*No conflicts*
		Effective working with students	*Make friends*
Relationship	Teacher ownership, and leadership readiness	*Significant, positive, and moderate* *Free to make judgement and adjustments develops leadership competency in classrooms.*	
	Professional development and recognition, and leadership readiness	*Significant, positive, and strong* *Mentor-mentee partnership develops leadership confidence in classroom teaching instructions.*	
	Open communication, and leadership readiness	*Significant, positive, and moderate* *Open and free talk develops leadership confidence in problem solving.*	
	Positive environment, and leadership readiness	*Significant, positive, and moderate* *Respect from parents and students develops leadership confidence.*	
	Participation in decisions, and leadership readiness	*Significant, positive, and moderate* *Making classroom decisions develop leadership ownership.*	
	Teacher collaboration, and leadership readiness	*No relationship* *Priority in classroom teaching and self-professional development.*	
Leadership strategies	Relationship with colleagues Relationship with students Relationship with parents	*Harmonious and comfortable* *Cooperation and communicative skills* *Making friends* *Avoid conflicts* *Expressing not persuading* *Communicate like friends* *Art of speaking*	
Influential factors	Facilitators	*Motivational rewards*	*Certificates* *Material rewards*

	Impediments	*Societal* *Confucianism*	*Promotion prioritises* *seniority;*
		Contextual *Structure*	*Shortage of early-* *career teachers;* *Lack motivational* *rewards;* *Fewer off-site* *training opportunities*
		Relational *Interpersonal relationship*	*Euphemistic* *communication*
		Personal *Lack of confidence*	*Prior experience;* *Developmental* *priorities;* *Lack of experience*
		Time constraints	*Administrative work;* *No time for peer* *classroom* *observation;* *Busyness of* *Banzhuren*
		Generation gaps	*Senior and young* *teachers*
		Generational *characteristics* *Influence of students*	*Young generation* *characteristics* *Fragile students;* *Passive students;* *Difficulty in students'* *habit formation*
		Influence of family *background*	*Performance-driven* *parents;* *Passive parents;* *Protective parents;* *Spoiling parents*

Exploratory Factor Analysis of TLSS

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	23.559	52.354	52.354	23.559	52.354	52.354	6.992	15.538	15.538
2	2.400	5.332	57.687	2.400	5.332	57.687	5.830	12.956	28.493
3	1.477	3.282	60.969	1.477	3.282	60.969	5.598	12.439	40.932
4	1.332	2.960	63.929	1.332	2.960	63.929	5.497	12.217	53.149
5	1.202	2.671	66.599	1.202	2.671	66.599	4.430	9.845	62.994
6	1.105	2.455	69.054	1.105	2.455	69.054	2.727	6.060	69.054
7	.951	2.113	71.167						
8	.828	1.841	73.008						
9	.802	1.781	74.789						
10	.680	1.511	76.300						
11	.614	1.364	77.664						
12	.596	1.325	78.988						
13	.556	1.235	80.223						
14	.507	1.126	81.349						
15	.486	1.080	82.429						
16	.464	1.031	83.460						
17	.452	1.005	84.465						
18	.443	.984	85.449						
19	.412	.917	86.366						
20	.381	.847	87.213						
21	.372	.828	88.041						
22	.359	.798	88.839						
23	.345	.766	89.604						
24	.330	.733	90.337						
25	.311	.691	91.028						
26	.308	.684	91.712						
27	.299	.664	92.375						
28	.288	.641	93.016						
29	.269	.597	93.613						
30	.254	.565	94.177						
31	.247	.549	94.727						

32	.231	.513	95.239						
33	.223	.495	95.734						
34	.216	.479	96.213						
35	.201	.447	96.660						
36	.194	.432	97.092						
37	.184	.410	97.502						
38	.175	.389	97.891						
39	.168	.372	98.263						
40	.157	.349	98.612						
41	.149	.331	98.943						
42	.137	.303	99.247						
43	.122	.271	99.518						
44	.115	.256	99.774						
45	.102	.226	100.000						

Extraction Method: Principal Component Analysis.

