Exploring Effective Measures for Improving Teacher Leadership in Junior High Schools in China

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Abstract: There are many relevant studies discussing what measures can improve teacher leadership under the context of China; however, few have interpreted how teacher leadership is enhanced. The purposes of this study are to implement and evaluate eight measures of four themes (i.e. Sharing teachers' expertise, Empowering teachers as leaders, Increasing teachers' self-efficacy and collective responsibility, Teacher participation in school affairs management) for improving teacher leadership and to analyze how these measures may lead to improvement. Therefore, this study adopts the Four-Factor Model of Teacher Leadership theory and develops a framework with the Three-Step for Teacher Leadership Improvement as an implement guidance. A mixed-method research design, involving the quantitative method (i.e., pre- and post-tests), and the qualitative method (i.e., semi-structured interviews), will be employed. This study will enrich the theories of teacher leadership in the aspect of feasible measures for improving teacher leadership, which is still under-researched. Moreover, to school stakeholders who aim to improve teacher leadership, this study should be able to provide exemplars of implementing the three-step framework, the four-factor model of teacher leadership, and the eight measures for improving teacher leadership.

Keywords: effective measures, teacher leadership, junior high schools, China

1. Introduction

As Ministry of Education (2017) presented in China, teacher leadership is becoming increasingly important in educational reform, and the government has taken several strategies aimed at nurturing teacher leaders so as to promote educational reform, enhance teachers' teaching ability, and achieve school improvement. Several previous studies found that the development of teacher leadership has a positive impact on teacher leaders, teacher colleagues, school structure, and students, in terms of teacher instruction, teacher professional development, student learning, student achievement, school improvement, and distributed leadership (Goddard, Hoy, & Hoy, 2000; Lieberman & Miller, 2005; Mulford & Zarins, 2002; Muijs & Harris, 2003; Silins & Mulford, 2004; Spillane et al., 2001; Katzenmeyer & Moller, 2001). However, although there are many relevant studies discussing what measures can improve teacher leadership in China, few have interpreted how teacher leadership has been enhanced (Dai, 2015). Therefore, it is significant to scientifically explore how measures influence teacher leadership. Furthermore, practical problems of teacher leadership in China, such as teachers not being sufficiently empowered to make decisions on school affairs and lacking support and platforms addressing their demands of achieving higher leadership, should also be noticed.

Teachers' weak leadership can lead to negative influences on teachers themselves, student learning, and school improvement (Berry, Daughtrey and Wieder, 2010). Therefore, improving teacher leadership is crucial for smoothly achieving school improvement and educational reform. Furthermore, this study offers an innovative design: the adoption the Four-Factor Model of Teacher Leadership theory in the educational context of China; this study marks the first time this theory will be used in junior high schools in China.

The purposes of this study are to implement and evaluate eight measures of four themes (i.e. Sharing teachers' expertise, Empowering teacher as leaders, Increasing teachers' self-efficacy and collective responsibility, Participating in school affairs management) for improving teacher leadership and to analyze how these measures may lead to improvement. Therefore, for the process framework of this study, this study adopts the Four-Factor Model of Teacher Leadership theory (Angelle and DeHart, 2010) and develops a framework based on the Three-Step for Teacher Leadership Improvement as an implement guidance, including assessing the levels of teacher leadership, identifying the strengths or

weaknesses of teacher leadership, and implementing eight measures for improving teacher leadership.

1.1 Research Questions

The proposed study aims to explore the effectiveness of eight measures in teacher leadership and how these measures affect teacher leadership. Accordingly, the author put forward two research questions:

(1) What is the influence of these measures on teacher leadership?

(2) How do these measures affect teacher leadership? In particular, which measure(s) might improve which aspect of teacher leadership?

