

GUIDELINES FOR DEVELOPMENT INSTRUCTIONAL
LEADERSHIP FOR SECONDARY SCHOOL TEACHERS
IN QINGDAO

HUANG YONGGANG

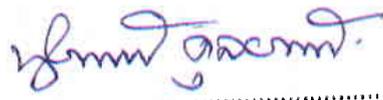
A thesis submitted in partial fulfillment of the requirements
for the Degree of Doctor of Philosophy Program in Educational Administration
Academic Year 2023
Copyright of Bansomdejchaopraya Rajabhat University

Thesis Title Guidelines for development instructional leadership for secondary school teachers in Qingdao

Author Mr.Huang Yonggang

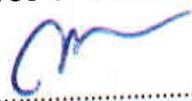
Thesis Committee


..... Chairperson
(Associate Professor Dr. Niran Sutheeniran)


..... Committee
(Assistant Professor Dr. Nonnadh Dulyadaweesid)


..... Committee
(Assistant Professor Dr. Kanakorn Sawangcharoen)

Accepted by Bansomdejchaopraya Rajabhat University in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy in Educational Administration

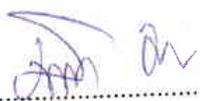

..... Dean of Graduate School
(Assistant Professor Dr. Kanakorn Sawangcharoen)


..... President
(Assistant Professor Dr. Linda Gainma)

Defense Committee


..... Chairperson
(Associate Professor Dr. Sanrudee Deepu)


..... Committee
(Assistant Professor Dr. Banjob Boonchan)


..... Committee
(Assistant Professor Dr. Teerawat Montaisong)

Thesis	Guidelines for development instructional leadership for secondary school teachers in Qingdao
Author	Huang Yonggang
Program	Educational Administration
Major Advisor	Associate Professor Dr.Niran Sutheeniran
Co-advisor	Assistant Professor Dr.Nonnadhi Dulyadaweetid
Co-advisor	Assistant Professor Dr.Kanakorn Sawangcharoen
Academic year	2023

ABSTRACT

The objectives of this research were: 1) To study the current level of instructional leadership of secondary school teachers in Qingdao. 2) To develop the guidelines of instructional leadership of secondary school teachers in Qingdao. 3) To evaluate the adaptability and feasibility of instructional leadership of secondary school teachers in Qingdao. The sample group of this research was 291 teachers. The Interview group was 9 secondary school teachers in Qingdao and the evaluate 9 experts from secondary school in Qingdao. Research instruments include: questionnaire, semi-structured interview, evaluation form. Data analysis by using percentage, mean, standard deviation and content analysis.

The results were: 1) the current situation of instructional leadership of secondary school teachers in Qingdao was at high level. 2) the guidelines for developing the instructional leadership of secondary school teachers in Qingdao in four aspects, which contain 23 articles. there are 6 guidelines for optimizing professional development, 6 guidelines for enhancing teaching practice, 5 guidelines for improving school culture, and 6 guidelines for promoting learn. 3) adaptability of guidelines for developing the instructional leadership of secondary school teachers in Qingdao in four aspects were at highest level. and feasibility of guidelines for developing the instructional leadership of secondary school teachers in Qingdao in four aspects were at high level.

Keywords: Guidelines for development, secondary school teachers, instructional leadership;

ชื่อเรื่อง	แนวทางการพัฒนาภาวะผู้นำทางการสอนสำหรับครูโรงเรียนมัธยมศึกษาในเมืองชิงเต่า
ชื่อผู้วิจัย	ฮวง ยงกั๋ง
สาขาวิชา	การบริหารการศึกษา
อาจารย์ที่ปรึกษาหลัก	รองศาสตราจารย์ ดร.นิรันดร์ สุธีนิรันดร์
อาจารย์ที่ปรึกษาร่วม	ผู้ช่วยศาสตราจารย์ ดร.นนท์ณิธิ ดุลยทวิสิทธิ์
อาจารย์ที่ปรึกษาร่วม	ผู้ช่วยศาสตราจารย์ ดร.คณกร สว่างเจริญ
ปีการศึกษา	2566

บทคัดย่อ

การวิจัยครั้งนี้มีวัตถุประสงค์ 1) เพื่อศึกษาสภาพปัจจุบันภาวะผู้นำทางการสอนสำหรับครูโรงเรียนมัธยมศึกษาในเมืองชิงเต่า 2) เพื่อพัฒนาแนวทางการพัฒนาภาวะผู้นำทางการสอนสำหรับครูโรงเรียนมัธยมศึกษาในเมืองชิงเต่าและ 3) เพื่อประเมินแนวทางการพัฒนาภาวะผู้นำทางการสอนสำหรับครูโรงเรียนมัธยมศึกษาในเมืองชิงเต่า กลุ่มตัวอย่างที่ใช้ในการวิจัยครั้งนี้ ได้แก่ ครูผู้สอน รวมทั้งสิ้น 291คน ผู้ให้สัมภาษณ์เป็นครูโรงเรียนมัธยมศึกษาในเมืองชิงเต่า จำนวน 9 คน และผู้เชี่ยวชาญประเมินแนวทางเป็นครูโรงเรียนมัธยมศึกษาในเมืองชิงเต่า จำนวน 9 คน เครื่องมือที่ใช้ในการวิจัย ได้แก่ แบบสอบถาม แบบสัมภาษณ์ และแบบประเมิน สถิติที่ใช้ในการวิเคราะห์ข้อมูล ได้แก่ ค่าร้อยละ ค่าเฉลี่ย ส่วนเบี่ยงเบนมาตรฐาน และการวิเคราะห์เชิงเนื้อหา

ผลการวิจัยพบว่า 1) สภาพปัจจุบันภาวะผู้นำทางการสอนสำหรับครูโรงเรียนมัธยมศึกษาในเมืองชิงเต่าโดยรวมอยู่ในระดับสูง 2) แนวทางการพัฒนาภาวะผู้นำทางการสอนสำหรับครูโรงเรียนมัธยมศึกษาในเมืองชิงเต่าทั้ง 4 ด้าน รวม 23 แนวทาง ประกอบด้วย ด้านแนวทางการยกระดับการสอน 6 แนวทาง ด้านแนวทางการพัฒนาวัฒนธรรมโรงเรียน 5 แนวทาง และด้านแนวทางการส่งเสริมการเรียนรู้ 6 แนวทาง และ 3) ผลการประเมินความเหมาะสมของแนวทางการพัฒนาภาวะผู้นำทางการสอนของครูโรงเรียนมัธยมศึกษาในเมืองชิงเต่าทั้ง 4 ด้านอยู่ในระดับมากที่สุด และความเป็นไปได้ของแนวทางการพัฒนาภาวะผู้นำทางการสอนของครูโรงเรียนมัธยมศึกษาในเมืองชิงเต่าทั้ง 4 ด้าน อยู่ในระดับมาก

คำสำคัญ: แนวทางการพัฒนา ครูโรงเรียนมัธยม ภาวะผู้นำในการสอน

Acknowledgements

The three years I spent in Bansomedjchaopraya Rajabhat University are the three years I returned to the campus from the society, to be a student and to return to the basics. I cherish the hard-earned learning opportunities. During the three years of study, I not only learned more systematic theoretical knowledge and broadened my horizons, but also had a richer experience and realization of my life under the teaching of teachers and the concern of classmates.