Scree Plot
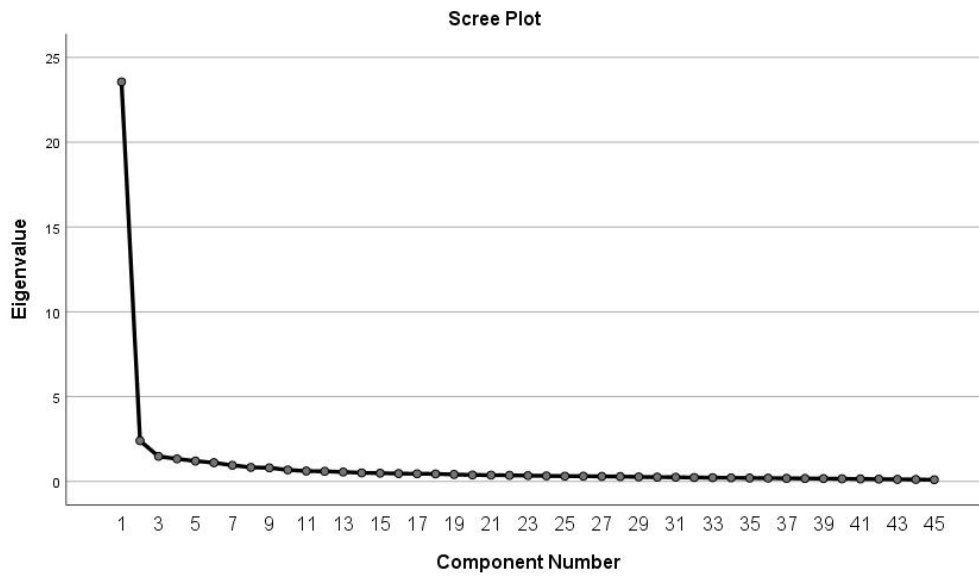
Rotated Component Matrix[a]

	Component					
	1	2	3	4	5	6
Q1	.321	.475	.505	.189	.060	.054
Q4	.285	.595	.401	.245	.084	.044
Q5	.309	.627	.399	.240	.072	.100
Q6	.281	.614	.394	.259	.097	.076
Q7	.304	.685	.279	.231	.116	.144
Q8	.184	.755	.174	.204	.186	.074
Q9	.292	.787	.062	.126	.199	.074
Q10	.290	.756	-.015	.072	.171	.267
Q11	.548	.175	.284	.106	.118	.181
Q12	.592	.219	.433	.279	.219	.048
Q13	.579	.235	.405	.295	.148	.127
Q14	.506	.379	.371	.277	.236	.072
Q15	.659	.242	.191	.129	-.133	.112
Q16	.647	.216	.273	.215	.318	.085
Q17	.643	.234	.073	.225	.135	.128
Q18	.619	.375	.101	.319	.083	.222
Q19	.610	.261	.030	.150	.482	.085
Q20	.587	.365	.120	.259	.343	.130
Q21	.602	.262	.192	.230	.427	.062
Q22	.530	.336	.245	.257	.242	.057
Q23	.075	.023	.093	.055	.276	.777
Q24	.232	.296	.246	.286	.121	.682
Q25	.472	.305	.390	.202	.011	.470
Q26	.416	.322	.340	.297	.255	.379
Q27	.387	.324	.414	.271	.329	.354
Q28	.374	.271	.237	.329	.130	.422
Q29	.349	.249	.337	.357	.375	.280
Q30	.386	.268	.342	.335	.483	.222
Q31	.375	.216	.378	.320	.490	.221
Q32	.317	.304	.275	.359	.489	.228
Q33	.097	.103	.213	.217	.776	.185
Q34	.135	.152	.326	.206	.770	.171
Q35	.318	.173	.554	.220	.461	.247
Q36	.290	.229	.618	.237	.333	.241
Q37	.235	.219	.667	.199	.372	.167
Q39	.273	.239	.672	.312	.232	.134
Q40	.135	.175	.581	.437	.274	.247
Q41	.308	.147	.506	.453	.271	.195

Q42	.138	.196	.508	.443	.328	.086
Q43	.181	.201	.211	.706	.136	.053
Q44	.263	.183	.077	.654	.239	.236
Q45	.217	.259	.169	.741	.200	.079
Q46	.165	.224	.363	.627	.387	-.034
Q47	.253	.059	.244	.630	.219	.210
Q49	.338	.212	.269	.656	-.008	.133

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 8 iterations.