2. Background

2.1 Educational Reform in China

China has issued many policies to enhance teacher leadership so as to improve educational quality and promote educational reform. For example, one of the National Policies of China, Long-and-Middle-Term Planning of National Education Reform and Development (Ministry of Education, 2010), emphasizes that "teachers are the heart of the educational reform, and were requested to change from the roles of knowledge transmitters to facilitators and advisors of student learning." (Chapter 17). Regarding this policy, Zhang & Pang (2016a) pointed that "Backbone teachers," who play key roles in the Chinese educational system, should be developed and nurtured as leaders and experts in teaching and learning. Moreover, the 13th Five-Year Plan of National and Educational Development (Ministry of Education, 2017) stated that the existing educational reform focuses on cultivating teacher leadership, which is the core point for succeeding in education transformation, in order to improve teacher quality and to cultivate teacher leaders who could transform teaching and student learning (Zhang & Pang, 2016b). In other words, as key leaders who play an important role in promoting educational reform, teachers can be helpful for student learning. As Nicholas & Zhuang (2017) stated, "The existing focus of the reform is to nurture teacher leadership and it is highly recognize that teacher leaders are ones who are expected to be the key players to bring about successful educational transformation in terms of innovation ideas and practices." (p.95). Namely, it is significant to improve teacher leadership in order to cultivate teacher leaders as promoters leading educational reform.

2.2 Current Issues of Teacher Leadership in China

A survey of 756 teachers at secondary schools in China, which was conducted by Hu & Gu (2012), indicated that Chinese teachers have limited influence power for decision-making regarding school affairs, given the context of the centralization of power in schools and there being fewer channels for teachers to participate in school affairs. The same issue was also found by Research Achievements of Central Universities (2020), which notes that fewer opportunities for teachers to become involved in decision-making may hinder teacher leadership performances. Moreover, due to inadequate support and platforms of leadership exertion, teachers' demands for leading school improvement cannot be satisfied (Dai, 2015). Therefore, it is urgent to improve teacher leadership for promoting the development process of educational reform in China. (Nicholas & Zhuang, 2017).

3. Literature Review

This section will systematically review the definitions of teacher leadership, previous measures for promoting teacher leadership, and a framework of Three-Step for Teacher Leadership Improvement, as well as propose the conceptual framework which is underpinned by the Four-Factor Model of Teacher Leadership theory and relevant literature on the improvement measures of teacher leadership.

3.1 Definitions of Teacher Leadership

As defined by DeHart (2011), teacher leadership means that teachers are willing to take actions that have contributions for improving education quality for students to strengthen the practice of peer teachers, to reduce the leadership responsibilities of principals, and to enrich the educational

environment throughout the school. Furthermore, as defined by York-Barr & Duke (2004), teacher leadership is "the process by which teachers, individually or collectively, influence their colleagues, principals, and other members of school communities to improve teaching and learning practices with the aim of increased student learning and achievement" (pp.287-288). Teacher leadership also influences student learning and school improvement, and it can inspire school leaders to engage in educational improvement (DeHart, 2011). Wasley (1991) stated that "the ability of the teacher leader to engage colleagues in experimentation and then examination of more powerful instructional practices in the service of more engaged student learning." (p. 170). Childs-Bowen, Moller & Scrivner (2000) defined teacher leadership as when teachers "function in professional learning communities to affect student learning; contribute to school improvement; inspire excellence in practice; and empower stakeholders to participate in educational improvement" (p. 28). Namely, teacher leadership has significant functions for student learning, school improvement, and educational reform. To summarize, most definitions of teacher leadership are related to student learning, teacher teaching, and school improvement. Based on the definitions above, teacher leadership herein refers to the abilities contributing to student learning and school improvement, improving the instructional ability of teachers and the education quality of schools, and inspiring colleges in practice.