I would like to thank Bansomedjchaopraya Rajabhat University for providing me with the invaluable learning opportunities and learning conditions, and I would like to thank all the teachers who have guided me during the three years, especially my supervisors Dr. Niran Suthiniran, Dr. Nonnathi Dulyadaweesid, Dr. Kanakorn Sawangcharoen, Dr. Patchara Dechhome, etc. Their rigorous and serious attitude and gentle and tolerant way of handling things have deeply influenced me and benefited me a lot in both study and life. It is my greatest fortune to meet a group of responsible and meticulous supervisors in my three-year postgraduate study career.

I would like to thank my fellow students, Rui Dong, Junjun Wang, Xiangli Kong, and Xueqian Li, for giving me a lot of help and support by keeping communication and encouraging each other in all aspects of research design and thesis writing. Over the past three years, we have studied together and formed a deep friendship, and we will be friends for life in the future.

Finally, I would like to thank my parents, my lover and my children for giving me so much support and help in life and psychology, so that I can walk steadily and securely in the process of studying while working.

The three years at Bansomedjchaopraya Rajabhat University will in future be a beacon of enlightenment for the next part of my life's path, illuminating me to continue on my way.

Huang Yonggang

Contents

	Page
Abstract.....	i
Abstract (Thai).....	ii
Acknowledgement.....	iii
Contents.....	iv
List of Figures.....	vi
List of Tables.....	vii
Chapter	
1 Introduction	1
Rationale.....	1
Research Question.....	4
Objective.....	4
Scope of the Research.....	4
Advantages.....	6
Definition of Terms.....	7
Research Framework.....	9
2 Literature Review	10
Concept of Teacher Leadership.....	10
Concept of Instructional Leadership.....	11
Concept of Teacher Instructional Leadership.....	19
Context of secondary school teacher in Qingdao.....	34
Related Research.....	36
3 Research Methodology	42
The Population/ Sample Group.....	42
Research Instruments.....	43
Data Collection.....	47
Data Analysis.....	50

Contents (Continued)

	Page
4 Results of Analysis	54
Part I: Personal information of instructional leadership of secondary school teachers in Qingdao.....	55
Part II: Analysis of Questionnaires on the Current Situation of instructional leadership of secondary school teachers in Qingdao.....	56
Part III: Adaptability and Feasibility Evaluation of guidelines of secondary school teachers' instructional leadership in Qingdao.....	62
Part IV: Adaptability and Feasibility Evaluation of guidelines of secondary school teachers' instructional leadership in Qingdao.....	71
5 Discussion Conclusion and Recommendations	76
Conclusion.....	76
Discussion.....	78
Recommendations.....	83
References	90
Appendixes	95
A List of Specialists and Letters of Specialists Invitation for IOC Verification.....	96
B Official Letter.....	98
C Research Instrument.....	102
D The Results of the Quality Analysis of Research Instruments.....	127
E Certificate of English.....	132
F The Document for Accept Research.....	134
Researcher Profile	136

List of Figures

Figure	Page
1.1 Research Framework.....	9
3.1 Summary of Research Steps.....	47
4.1 Guidelines of Optimising Professional Development.....	69
4.2 Guidelines of Enhancing Teaching Practice.....	70
4.3 Guidelines of Improving School Culture.....	70
4.4 Guidelines of Promoting Learning Outcomes.....	71

List of Tables

Table		Page
2.1	Results of the synthesis of teachers' instructional leadership elements.....	33
3.1	Sample distribution.....	43
4.1	Personal information.....	55
4.2	Analysis of the current situation of secondary school teachers' instructional leadership in Qingdao.....	56
4.3	Current situation of professional development.....	57
4.4	Current situation of teaching practice.....	58
4.5	Current situation of school culture.....	59
4.6	Current situation of learning outcomes.....	61
4.7	List of respondents.....	62
4.8	The guidelines for development of secondary school teachers' instructional leadership in Qingdao.....	65
4.9	List of evaluation experts.....	72
4.10	Summary table of evaluation data analysis.....	72
4.11	Evaluation data analysis.....	73

Chapter 1

Introduction

Rationale

Effective teacher leadership of teaching and learning is an inevitable response to international and national instructional reforms

International instructional reforms began in the 1980s to emphasize the contribution of strong instructional leadership by principals to school effectiveness and development. However, by the late 1990s and early 2000s, the development of distributed and shared leadership theories led to an increasing emphasis on the role of teachers and other constituents in school building. Teachers' agency was gradually recognized and they were given responsibility for assuming instructional leadership roles. For example, the Model Standards for Teacher Leadership in the United States emphasizes the important role of teacher instructional leadership.

China's teaching reform is in a deepening stage of development, and advances in information technology have pushed the traditional school teaching model in a more open and innovative direction. In 2019, China issued the Opinions on Deepening the Reform of Education and Teaching to Comprehensively Improve the Quality of Compulsory Education, which emphasizes the leading role of teachers in teaching and requires them to teach every class well. This indicates that in the education teaching reform, teachers need to change their roles from knowledge transmitters to instructional leaders in order to better adapt to the needs of the reform.

The enhancement of teachers' instructional leadership has become an inevitable requirement to adapt to the international and domestic teaching reform. The enhancement of teacher instructional leadership can enable teachers to play a more important role in school construction, promote the improvement of school effectiveness and the good development of schools, as well as better adapt to the needs of teaching reform and improve the quality of education and teaching. Therefore, educational institutions and governments should focus on fostering and

supporting the development of teachers' instructional leadership so as to make a positive contribution to the success of education reform.

Teachers' pedagogical leadership is a key element affecting the quality of education and teaching in schools

The quality of education in schools, as a place of educational practice, is crucial to the growth and development of students. In school education, teachers are the leaders of classroom teaching and are directly involved in the learning process of students. Therefore, teachers' instructional leadership has a significant impact on the improvement of the quality of school education.

In the Model Standards for Teacher Leadership published in the United States, it is emphasized that teacher leaders can contribute to the improvement of teaching and student learning, thus improving the quality of school teaching and learning. Relevant studies have also shown that instructional leadership is one of the core characteristics that influence the internal development of schools and effective schools. Teachers taking up the role of instructional leaders can inspire self-confidence and a sense of responsibility among teachers, making them more proactive and willing to participate in the process of improving teaching and learning in the school as a whole.