Factors	Labels	Items	No. of items	% of variance	Mean SD Rank	Reliability
1	Teacher ownership	11,12,13,14 15,16,17,18,19,20,21, 22	12	15.538	3.92 .69 H	.938
2	Professional development and recognition	4.5.6.7 8.9.10	7	12.956	4.06 .69 H	.923
3	Open communication	1 35 36.37.39.40.41,42	8	12.439	3.81 .76 H	.935
4	School environment	43,44,45,46,47,49	6	12.217	3.97 .69 H	.892
5	Participation in decision-making	33, 34	2	9.845	3.37 1.15 M	.873
6	Teacher collaboration	23, 24	2	6.060	3.66 .92 H	.719
			37	69.054	3.89 .64 H	.971

The University of Nottingham

UNITED KINGDOM · CHINA · MALAYSIA

Exploratory Factor Analysis of TLRI

Total Variance Explained

Component	Initial Eigenvalues Total	Initial Eigenvalues % of Variance	Initial Eigenvalues Cumulative %	Extraction Sums of Squared Loadings Total	Extraction Sums of Squared Loadings % of Variance	Extraction Sums of Squared Loadings Cumulative %
1	8.072	67.267	67.267	8.072	67.267	67.267
2	.908	7.564	74.831			
3	.699	5.823	80.654			
4	.498	4.148	84.802			
5	.407	3.391	88.193			
6	.322	2.686	90.879			
7	.297	2.477	93.356			
8	.270	2.248	95.604			
9	.199	1.660	97.264			
10	.144	1.203	98.467			
11	.113	.938	99.405			
12	.071	.595	100.000			

Extraction Method: Principal Component Analysis.

269
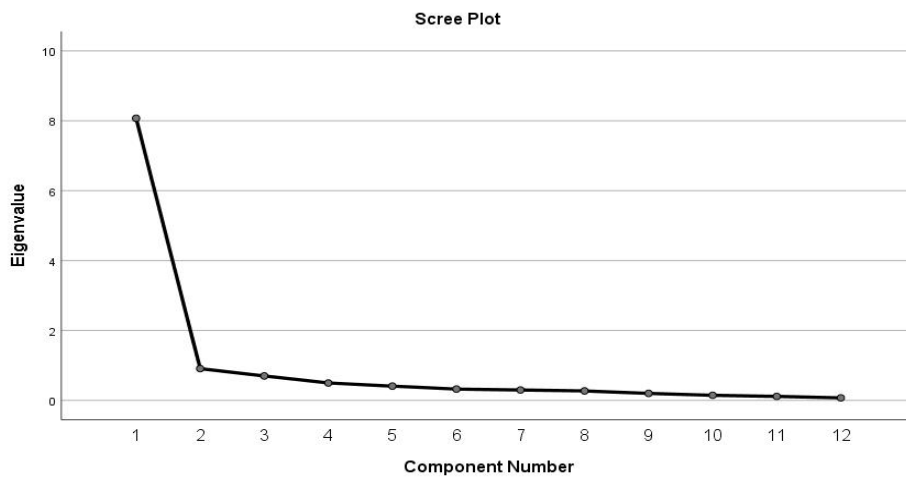
Component Matrix[a]

	Component
	1
Q1	.854
Q2	.850
Q3	.823
Q5	.906
Q6	.882
Q7	.880
Q10	.615
Q16	.771
Q17	.806
Q20	.837
Q21	.790
Q24	.791

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Factors	Labels	Items	No. of items	% of variance	Mean SD Rank	Reliability
1	Leadership readiness	1,2,3,5,6,7,10, 16,17,20,21,24	12	67.267	4.24 .61 VH	.953

Map of Gansu Province, China

Calculation of Aggregated Means

The aggregated mean score was calculated to illustrated the ranks of Five-Likert scale instruments (*TLSS* and *TLRI*).The following scale interpretation will be used:

The University of Nottingham
UNITED KINGDOM · CHINA · MALAYSIA
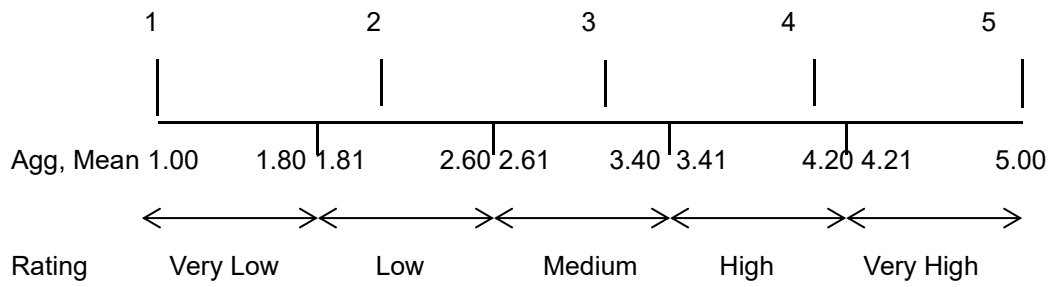
A cross-case comparison among 6 schools in City A and City B
of Gansu Province

Categories	Themes	PSA In City A	SSA In City A	CSA In City A	PSB In City B	SSB In City B	CSB In City B
School culture	Teacher ownership	*Banzhuren leadership roles;*	*Banzhuren leadership roles*	*Banzhuren leadership roles;*	*Banzhuren leadership roles*	*Banzhuren leadership roles*	*Banzhuren leadership roles*
		Free to make adjustments on teaching instructions; Free to make judgement on teaching content	*Make less adjustments on teaching instructions; Make less judgement on teaching content Lack ownership in innovation*	*Make free adjustments on teaching instructions; Make free judgement on teaching content Spontaneous organisation of professional reading*	*Free to make adjustments on teaching instructions; Free to try teaching methods and styles*	*Lack of free adjustments on teaching instructions and teaching content*	*Make free adjustments on innovative teaching instructions*
		Supportive school leaders for teacher innovation	*Less supportive principal*	*Support teacher innovation Encouraging principal*	*Supportive school leaders*	*Supportive principal*	*Supportive principal in innovation with encouragement without blame*
	Professional development and recognition	*Various forms of training; Convenient and helpful online training; Highly interactive on-site training; Preference for off-site training; Mentor-mentee partnership; Teaching and researching activities*	*Various forms of training Convenient and flexible online training; on-site training; Most beneficial and effective off-site training; Mentor-mentee partnership; No routinised teaching and researching activities; Middle leaders lead teaching and researching activities*	*Various forms of training; Efficient and flexible online training; Effective and helpful on-site training; Best off-site training; Mentor-mentee partnership; Routinised, thematic, and subject-based teaching and researching activities*	*Various forms of training; Theoretical online training; Limited numbers of off-site training; Preference for on-site training in classroom teaching; Regular teaching and researching activities*	*Various forms of training; General and theoretical online training and on-site training; Impressive and applicable off-site training; Teaching and researching activities*	*Various forms of training; Useful but less practical online training; Less regular off-site training; Most effective on-site training and Mentor-mentee partnership*
		Self-directed learning and development; Improve educational qualifications Fast learning and ICT application	*Self-directed learning and development; Improve educational qualifications Backbone teachers as role models*	*Self-directed learning and development*		*Self-directed learning and development*	
				Fast learning and ICT application; Backbone teachers as role models	*Backbone teachers as role models in professionalism; Banzhurens are recognised with relationship with parents*	*Older teachers as role models*	*Recognise qualifications and classroom performance by parents; Recognise effective classroom teaching by colleagues; Recognise professional expertise and skills; Recognise young teachers'*