3.2 Previous Measures for Promoting Teacher Leadership

There are many previous studies discussing the measures for promoting teacher leadership. The contemporary leadership model consists of three elements: establishing an appropriate school culture, recognizing teacher leaders, and inspiring teachers' confidence (Bishop, Tinley & Berman, 1997). Bishop et al. (1997) has pointed out the advantages of this model: "These three elements, along with enabled teacher leadership, result in positive cultural outcomes, effective administration, empowered teachers, and relevant organizational policies and procedures which focus on student" (P.3). What's more, a previous study adopted the 1998 National Survey (TLC) to measure three dimensions of teacher leadership: teacher cooperation and group responsibility, teacher involvement in the community of practice, and engagement in leadership activities (Riel and Beaker, 2008). As a result, teacher leaders gained higher scores in these three dimensions. The above statement and results inspire the current study to consider these elements and dimensions when proposing suitable measures for promoting teacher leadership. Furthermore, some studies have proposed effective models of promoting teacher leadership; for example, Wilson (2016) pointed that the Professional Learning Community (PLC) could enhance teacher leadership by providing environments for teachers to cooperate on their teaching and learning. A PLC includes five dimensions: shared and distributed leadership, cooperative values and vision, collaborative teaching and learning, shared personal experience, and supportive platforms and chances (Huffman, 2011; Wilson 2016). These dimensions are useful for school stakeholders who attempt to promote teacher leadership. Therefore, considering China's national education situation, the author proposes some feasible measures, which will be elaborated on in the conceptual framework.

3.3 Conceptual Framework of the Proposed Study

3.3.1 The Four-Factor Model of Teacher Leadership

For evaluating teacher leadership, this study adopts the Four-Factor Model of Teacher Leadership proposed by Angelle and DeHart (2010) because this model, which was underpinned by theories of teacher leadership and substantial empirical evidence, is relatively reliable and authoritative (DeHart, 2011). Furthermore, the four-factor model provides the foundation for the construction of the teacher leadership theory (DeHart, 2011). DeHart (2011) said that: "For researchers, this model also offers a means to examine formal and informal teacher leadership from a theoretical standpoint" (p.105), which means the four-factor model of teacher leadership can be used as a theoretical model in future case studies to further confirm and enrich this theory. Importantly, based on this model, this study attempts to further propose some measures for improving teacher leadership, which will be interpreted in the next section. As shown in Figure 2, teacher leadership consists of four factors, including Sharing Expertise (SE), Sharing Leadership (SL), Supra-Practitioner (SP), and Principal Selection (PS). The three factors of SE, SL, and SP, which are upward-pointing triangles, are positively correlated with each other; the PS is negatively correlated with the other three factors and represented by a downward-pointing triangle. The specific definitions of each factor can be seen in Table 1.
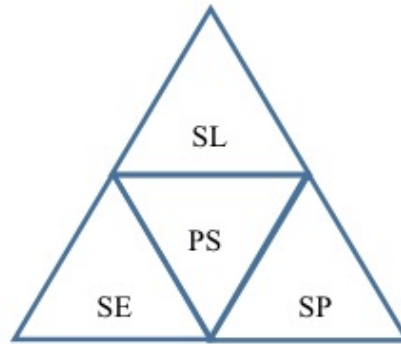
Figure 1: The Four-Factor Model of Teacher Leadership

Table 1: Four-Factor Model of Teacher Leadership

Four-Factor Model of Teacher Leadership	Definitions
Sharing Expertise (SE)	Perceptions of teachers' pedagogical and classroom management skills as well as their willingness to share those skills with their fellow teachers
Sharing Leadership (SL)	Perceptions of reciprocal relationship existing between the principal and the teachers in a school
Supra-Practitioner (SP)	Perceptions of teachers' willingness to go above and beyond their prescribed roles
Principal Selection (PS)	Perceptions that the principal controls which teachers may participate in leadership activities

3.3.2 Measures for Teacher Leadership Improvement

Teacher leadership plays an important role in education reform in China, while the current situation of Chinese teacher leadership is still not ideal (Hu & Gu, 2012). Therefore, taking measures to promote teacher leadership is urgent and necessary. Berry, Daughtrey, and Wieder (2010) conducted a survey interviewing teachers in urban and high-needs schools, and the results indicate that when teachers are empowered to be instructional leaders and decision makers in their schools, student learning and school improvement gains positive influences. Berry's study proposes some measures for school stakeholders to cultivate teacher leadership so as to promote effective teaching and learning and school improvement (for instance, collaborating teacher teaching, providing support and platforms for teachers to exert their leadership role, and strengthening teachers' beliefs on education.) Based on these measures, this study proposed four themes of eight measures (two measures per theme), including sharing teachers' expertise, empowering teachers as leaders, increasing teachers' self-efficacy and collective responsibility, and teacher participation in school affairs management.