Although the principal's personal instructional leadership plays an important role in school teaching and learning, there may sometimes be a lack of personal expertise or energy that limits his or her effectiveness in instructional leadership. However, teachers' instructional leadership responsibilities can be shared and shared. Teachers' involvement in school instructional leadership can compensate for principals' knowledge deficits and time gaps in instructional leadership, leading to more proactive and conscious improvements in instructional quality.

In summary, teachers' instructional leadership plays a crucial role in the quality of education and teaching in schools. As the primary implementers of classroom instruction, teachers' leadership skills are critical to promoting student learning and overall school development. Through the enhancement of teachers' instructional leadership, the quality of school education can be improved continuously, laying a solid foundation for the overall growth of students.

Improvement of instructional leadership is an inevitable requirement for teachers' professional development

The professional connotation of teachers includes such aspects as educating people and helping students learn to learn, while the quality of teachers is crucial to student learning and directly affects students' learning outcomes. Factors such as teachers' knowledge, skills and values play an important role in students' development, and teaching is one of the most important aspects of teachers' work.

Research has shown that teaching has greater importance in student learning and achievement compared to other school factors. As a result, teachers play the role of leaders in the classroom and must have the ability to model leadership. Teachers' instructional leadership reflects their instructional proficiency and skills and is an important measure of their instructional performance.

The development of Distributed Leadership Theory and information technology has impacted on the role orientation of teachers, requiring them to be not only implementers but also influencers. In terms of teaching, teachers should have solid teaching skills and knowledge, as well as the ability to positively influence students' learning and lead their learning process. These new requirements place higher demands on teachers' professional development and emphasize the importance of teachers' instructional leadership.

Therefore, the enhancement of instructional leadership is indispensable for teachers' professional development. Through the enhancement of teachers' instructional leadership, teachers can better guide students' learning, promote the continuous improvement of the quality of education and teaching in schools, and make positive contributions to the overall growth and development of students. The continuous improvement of teacher instructional leadership is also an inevitable requirement to adapt to the teaching reform and school development.

The Science of Teacher Teaching Leadership Evaluation Needs Further Improvement

The science of teacher instructional leadership evaluation does need to be further improved. The International Association for Educational Evaluation (IAEE) and scholars have emphasised that the purpose of evaluation is to improve and provide

effective information for decision-making. Educational evaluation not only provides support for teaching and learning and an important basis for educational reform and management decision-making, but also helps teachers to understand the development of their own instructional leadership and promotes the improvement and development of teacher instructional leadership.

Based on this, this study is based on Qingdao City to study the current situation of teachers' instructional leadership, to develop scientific and reasonable evaluation elements, to evaluate adaptable and feasible improvement guidelines, and to promote the improvement of teachers' instructional leadership.

Research Questions

1. what is the current level of secondary school teachers' instructional leadership in Qingdao?
2. What are the guidelines to development instructional leadership for secondary school teachers in Qingdao?
3. How to evaluate the adaptability and feasibility of instructional leadership for secondary school teachers in Qingdao?

Objectives

1. To study the current level of instructional leadership of secondary school teachers in Qingdao.
2. To develop the guidelines of instructional leadership of secondary school teachers in Qingdao.
3. To evaluate the adaptability and feasibility of instructional leadership of secondary school teachers in Qingdao.

Scope of the Research

Population and the Sample Group

Population

The population were 9 representative secondary schools in Qingdao, a total 1262 teachers. (Qingdao Education Bureau, 2022)

The Sample Group

The sample group were according to the Krejcie and Morgan sampling table (1970), the sample group of this research was 291 teachers from 9 representative secondary schools in Qingdao. By using proportion random sampling and sampling random sample methods.

Interviewees

The interviewees of this study were 9 secondary school teachers in Qingdao. The qualification of interviewees were: 1) have a master's degree or higher, 2) have been working in secondary school for more than 10 years, 3) the academic title is associate Secondary III or above.

Evaluation Expert

The evaluation expert of this study was 9 exports from 9 secondary school in Qingdao. The qualification of expert were: 1) More than 15 years of working experience in secondary school, 2) senior leaders, 3) educational administrators with senior titles.

The Variable

According to analysed and distilled the literature, concepts, theories and related studies on teacher instructional leadership including Fullan. (1994), Golon. (2000), Wu Qingshan. (2003), Murphy. (2007), Chen Yijun. (2008), Guo Na. (2011), Xiao Yueqiang. (2011), Shangguan Dandan. (2014), Zhao Decheng. (2016), Zhao Yuanke. (2017). The researcher selected the appropriate factors based on the criteria as a framework for the study. The researcher selected factors with a frequency of 8 or more including the following 4 factors as follows:

- 1) Professional development
- 2) Teaching practice
- 3) School culture
- 4) Learning outcomes

Advantages

There are many advantages of studying the instructional leadership of secondary school teachers, and an in-depth exploration and understanding of the instructional leadership of secondary school teachers is essential for the development of secondary education and the improvement of students' academic performance. The following are the advantages of studying secondary school teachers' instructional leadership:

1. Promoting teacher development and professional growth: research on secondary school teachers' instructional leadership can help teachers recognise their own level of instructional leadership and potential, thus motivating them to continuously improve the quality of their teaching and expand their teaching methods and strategies. In addition, understanding and recognising the factors of teacher instructional leadership can also provide guidance for teachers' professional development and growth.

2. Teachers are the most direct practitioners in the education process: secondary school teachers are the practitioners in the education process who are directly facing their students, and their teaching behaviours and leadership have a direct impact on students' learning outcomes. Therefore, studying the instructional leadership of secondary school teachers can provide insights into the mechanism of teachers' influence on students' learning, and thus provide targeted recommendations for improving the quality of teaching and learning.

3. Impact of instructional leadership on school culture and climate: Teachers' instructional leadership not only affects student learning, but also has an impact on school culture and educational climate. Excellent secondary school teacher instructional leadership promotes a positive school climate and teacher teamwork and contributes to a positive learning climate.

4. Teachers' instructional leadership is related to student learning outcomes: excellent secondary teacher instructional leadership can stimulate students' interest in learning, increase motivation, and promote learning outcomes. Research on secondary school teachers' instructional leadership can help to explore ways to

improve student learning outcomes and the overall quality of teaching and learning in schools.

In short, research on secondary school teachers' instructional leadership has many advantages. Based in Qingdao, this study examined the current level of secondary school teachers' instructional leadership from four aspects, professional development, teaching practice, school culture, and learning outcomes, through questionnaires, interviews, and expert assessments, developed corresponding improvement guidelines to promote educational reform and teaching quality in Qingdao, which can also be of some reference value to other regions.

Definition of Terms

Teacher Instructional Leadership: The ability of a teacher to exert a positive influence and guidance in the classroom and within the school in order to stimulate student learning and improve learning outcomes while positively impacting educational reform and the quality of teaching and learning in the school. This leadership is expressed not only in terms of teaching skills and methods, but also in terms of guiding educational philosophy and supporting and collaborating with colleagues.