							fast learning
		Work ethics and morality are recognised *Learning attitudes are recognised*		*Work ethics and morality are recognised* *Learning attitudes are recognised*		*Work ethics and morality are recognised*	
	Open communication	*Informal communication; Private in teacher staff rooms; Release emotion burdens*	*Not keep informed Informal communication in staff-rooms; Lack of communication; Power relationship in communication; Reserved opinions* *Blame teachers; Lack of sharing and exchanging*	*Open and free; Equal communication; Straightforward communication*	*Formal communication in teaching and researching activities; Frequent and informal communication in staff-rooms*	*Informal communication in staff-rooms Lack of communication; Harmonious, less critical communication*	*Open and harmonious; Informal and frequent communication in staff-rooms*
	School environment	*Advanced teaching facilities* *Cooperative parents with high levels; Respect from students Encouraging culture*	*Lack satisfaction with school* *Less respect from colleagues and parents* *Negative attitudes*	*Good infrastructure and facilities; Advantages of combined school; Rich cultural atmosphere and diverse extra-curricular activities*	*Satisfaction with physical and cultural environment* *Respected by parents by building close family-school relationship Encouraging culture*	*Good impression on from early-career teachers* *Dissatisfying attitudes to teacher and student quality*	*Advance teaching facilities; Good infrastructure and facilities; Advantages of combined school; Rich cultural atmosphere and diverse extra-curricular activities Respected by colleagues*
	Participation in decision-making	*No participation* *Classroom-related decisions; Pre-arranged teaching and researching activities by principal*	*No participation* *Classroom decision-making; Opinions are not sought; Tightly controlled by principal*	*Consultation* *Middle leaders made decisions; Professional reading decisions; Free and spontaneous classroom decisions; Students-related decision*	*No participation* *Classroom-related decisions; Teaching and researching activities decisions by consultation, discussion, and negotiation*	*No participation* *Limited classroom decision-making; Opinions are pre-arranged by senior leaders in group-level decisions*	*Controlled freedom* *Middle leaders made decisions in group levels; Teachers made classroom decisions; Students-related decision*
	Teacher collaboration	*Mandatory peer observations*	*Mandatory peer observations; Frequent peer observations*	*Teaching and researching activities; Frequent and voluntary peer observations*	*Teaching and researching activities; Peer observations*	*Less frequent teaching and researching activities; Mandatory peer observations; Frequent peer observations; Teacher competition*	*Teaching and researching activities; Teacher competition*
Teacher leadership readiness	Awareness				*Beliefs on teaching profession as meaningful and important*		

		Leadership for all; Lead and influence; Lead relationship building; Lead classrooms	*Lead relationship building; Lead classrooms; Lead students*	*Teacher leadership is a nature and a nurture; Leadership for all; Lead classrooms; Lead outside classrooms; Lead students*	*Leadership for all; Lead within and beyond classrooms; Instructional leaders in classrooms*	*Leadership is relationship building and trust building*	*Classroom leadership; Leadership is formal and informal; Leadership is an influence*
	Competency	*Peer observations*	*Mature ICT applications in instructions*	*More leadership in classrooms than outside classrooms*	*Priority in their continuous and professional learning and development Enhance her professional and leadership development*	*Leadership in class management and student instructions Priority in their continuous and professional learning and development*	*More leadership in classrooms than outside classrooms*
		Make judgement and adjustments on teaching content and instructions					
	Confidence	*No conflicts*	*Mixed findings*	*Plans to apply for Banzhuren leadership roles*	*Opportunistic appointment*		*Plans to apply for Banzhuren leadership roles Further improve leadership knowledge and skills*
		Make friends					
Relationship of school culture and teacher leadership readiness	Teacher ownership, and leadership readiness	*Free to make judgement and adjustments develops leadership competency in classrooms.*	*An aging structure which limits teacher innovation discourages leadership confidence.*	*Free judgement and adjustments on teaching content and instructions encourages early-career teachers confidence in leading students in classrooms.*	*Teacher ownership in free adjustments developed teachers' confidence to lead classroom innovative instructions.*	*A lack of teacher ownership in making adjustments in teaching instructions discouraged early-career teachers in leading with innovative practices in their classrooms.*	*The sense of ownership in freedom to make judgement and adjustments developed early-career teachers' professional competency to lead their students in classroom domains.*
	Professional development and recognition, and leadership readiness	*Mentor-mentee partnership develops leadership confidence in classroom teaching instructions.*	*Lack of training leads to reduced confidence in leadership competency*	*Updated learning new knowledge and skills encourages early-career teachers' confidence to win recognition from their fast learning and ICT applications.*	*School culture which focused on teacher professional development and recognition developed teachers' professional competency and confidence to take up leadership roles and practice leadership*	*The disconnected professional learning opportunities like online training failed to develop early-career teachers' classroom applications in leading students.*	*The open classes and mentor-mentee partnership developed early-career teachers' confidence in leading their classroom teaching instructions*
	Open communication, and leadership readiness	*Open and free talk develops leadership confidence in problem solving.*	*Power relationship in communication leads to reduced efficacy to lead.*	*Informal and straightforward communication help early-career teachers' confidence in problem-solving for students' problems.*	*The open communication with free talk and discussions with their colleagues developed problem-solving skills of early-career teachers;*	*The lack of mutual communication and voices failed to develop critical aspects of teachers' professional development..*	*The open communication with free talk and discussions with their colleagues developed professional and problem-solving skills of early-career teachers;*