Sharing teachers' expertise. Berry, Daughtrey and Wieder (2010) pointed out that "teachers who collaborate with experienced teachers who spread their expertise among colleagues that will have a big help for less-experienced teachers' teaching ability." Aligning with this view, Ghamrawi (2013) demonstrates that "high-quality; teacher-led professional development has the potential of fueling up the process of developing leaders at school" (p.180). Teachers would acquire informal leadership when bringing innovative ideas to school, participating in projects, and sharing expertise (Leithwood & Jantzi, 1999). Namely, the professional development of teachers is beneficial to teacher leadership. Therefore, the proposed study puts forward corresponding measures:

a. Increasing the opportunities for teachers to learn and communicate, such as weekly group discussion on course teaching and communication on students' learning problems in class, and monthly

teaching summaries of the whole grade.

b. Constructing teachers' mutual-help mechanisms, such as teaching guidance from old teachers to new teachers, excellent teachers to ordinary teachers, experience imparting, and other methods conducive to improving the quality of teaching.

Empowering teachers as leaders. "Teachers tend to seek out leadership opportunities but require support to fulfill their promise as leaders. For instance, schools' leaders allow teacher leaders to function as peer evaluators and trainers parent involvement coordinators, education policy advisors..., while keeping at least one foot in the classroom to ground their pedagogical leadership" (Berry, Daughtrey & Wieder, 2010, p.9). There is a correlation between leadership and learning (Clarke, 2016). When teachers become leaders, the new knowledge they learn will permeate the classroom and have a positive impact on teaching and learning throughout the school (Hallinger & Heck, 2010; Leithwood & Mascall, 2008: Louis & Wahlstrom, 2011). Therefore, empowering teachers or nurturing teachers as leaders will be beneficial to teacher instruction and learning. In line with this idea, the study brings up the following measures:

c. The principal empowers teachers to arrange teaching contents and teaching methods independently according to the learning situation of the students, so as to give real rights to teachers, which can be deemed as distributed leadership (Muijs and Harris, 2007).

d. The principal communicates with the teachers directly, understands and tries to meet the needs of teachers, and targets the cultivation of teacher leadership.

Increasing teachers' self-efficacy and collective responsibility. Berry, Daughtrey and Wieder (2010) stated that "teachers' sense of efficacy and collective responsibility will help for cultivating teacher leadership that benefits to their teaching effectiveness and improved student achievement" (p.9). A culture of trust and cooperation is essential for the development of teacher leadership (Muijs & Harris, 2007). Research (i.e., Katzenmeyer & Moller, 2001) has demonstrated that teacher leaders' self-esteem and self-efficacy have positive effects on fellow teachers, student participation, and student achievement. Moreover, teachers' collective responsibility is positively correlated to teacher leadership (Riel and Beaker, 2008). Accordingly, this study proposes the following measures:

e. Improving teachers' sense of superiority and pride so that teachers can be proud of being teachers and helping students achieve their life goals.

f. Strengthening teachers' sense of belonging and their willingness to make unremitting efforts to achieve school goals.

Teacher Participation in school affairs management. As stated by Berry, Daughtrey and Wieder (2010), "Expanding leadership roles for teachers may be an excellent and cost-effective strategy for retaining the most effective teachers" (p.9), which suggests that teachers should be engaged in school affairs. Teachers are involved in almost every operation of the school (Silva et al., 2000). Teachers have the ability to change the situation in the school, as they are familiar with the school context and their key role in the education process (Lindahl, 2008). Teachers should not be deemed as just employees or followers; instead, they should be regarded as school leaders who are highly responsible for student learning and school improvement, devoting themselves to their education careers. Therefore, in order to solve the problem of teachers having fewer opportunities to participate in the decision-making of school affairs (Hu & Gu,2012), this study proposes these measures:

g. Engaging teachers in decision-making meetings on school affairs once a month.

h. Encouraging teachers to put forward improvement suggestions on all aspects of the school, collecting their opinions regularly and trying to adopt their valuable and advanced suggestions.

4. Methodology

In this mixed-method research, both quantitative and qualitative methods will be employed for comprehensively and scientifically exploring the effective measures of improving teacher leadership and analyzing how these measures affect teacher leadership. The data collection period will be one semester.