Professional Development refers to secondary school teachers' ongoing efforts to improve their pedagogical knowledge and skills in order to adapt to changes and challenges in the field of education. Teachers continue to refine their teaching skills and educational philosophies through participation in professional development, research on teaching methods, and ongoing learning and reflection. Excellent teacher instructional leaders focus on self-learning and development and are able to apply the knowledge and skills they have learned to actual teaching.

Teaching Practice refers to the actual use of various teaching strategies and methods by secondary school teachers in the classroom to promote student learning. Teacher instructional leadership is reflected in their performance in instructional practices, including instructional design, learning activities, student interactions, and classroom management. Excellent teacher instructional leaders are

able to flexibly utilize different instructional methods, focus on students' learning needs, and create a positive learning climate to enhance student learning outcomes.

School Culture is the values, beliefs, codes of behavior, and shared awareness within a school. The Teacher Instructional Leadership model emphasizes teachers' fit with and identification with the school culture. Good teacher instructional leaders are able to actively participate in the school culture and work with colleagues to promote the development of the school and the achievement of educational goals.

Learning Outcomes are the academic achievements and progress made by students under the instructional leadership of teachers. Excellent teacher instructional leaders are able to stimulate students' interest in learning and increase their motivation to learn, resulting in excellent learning outcomes. Learning outcomes are an important measure of the effectiveness of teacher instructional leadership.

Integrating these four dimensions, the secondary teacher instructional leadership model emphasizes the close connection between teacher professional development, teaching practice, school culture and learning outcomes. These dimensions interact and support each other, and together they form a comprehensive framework for teacher instructional leadership. By strengthening the cultivation and development of these dimensions, secondary school teachers can better lead their students, enhance student learning outcomes, and promote the overall development of school education.

Research Framework

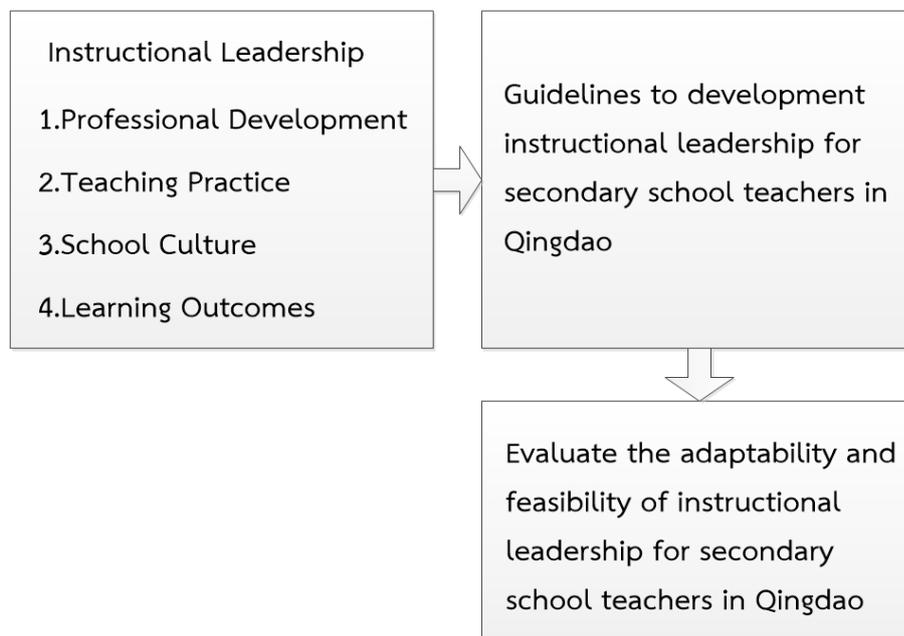


Figure 1.1 Research Framework

Chapter 2

Literature Review

By searching relevant literature through online databases and combining the concepts and theories of the purpose of this study, teacher leadership, instructional leadership and teacher instructional leadership, the literature was classified, sorted and analysed to analyse the current situation of teacher instructional leadership in Qingdao and related research, in order to provide a theoretical basis for future development. The main theoretical results are as follows:

1. Concept of Teacher Leadership
2. Concept of Instructional Leadership
3. Concept of Teacher Instructional Leadership
4. Context of secondary school teacher in Qingdao
5. Related Research

The details are as follows.

Concept of Teacher Leadership

Distributed Leadership Theory

The theory originates from the field of organizational leadership and management and was first proposed by American scholar James Spillane in 2006. The theory emphasizes that leadership is a phenomenon that is dispersed among multiple individuals in an organization, rather than functioning solely by a single leader. The theory mainly includes the following elements:

Multiple leaders: distributed leadership theory suggests that leadership responsibility and authority in an organization is distributed among multiple individuals rather than concentrated in the hands of a single leader. In schools, it is not only principals and instructional supervisors who have leadership authority; every teacher has a potential leadership role.

Collaboration: Distributed leadership theory encourages collaboration and cooperation among leaders. Teachers can form a leadership team among themselves

to work together to solve problems in teaching and learning in the school, to develop improvement plans, and to move the school forward.

Task Dependence: Distributed Leadership Theory states that the emergence and behavior of leaders are task and context specific. In schools, different instructional activities and programs may require different teacher leaders.

Complementarity: distributed leadership theory states that multiple leaders in an organization should complement each other. Each leader has his or her own expertise and strengths, and by working together, the overall capacity of the leadership team can be maximized.

Constructive Conflict: The theory emphasizes that conflict between leaders is not necessarily undesirable, and that constructive conflict can promote in-depth discussion of problems and innovation of solutions.

Trust-based: Distributed Leadership Theory suggests that relationships between leaders based on trust are key to achieving synergy. Teachers in a school need to trust each other and believe in the ability and willingness of other teachers to engage in leadership.

Through Distributed Leadership Theory, the study of teacher instructional leadership focuses on recognizing and exploring the ways in which teachers interact, influence, and collaborate with each other and how to maximize each teacher's leadership potential to contribute to the overall development of the school and improve the quality of instruction. The theory encourages schools to develop a culture of shared leadership that enables teachers to lead at all levels of the school, thereby achieving the goals of collaboration, resource sharing and shared learning.

Connotation of Teacher Leadership

Behavioral role perspective

Sun Jie. (2019, p.124-128). proposes that behavioral role perspective research is to locate teacher leadership in specific positions and concretized influence, which focuses on teachers' personal leadership behavior. Teachers exercise leadership and thus influence in school organizations in the following ways: first, directors of instruction, grade level directors, and heads of teaching and research

groups who have administrative positions derive their leadership from their positions. Teachers with leadership positions not only have influence inside and outside the classroom, but also influence others to work together to promote education as part of the community of teachers and students. Secondly, outstanding and key teachers who do not hold administrative positions are also responsible for the school's policy, vision and mission, empowering teachers to have leadership based on distributed leadership theory.