	School environment, and leadership readiness	*Respect from parents and students develops leadership confidence.*	*Lack of respect from parents leads to decisions to leave*	*Rich cultural atmosphere and diverse extra-curricular activities develop early-career teacher leadership skills in organising extra-curricular activities and communication with parents.*	*Teacher satisfaction of school environment with advanced ICT facilities enhanced early-career teachers' confidence to lead and influence others;*	*A positive school environment development early-career teachers' efficacy and commitment to lead.*	*Teacher satisfaction of school environment with advanced ICT facilities enhanced early-career teachers' confidence to lead and influence others;*
	Participation in decision making, and leadership readiness	*Making classroom decisions develop leadership ownership.*	*Opinions not sought by principals leads to reduced efficacy to lead.*	*Classroom and students-related decisions made by early-career teachers develop their efficacy to lead students.*	*Decision-making in classrooms and learning communities developed early-career teachers' ownership as instructional or pedagogical leaders*	*The limited decision-making constrained early-career teachers' leadership practised only within their classroom domains.*	*Decision-making in classrooms developed early-career teachers' ownership as instructional or pedagogical leaders for their students.*
	Teacher collaboration, and leadership readiness	*Priority in classroom teaching and self-professional development.*	*Priority in classroom teaching and self-professional development.*	*Peer observations and evaluations develop early-career teachers' teaching instructional skills in classrooms.*	*Teacher collaboration with a focus on peer observations and evaluations developed early-career teachers' professional competency to lead.*	*Supported teacher collaboration in participation in competitions developed early-career teachers' professional knowledge and skills in leading with ICT applications.*	*Co-existence of teacher collaboration and communication developed early-career teachers' professional and leadership knowledge and skills.*
Leadership strategies	Relationship with colleagues	*Harmonious and comfortable; Cooperation and communicative skills*	*Taking initiatives*	*Taking the initiative; respect, equal and humble attitudes*	*'Open for diversity'*	*'Self-initiation' and 'communication' skills*	*'Collaborative, communicating and negotiating skills'*
	Relationship with students	*Making friends; Emotional bonding*	*Making friends; Emotion bond; Trust building*	*Making friends; Balance professional and personal relationship*	*'Communication skills; 'emotional bonding skills'*	*'Observation on students emotional status' and 'balancing the relationship' skills*	*'Management with patience' 'showing care and love for students' and ' observation on students and their family background'*
	Relationship with parents	*Avoid conflicts Expressing not persuading Communicate like friends Art of speaking Showing care for students*	*Convenient communication approaches; Extra care for students*	*Communicate like friends*	*'Cooperation and problem-solving skills'*	*'Communication, conflict management, and problem-solving' skills*	*Communication and negotiation skills*
Influential factors	Facilitators	*Certificates; Material rewards*	*Certificates; Material rewards; Incentive and rewarding system*	*Certificates; Material rewards*	*Motivational rewards*	*Motivational rewards*	*Motivational rewards*
	Impediments	*Promotion prioritises seniority*	*Promotion prioritises seniority; Reward prioritises seniority; Professional titles matter; Training priorotises*			*The low social economic status, low and fixed salary, tight government control*	