4.1 Data collection

For the first research question ("What is the influence of these measures on teacher leadership?"), the researcher will use pre- and post-tests to compare the levels of teacher leadership before and after implementing the eight measures. For addressing the second question ("How do these measures affect teacher leadership?"), the proposed study will use semi-structured interviews to explore teachers' in-depth perceptions on those implemented measures.

4.1.1 Participants

A total 100 teachers from grade one in a junior high school will be randomly selected. The reason is that grade-one teachers have relatively smaller workloads than those of higher grades. Furthermore, the author will conduct semi-structured interviews with all participating teachers, who are the unit of analysis in the research (Flick, 2018). As the key participants in teacher leadership, teachers are able to share their direct points-of-view based on their own experiences, which could allow them to provide numerous details and examples of their own stories and offer their insights on teacher leadership.

4.1.2 Instruments

This study adopts the Teacher Leadership Inventory (TLI) developed by Angelle et al. (2008). Angelle and DeHart (2010) reported Cronbach alpha reliabilities of .85 for the entire instrument and strong goodness-of-fit statistics (GFI = .98, NFI = .95, CFI = .97, RMSEA = .058), furthering supporting the construct validity of the TLI. The TLI contains 17 items of four factors; items 1, 2, 3, 4, and 7 are used to measure Sharing Expertise, items 5, 6, 12, 13, 14, and 16 are used to measure Sharing Leadership, items 8, 9, and 10 are used to measure Supra-Practitioner, and items 11, 15, and 17 are used to measure Principal Selection. All items are designed on a four-point Likert scale (From 1-Never to 4-Routinely). Additionally, the author designed the interview questions based on the purposes and research questions of this study.

4.1.3 Procedure

Before and after the implementation of the measures for improving teacher leadership, teachers will be required to complete the TLI, which will take about 15 minutes. The researcher will explain the meaning of each question and then ask the teachers to answer according to the questionnaire instructions. After implementing the measures, all participants will be invited to the individual interviews in order to gauge their perceptions on which measure(s) influence(s) which aspect of their own leadership. Each interview will take more than 30 minutes, and all interviews will be audio-recorded.

4.2 Data Analysis

To analyze the data collected by pre- and post-tests, the proposed study will conduct a paired sample t-test analysis in SPSS. To analyze the qualitative data collected by interviews, the proposed study will adopt a grounded theory approach (Strauss & Corbin, 1990). The first step is open coding, which reviews teachers' responses sentence-by-sentence and interprets them to different new labels. The second step is axial coding, which, according to the similarity of the first step's labels, separates them into different groups. The third step is thematic coding, which explores the relationship of different groups in the second step and then uses sentences to integrate them together. At last, based on the third step, the grounded theory can come up with a theoretical coding, which can present a clear statement on the how the measures affect teacher leadership. These steps should be repeatedly used until the completion of the data analysis.

4.3 Ethical Issues

During the procedure of data collection, the researcher will get permission from the principal and the teachers who are willing to participate in the interviews and questionnaires. Furthermore, consent letters listing all information about this proposed study will be provided to the participants, and the signed letters will be collected before conducting the research. All participants will be allowed to voluntarily participate in this research based on their own willingness. Additionally, the research will maintain the confidentiality of all information.

5. Implications

Theoretically, the proposed study adds knowledge to the field of teacher leadership. Specifically, the proposed study fills existing research gaps of how measures affect teacher leadership by putting forward and evaluating eight measures of teacher leadership. In addition, this study explores how teacher leadership is influenced by eight measures, in particular which measure(s) could enhance which aspects of teacher leadership, and thereby, this study will contribute to theories on teacher leadership's improvement mechanisms. In addition to theoretical implications, the current study also has three practical implications. To begin with, to schools, the three-step framework provides a specific guidance of how to improve teacher leadership. Secondly, the four-factor model of teacher leadership, which will be used and identified by this study, could be utilized as a framework for designing programs for teacher professional development. Thirdly, through evaluating the effectiveness of the measures, the effective and feasible measures identified by this study could be useful for those school stakeholders who would like to promote teacher leadership.

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