Harris. (2005, p.12-65). takes on formal leadership roles in school administration and teaching, such as curriculum directors, subject directors, and grade level directors; and can also take on informal leadership roles, such as a new team or setting up an action research group. It shows that teacher leadership is not necessarily linked to formal positions or posts.

Influence Perspective

Teacher leadership is an embodied form of teachers' comprehensive ability and professionalism, which is mainly manifested in the influence of teachers on colleagues, students, etc. within the school, and the views of different scholars are roughly as follows.

Li Qian. (2009, p.65-70). believes that teachers can influence groups through two types of power. The first type is professional power, which refers to the position of authority that teachers have based on their professional knowledge, skills and experience. This type of power stems from the teacher's role as a professional whose specialized competence and knowledge in teaching and subject areas enable him or her to exert influence over the group. The second type of power is non-professional power, which refers to the influence that teachers gain through other sources, not based on their professional status. It includes factors such as the teacher's interpersonal relationships, personal charisma, personality traits, and social skills in the group. Through this non-professional power, teachers can influence other members in terms of trust, cooperation and opinions. Taken together, the teacher has influence over other members of the group through these two types of power, professional power and nonprofessional power. This combined influence can enable

teachers to effectively lead and influence educational teams, students and educational institutions.

Xiao Yueqiang and Yuan Yongxin. (2011, p.66-70). stated in their study that teachers' influence on organizations and their members is created through a combination of power and non-power elements. In terms of teachers' influence on organizations and their members, the power element includes teachers' formal power and status. This includes the authority of the teacher in terms of position, authority, responsibility, and decision-making power in the organization. Through these elements of power-ness, teachers can influence aspects of the organization's direction, policies, and practices, as well as exert authority over other members. However, a teacher's influence is not only dependent on the power elements, but also involves the non-power elements. Non-power elements include factors such as teachers' personal attributes, attitudes, values, skills, and interpersonal relationships. These non-power elements can enable teachers to gain trust, respect, and influence in the organization, which in turn can have a positive impact on other members. Taken together, a teacher's influence on an organization and its members is created through a combination of power and non-power elements. The power element provides a formal basis of authority, while the non-power element involves the teacher's personal qualities and abilities that enable him or her to earn trust and influence in the organization.

In his study, Nie Yujing. (2016). proposed several elements of teacher leadership, including subject matter knowledge, pedagogical skills, communicative competence, political identification, decision-making power, and social criticality. Subject matter knowledge refers to a teacher's specialized knowledge and understanding in a particular subject area. Teachers need to possess a wealth of subject matter knowledge in order to effectively guide student learning and provide professional support to the educational team; teaching skills refer to the skills and abilities that teachers demonstrate in the classroom. This includes skills in classroom management, instructional strategies, assessment and feedback to ensure that students can learn and grow effectively. Interpersonal communication skills are the ability of teachers to communicate effectively with students, parents, colleagues and

other stakeholders. Good communicative communication skills build positive relationships and promote cooperation and the achievement of common goals; Political recognition refers to teachers' sensitivity to and understanding of educational policies and the social environment. Teachers need to understand and adapt to policy changes while being able to advocate for students and the educational team in a complex political environment. Decision-making is the ability of teachers to make informed decisions when faced with a variety of issues and challenges. Teachers need to apply appropriate decision-making methods based on professional knowledge and practical experience to solve problems and make favorable choices for students and the educational team; Social criticality refers to the ability of teachers to think deeply and analyze social phenomena and issues. Teachers need to be able to think critically and be able to guide their students to think about and evaluate social issues and to develop a sense of social responsibility and engagement.

Yorkeba, Duke. (2004, p.287-289). describes the view that teachers aim to promote student learning and achievement and improve the quality of teaching and learning by influencing colleagues, leaders and other school members. This is one of the important aspects of teacher leadership. Teachers, as leaders, are not only concerned with their own teaching and student achievement, but also actively collaborate with other teachers and school members to improve the quality of teaching and student performance. By collaborating professionally with colleagues, sharing best practices, and providing support and feedback, teachers are able to influence each other and work together to drive school improvement. At the same time, teachers may be able to collaborate with school leadership and participate in decision-making and policy development to improve teaching and learning environments and practices.

Yu Wencong. (2018, p.45-50). suggested that, firstly, having good character can help teachers build trust and respect from students, parents and the community, thus enhancing their professional authority; secondly, teachers should demonstrate care and love for their students and actively create a positive learning atmosphere. By establishing a good emotional connection, teachers can better guide students'

learning and enhance their professional authority; third, teachers should have solid subject knowledge and teaching ability, and be able to flexibly utilize teaching methods and strategies to meet students' learning needs. Teachers' professional knowledge and abilities are important supports for establishing professional authority; finally, schools should provide good working conditions and training opportunities to support teachers' professional development. In addition, schools should give teachers certain decision-making and management rights so that they can utilize their professional ability and authority in the process of education and teaching.

Liu, Zhihua and Luo, Li-Wen. (2015, p.62-68). year's study suggested that teachers influence student learning by applying the professional knowledge and skills they possess. This includes teachers selecting and designing appropriate teaching methods and strategies, providing effective learning resources and materials, and providing individualized instruction and support to meet students' learning needs. Through the judicious and effective use of professional knowledge and skills, teachers can help students achieve their learning goals and improve their academic performance and competence. In addition, teachers influence colleagues and parents through the use of professional knowledge and skills. In collaborating with colleagues, teachers can share their professional experiences and teaching methods to promote teamwork and professional growth. In communicating with parents, teachers can provide advice and support to parents on student learning and development through their professional knowledge and skills, and promote home-school collaboration to focus on students' learning progress.

Rutherford. (2006, p.59-76). suggests that teachers purposefully accumulate and transfer knowledge with the goal of improving teaching competence and developing professional qualities to meet the needs of educational reform. The accumulation of knowledge by teachers and its transmission to students is a crucial part of the educational process. The improvement of teachers' pedagogical competence and professionalism can help them to better adapt to the changing educational reforms.

Golon. (2000). mentions the importance of teachers' continuous professional development and collaboration with colleagues in improving student achievement

and learning outcomes. Teachers can continue to improve their teaching skills through continuous professional learning and self-improvement. This includes understanding and applying the latest teaching methods and strategies, keeping abreast of the latest research findings in the field of education, and incorporating them into their own teaching practice. Meanwhile, collaboration with colleagues is also an important aspect of teachers' professional development. By sharing experiences, supporting each other and learning from each other with their colleagues, teachers can work together to improve the quality of teaching and students' learning outcomes.