		Shortage of early-career teachers; *Lack motivational rewards;* *Fewer off-site training opportunities*	*Aging teacher structure*	*Lack motivational rewards;* *Fewer off-site training opportunities;* *Limited education resources*	*A lack of mentor support*	*A lack of mentor-mentee support;* *A lack of motivational rewards*	
		Prior experience; *Developmental priorities;* *Lack of experience*	*Lack of experience;* *Introverted personality*	*Lack of experience;* *Lack of confidence*	*Prior experience in rural schools;* *Developmental priorities*	*Prior experience in rural schools*	
		Administrative work; *No time for peer classroom observation;* *Busyness of Banzhuren*	*Administrative work;* *No time for peer classroom observation;* *Heavy workload;* *Busyness of Banzhuren*	*Administrative work;* *No time for peer classroom observation;* *Busyness of Banzhuren*	*Heavy workload;* *Busyness of Banzhuren*	*Tight schedule and heavy workload*	*Heavy workload*
		Fragile students; *Passive students;* *Difficulty in students' habit formation*	*Difficulty with students;* *Low acceptance from students;* *Gender difference of students*	*Fragile students;* *Passive students*	*Diverse students;* *Large class size*	*Personality change of students*	*Left-behind children*
		Performance-driven parents; *Passive parents;* *Protective parents;* *Face of parents;* *Spoiling parents*	*Performance-driven parents;* *Passive parents;* *Negative attitudes; from parents;* *Lack trust from parents;* *Protective parents*	*Performance-focused parents;* *Passive parents;* *Less respectful parents*	*Complexity of parents;* *Passive parents;* *Migrant parents*	*Complexity of parents*	*Migrant parents*

The strength of correlation coefficient values (Costa, 2016)

.91 to 1.00 or -.91 to 1.00	**Very strong**
.71 to .90 or -.71 to .90	**Strong**
.51 to .70 or -.51 to .70	**Average or medium or moderate**
.31 to .50 or -.31 to .50	**Weak**
.01 to .30 or -.01 to .30	**Very weak**
.00	**No correlation**

Information of interview participants in City A and City B (n=33)

	Interview participants in City A (n=17)				
No.	Name (Pseudonym)	Gender	Formal/Informal leadership role	Teaching subject	Teaching experience
1	PSAP1	Female	Formal/deputy principal	Math	26 years
2	PSABT1	Male	Formal/*Banzhuren*	Math	23 years
3	PSABT2	Female	Formal/*Banzhuren*	English	20 years
4	PSAECT1	Female	Informal/Subject teacher	Math	7 years
5	PSAECT2	Female	Formal/*Banzhuren*	Math	4 years
6	SSAP1	Male	Formal/deputy principal	Math	25 years
7	SSABT1	Female	Formal/*Banzhuren*	Chemistry	22 years
8	SSABT2	Female	Formal/*Banzhuren*	English	22years
9	SSAECT1	Male	Informal/Subject teacher	Geography	2 years
10	SSAECT2	Female	Formal/*Banzhuren*	Chinese	2 years
11	SSAECT3	Female	Informal/Subject teacher	Math	3 years
12	CSAP1	Male	Formal/deputy principal	History	26 years
13	CSABT1	Female	Formal/Head of department	Chemistry	28 years
14	CSABT2	Male	Formal/head of department	Math	16 years
15	CSAECT1	Female	Informal/Subject teacher	ICT	1 year
16	CSAECT2	Female	Informal/Subject teacher	Chinese	1 year
17	CSAECT3	Male	Formal/*Banzhuren*	Politics	1 year
	Interview participants in City B (n=16)				
No.	Name (Pseudonym)	Gender	Formal/Informal leadership role	Teaching subject	Teaching experience
1	PSBP1	Male	Formal/principal	Chinese	28 years
2	PSBBT1	Female	Formal/*Banzhuren*	Math and Chinese	16 years
3	PSBBT2	Female	Formal/*Banzhuren*	Chinese	18 years
4	PSBBT3	Male	Formal/*Banzhuren*	Chinese	28 years
5	PSBECT1	Female	Formal/*Banzhuren*	Chinese	7 years
6	PSBECT2	Female	Informal/Subject teacher	Math	7 years
7	SSBP1	Male	Formal/principal	PE	30 years
8	SSBBT1	Male	Formal/deputy principal	Math	26 years
9	SSBBT2	Male	Formal/*Banzhuren*	Politics	20 years
10	SSBECT1	Female	Formal/*Banzhuren*	English	1 year
11	SSBECT2	Female	Formal/*Banzhuren*	Geography	6 years
12	CSBP1	Male	Formal/ Deputy principal	Maths	25 years
13	CSBBT1	Male	Formal/Director of teaching affair department	All subjects	20 years
14	CSBECT1	Male	Formal/Assistant of the director of teaching affair department	Maths	2 years
15	CSBECT2	Male	Formal/*Banzhuren*	ICT and Math	2 years
16	CSBECT3	Female	Formal/*Banzhuren*	Chinese	2 years