From the above study, it is clear that, 1) teacher leadership is a reflection of comprehensive competence, which not only influences colleagues and students, but also has an impact on leaders as well as parents; 2) the center of teacher leadership is professional influence, where teachers use their professional knowledge and skills to improve their own professionalism, participate in school affairs, and help their colleagues to design, implement, and evaluate teaching and learning programs, with the goal of improving students' performance; 3) teachers are voluntarily and proactively involved in school reform and enhancing professional development, exercising leadership over teaching and student learning not only in the classroom, but also having a positive impact outside the classroom.

Factors Influencing Teacher Leadership

Fullan. (1994 p.243-253). suggests that teacher leadership influencing factors are: teachers assume important leadership roles in the educational process, including guiding students' learning, continuous self-learning and professional development, and demonstrating high moral literacy and professional conduct; teachers' teaching responsibilities cover the provision of high-quality education for students and the application of appropriate instructional methods and strategies to facilitate student learning and development; continuous learning is an important aspect of a teacher's career, and teachers need to update their professional knowledge and skills to meet changing educational needs and challenges; furthermore, teachers' moral literacy and professional conduct are essential for building trusting relationships, safeguarding students' rights and interests, and shaping a positive learning environment. Teachers

are expected to adhere to a professional code of ethics and demonstrate integrity, fairness and honesty in their behavior.

Murphy. (2007 p.681-706). suggests that teacher leadership refers to the fact that teachers are not only knowledge transmitters, but also guides, supporters and motivators of student learning. They should take responsibility for promoting the holistic development and growth of students, including the development of knowledge, skills and moral values; Teacher motivation and recognition involves the motivation of teachers and the recognition of their work. Motivation can be achieved in a variety of ways, such as providing opportunities for professional development, rewards and recognition, and supporting teachers' professional growth and innovation. Recognition, on the other hand, refers to the affirmation and appreciation of teachers' work, which can be achieved through feedback, assessment and support; resource utilization refers to the ability of teachers to make rational use of the resources available to them in the teaching and learning process. This includes curriculum materials, teaching equipment, technological tools, human resources, etc. Teachers should be able to effectively plan, organize and utilize these resources to support student learning and development.

Wu Yingmin. (2008, p.52-57). suggests that teacher leadership school culture plays an important role in the operation and development of the school, which can influence the behavior, attitudes, and learning outcomes of both teachers and students; leadership roles play an important role in shaping the school culture, facilitating the development of teachers, and enhancing the performance of the school; good interpersonal relationships help to build cooperation, share knowledge and resources, and promote the school's achievement of common goals; the organizational structure of a school can influence the effectiveness of collaboration and decision-making within the school, as well as the working and learning environment for teachers and students; and the responsibilities assumed within roles usually involve the duties and responsibilities that an individual is required to perform in a particular role. For example, the responsibilities of the teacher role include teaching, student assessment, and curriculum development; the responsibilities of the principal role include school administration, leadership, and

decision-making; and different roles have varying degrees of authority, which can be used to organize and manage matters within the school and to influence teaching and learning and school operations. The intertwining of responsibilities and authority within the role is critical to the effective functioning of the school and the achievement of its goals. Proper allocation and exercise of responsibility and authority can foster collaboration, improve school performance and promote student learning and development.

Du Fangfang. (2010, p.62-67). suggests that teacher leadership includes organizational structure and culture involves the hierarchical structure, decision-making process, division of responsibilities, and shared values, beliefs, and behavioral norms within the school. Organizational structure and culture have a significant impact on school operations, teacher collaboration, and student learning environments; social capital refers to the social networks and relationships within the school, including cooperation, trust, and information sharing among teachers. Good social capital helps to promote collaboration and the achievement of common goals in schools; Responsibility and authority assumed within roles relates to the duties and obligations that individuals are required to fulfill in a particular role, as well as the influence and decision-making power they possess. This covers aspects such as authority, knowledge, situational understanding and interpersonal skills; authority refers to the position and power within a particular role to influence the behavior and decision-making of others; knowledge relates to a teacher's expertise and competence in a particular area; situational understanding refers to a teacher's ability to understand and respond to students, the school, and the educational environment; and interpersonal skills refers to a teacher's ability to build rapport and communicate effectively with others. Interpersonal skill refers to the ability of teachers to establish good relationship and effective communication with others.

Based on the above studies, it can be seen that scholars at home and abroad have reached a certain consensus on the factors influencing teacher leadership, and there are also different views. According to the consensus reached by scholars, the main factors affecting teacher leadership are summarized, including

school organizational culture, school organizational structure, principal's attitude, interpersonal relationship and teachers' own professional quality and ability.

Concept of Instructional Leadership

Evolution of instructional leadership

The concept of "instructional leadership" was introduced and gained widespread attention in the 1970s during the U.S. school effectiveness and improvement movement. Instructional leadership refers to the critical role of school leaders in promoting student learning and improving school performance. During this period, the primary goal of the school effectiveness and improvement movement was to improve student learning outcomes through better teaching and school leadership. Instructional leadership promotes the active involvement of school leaders in teaching and learning and provides support and guidance in teacher development, curriculum design, and instructional methods. The roles of instructional leaders include motivating and supporting teachers, monitoring and evaluating the quality of teaching and learning, providing professional development opportunities, and fostering a positive learning environment. The development of this concept has had a significant impact on educational reform and school leadership research. It emphasized the importance of school leaders in the teaching and learning process and prompted the educational community to focus on how leaders can effectively support and enhance teachers' instructional competencies, thereby improving student learning outcomes.

During the 1980s and the first half of the 1990s, principal instructional leadership dominated research in education. During this period, scholars began to focus instructional leadership on school principals, arguing that principals play a critical role in improving the quality of instruction and student learning outcomes in schools. The research findings on principals' instructional leadership had a positive impact on practice. Many schools and educational organizations have begun to identify principal instructional leadership as a core element of the principal's role and have taken steps to improve the principal's instructional leadership skills. In addition, education policy began to include instructional leadership as one of the key criteria

for evaluating and recruiting principals. In the mid- to late 1990s, "school-based management," "charter schools," "school choice" and other issues became key topics in U.S. education research. During the same period, leadership theories such as transactional leadership, transformational leadership, distributed leadership, and shared leadership became the focus of researchers' attention.

After entering the 21st century, the high-stakes testing and accountability system emerged in the U.S. education system. This is a means of assessing student learning outcomes through high-stakes testing and as a means of school and teacher performance evaluation. High-stakes testing and accountability systems have caused widespread controversy in U.S. education policy. Proponents argue that such systems improve student learning outcomes, increase school and teacher accountability, and promote educational reform. Critics, however, point out that an excessive focus on test scores may lead to a narrowing of education that ignores overall student development and noncognitive abilities, as well as problems such as excessive pressure on teachers and unfairness in assessments.

Under the policy orientation, the researcher conducts two aspects of reflection. First, the researcher incorporated leadership concepts such as transformational leadership, distributed leadership, and transactional leadership into instructional leadership theories; second, promoting teacher development and leading teacher learning became the focus. At the same time, emphasis has been placed on empowering teachers and building their leadership capacity, and teachers' awareness of becoming school leaders has become stronger and stronger.

Meaning of Instructional Leadership in China

Since the beginning of the 1980s, when the study of effective teaching began in China, instructional leadership has been categorized into narrow and broad meanings. The former focuses only on teaching and learning related areas.

Wu Qingshan. (2003, p.46-47). proposed that instructional leadership refers to the leader's ability to assist teachers in their instructional work, to promote their professional growth, and to develop school-based curriculum and engage in action research. The core of instructional leadership is to help teachers improve their instructional competence and effectiveness. Leaders should work with teachers to

provide support and guidance to help them improve their instructional methods and strategies. This includes activities such as conducting instructional observations with teachers, providing feedback and suggestions, and conducting instructional workshops to promote teachers' professional development and instructional competence. In addition, Ng Ching Shan emphasized the role of instructional leaders in developing school-based curriculum. School-based curriculum refers to the development of instructional programs and curricula that are appropriate for students based on the characteristics and needs of the school. Instructional leaders should guide teams of teachers in curriculum development and evaluation to ensure that the curriculum is aligned with the school's goals and values and can meet the learning needs of students. In addition, Ching-Shan Wu mentioned that instructional leaders develop teachers' ability to engage in action research. Action research refers to the continuous improvement and enhancement of the quality of teaching and learning by teachers through reflection and research on their own teaching practices. Instructional leaders should encourage teachers to take the initiative to conduct action research and provide support and guidance in order to promote teachers' professional growth and the improvement of teaching and learning in schools. Wu Ching-shan's view emphasizes the multiple roles of instructional leaders, including supporting teacher development, developing school-based curriculum, and facilitating action research.

Chen Ruping. (2004, p.30-32). further expanded the scope of instructional leadership. It was proposed that instructional leadership in a broad sense covers not only teachers' teaching activities but also students' learning activities. In this broad sense of instructional leadership, the role of leaders is to facilitate and support the teaching and learning of teachers and students. They are concerned not only with teachers' professional development and pedagogy, but also with students' learning needs and outcomes. Leaders are expected to be actively involved in the school's instructional activities, to work with teachers to develop instructional goals and strategies, and to work with students to create positive learning environments. This broad definition of instructional leadership emphasizes the importance of students in the instructional process. Leaders should be attentive to students' progress, motivation and learning outcomes and take steps to support their learning. This may

include providing different learning resources and instructional strategies, encouraging student participation in classroom activities and collaborative learning, and providing individualized learning support for students. Instructional leadership in this broad sense is important for achieving the overall development of the school and the holistic development of students. It requires leaders to focus not only on teachers' instructional competence and professional growth, but also on students' learning needs and learning outcomes in order to provide effective educational leadership and support.

Lin Haiyan's. (2006, pp. 38-39). viewpoint further emphasizes the focus on teachers in instructional leadership research and points out that research has shifted from the traditional emphasis on "teaching" to "learning". As educational philosophies and practices continue to evolve, researchers have begun to focus on the role of teachers as instructional leaders and to explore their impact on student learning. Instructional leadership research that focuses on "learning" emphasizes the importance of teachers as guides and supporters of student learning. Teachers go beyond the traditional role of imparting knowledge and skills to focus on students' learning needs, motivation, and outcomes. Teachers need to stimulate students' interest in learning, provide personalized learning support, and promote students' active learning and self-directed development through appropriate teaching strategies and learning resources. This shift implies an increasingly important role for teachers as instructional leaders. They need to be equipped with pedagogical skills and professional knowledge, as well as the ability to guide students' learning and inspire their potential. Teachers' instructional leadership includes their ability to make decisions about the teaching and learning process, classroom management, individualized instruction, and assessment and feedback on student learning outcomes. This shift is important for improving the quality of education and promoting student learning outcomes, and provides guidance for the cultivation and development of teacher instructional leadership.

In summary, the connotations of instructional leadership are divided into the following points: first, instructional leadership in the narrow sense emphasizes the principal's direct involvement in curricular and classroom teaching and learning

activities. In contrast, instructional leadership in the broader sense includes activities that directly and indirectly affect students' teaching and learning, and the main body of leaders are principals and teachers; second, teaching activities are the main place for the cultivation and development of instructional leadership, and include other scenarios, such as a variety of teaching and learning management behaviors, competencies and performances, organizational cultures, and teacher incentives; and lastly, instructional leadership leads not only the teaching of teachers, but also students' learning, with the fundamental purpose of improving The fundamental purpose is to improve student learning and promote student development.

Content of Instructional Leadership

Lu Xianhua. (1994). summarized the principal's instructional leadership tasks into six areas: setting clear instructional goals: the principal should work with teachers to establish clear instructional goals and share these goals with the entire school; creating a good learning environment: the principal should create an environment that is positive, supportive, and encouraging of learning. This includes establishing and maintaining a good school culture, fostering good relationships between teachers and students, and providing appropriate learning resources and facilities; supporting teachers' professional development: principals should provide teachers with opportunities and support for professional development; promoting teachers' pedagogical innovations: principals should encourage and support teachers to engage in innovative pedagogical practices; monitoring and evaluating the quality of teaching and learning: principals should carry out regular monitoring and evaluation of teaching and learning to ensure continuous improvement in the quality of teaching and learning; collaborate with parents and the community: principals should actively build good partnerships with parents and the community. These six aspects of LU Xianhua summarize the key tasks of principals in instructional leadership, covering the setting of instructional goals, the creation of learning environment, the support of teachers' professional development, the promotion of instructional innovations, the monitoring and evaluation of the quality of teaching and learning, as well as the collaboration with parents and the community. These tasks aim to improve the overall quality of teaching and learning in schools and student learning outcomes.

The content of instructional leadership has been studied relatively more and includes instructional leadership tasks. Narrowly defined, these tasks refer to the principal's teaching and learning tasks, such as determining instructional goals, rationally allocating instructional resources, managing curriculum and instruction, and supervising teachers' instructional activities.

Han Lajing's. (2012, p.69-71). view further expands the scope of instructional leadership. Instructional leadership in a broad sense includes all activities that can improve the quality of teaching and influence student learning. Instructional leadership in a broad sense implies that the responsibilities of instructional leaders are not limited to the relationship between teachers and students, but involve all aspects of the entire educational system. Instructional leaders are expected to play a role in driving and facilitating educational change and development in their schools, providing a clear vision and goals for the school, developing effective teaching and learning policies and strategies, and providing the necessary resources and support. Instructional leadership, broadly defined, also emphasizes the cooperation and collaboration of instructional leaders with other relevant stakeholders. This includes working with a variety of parties, including teachers, parents, the community, and the education sector, to focus on and promote the quality of education. Instructional leaders are expected to promote effective communication and collaboration, build good partnerships, and work together to improve the teaching and learning environment of the school. In addition, instructional leadership in the broad sense also emphasizes the importance of instructional leaders in monitoring and evaluating the quality of teaching and learning. They should collect and analyze teaching and learning data, conduct assessment and reflection, and make timely adjustments to teaching strategies and measures to improve the quality of teaching and student learning outcomes. In sum, a broad understanding of instructional leadership extends the scope of instructional leadership to include all activities that can improve the quality of instruction and impact student learning. This understanding emphasizes the roles and responsibilities of instructional leaders across the education system and stresses the importance of collaboration, monitoring, and evaluation. It provides a

broader perspective and guidance for the practice and research of instructional leadership.

Broadly speaking, it refers to all activities that improve the quality of teaching and learning and impact on student learning. First, to define the school mission: to achieve the school's goals while leading the entire school staff to accomplish their personal goals and to maintain a positive climate of interaction with parents and the community; second, to manage teaching and learning: to oversee and evaluate teaching and learning processes and outcomes, to coordinate the integration of relevant curricula, and to monitor student learning; and third, to establish an upwardly mobile school culture: to maintain equal communication and exchange with school personnel and set high expectations; to establish a system of rewards, sanctions, and incentives; and to promote fair and just school practices and procedures. Thirdly, to build an upward campus culture: communicate equally with school personnel and set high expectations; establish a system of rewards, sanctions, and incentives to promote fairness and equity; set standards so that students know what is expected of them; ensure effective instructional time; and organize teacher training and develop a professional development plan for teachers. Research on teachers' instructional leadership

Instructional Leadership Levels

Professor Li Sen. (2012, p.3). classified instructional leadership into three levels: macro, meso and micro levels, and this division helps to better understand and practice the multidimensionality of instructional leadership. Macro level: instructional leaders at the macro level are concerned with the direction and development of the entire school and educational system. Meso-level: Instructional leadership at the meso-level is concerned with the organization and management of instruction within the school. Micro-level: Micro-level instructional leaders focus on specific instructional processes and classroom practices. This division into macro-, meso, and micro-levels brings out the complexity of instructional leadership and provides a framework for guiding instructional leaders in their roles at the different levels. Instructional leaders need to focus on all three levels simultaneously and

flexibly utilize different strategies and skills to promote educational reform and improve the quality of teaching and learning.

Li Chongfeng. (2009, p.3-7). classified the executive body of instructional leaders into four dimensions, including principals, instructional leaders, teaching and research leaders, and teachers. Principal: As the leader and decision maker of the school, the principal plays an important role in instructional leadership; Head Teacher: Head Teachers are important positions in the management of teaching and learning in the school. They are responsible for coordinating and organizing the school's teaching and ensuring the smooth implementation of the teaching plan; Teaching and Research Leaders: Teaching and Research Leaders are one of the important levels of instructional leadership. They lead and organize teaching and research activities, and assist teachers in instructional design and instructional improvement; Teachers: Teachers, as the executive body of instructional leadership, are directly involved in and implement instructional activities. Teachers are expected to possess professional knowledge and teaching skills, pay attention to students' learning needs and development, and actively adopt effective teaching strategies and methods. This division of labor enables instructional leaders at all levels to play their respective roles and work together to promote the school's educational endeavors and improve the quality of teaching. At the same time, teachers, as the executors of instructional leaders, bear the important responsibility of direct teaching work and need to continuously improve their teaching ability and professionalism.

The above two scholars agree that instructional leadership has different levels in different fields, and that the subject of instructional leadership is pluralistic, and the tasks are interrelated and different.

Functions of instructional leadership

The functions of instructional leadership are generally divided into: coordination and unification function, promotion and enhancement function, support and protection function.

Coordination and integration function

Yan Xueling's. (2006, p.9-10) viewpoint emphasizes the role of the teacher as the coordinator of the class in instructional leadership. According to her viewpoint,

teachers should play the role of coordinator of the class, work with students to set teaching goals and individual learning goals, and help students to reach these goals. As a class coordinator, teachers should participate in developing instructional goals with students to ensure that the goals are aligned with curriculum requirements and students' learning needs. Teachers should be aware of students' learning characteristics and differences, and develop individual learning goals based on students' individual differences and learning needs in order to help each student achieve maximum learning benefit. Teachers play an important guiding and supporting role in this process. They should provide appropriate learning resources and teaching strategies, help students build up their learning plans and time management skills, offer guidance and feedback, monitor students' learning progress, and make timely adjustments to teaching methods and measures to ensure that students are able to achieve the expected learning targets. In addition, teachers should encourage students to participate in independent and cooperative learning activities, and promote interaction and cooperation among students to learn and solve problems together. Teachers should provide a positive learning atmosphere and encourage students to express their views and ideas to stimulate their interest and motivation in learning. Through the teacher's role as class coordinator, working with students to set teaching goals and individual learning objectives, and helping students to achieve these goals.

Facilitating and Enhancing Functions

Ma Huimei. (2008, p.84-87). emphasizes the importance of teachers in developing students' problem solving skills and facilitating the effectiveness of learning in teaching and learning activities. According to her, teachers should consciously develop students' ability to identify and solve problems and supervise their progress through group learning. Teacher leadership is based on a student-centered approach that focuses on students' strengths and potentials. In addition to imparting subject knowledge, teachers should also expand students' interpersonal skills, creativity and problem-solving abilities. By encouraging students to think and ask questions, and by stimulating their curiosity and inquisitiveness, teachers can develop students' spirit of inquiry and problem-solving skills. Teachers can use the

form of group learning to promote students' learning effectiveness. In group learning, students can cooperate, communicate and share with each other to solve problems and accomplish tasks together. Teachers, as leaders, can organize and guide group learning activities, provide appropriate guidance and support, and help students learn and grow with each other.

Support and Guarantee Functions

Zhang Tao. (2006, p.85-90). proposed the role of teachers as demonstrators in teaching and learning activities, emphasizing that the teacher's words and behaviors are the object of students' imitation. Teachers are not only transmitters of knowledge in the teaching process, but also role models of students' behavior and values. As a role model, teachers' words and behaviors have an important influence on students. Students often imitate teachers' behavior, attitudes and values. Therefore, teachers should set a good example for students in terms of their mannerisms, attitudes and feelings, and behavior. Teachers should demonstrate a positive attitude, a love of learning and education, and treat students with equality, respect and care. In addition, teachers should behave in a manner consistent with educational goals and values. Through teachers' modeling, students can develop good behavior, social interaction skills and values through imitation and learning. Teachers' self-discipline and role modeling power in their speech and behavior have a positive impact on students' growth and development. Instructional leaders are the central figures in the new curriculum reform, while instructional leaders should integrate the resources of all parties and utilize the characteristics of their roles to improve the quality of teaching and learning in the form of efficient synergy and cooperation.

The Concept of Teacher Instructional Leadership

Connotation of Teacher Instructional Leadership

Teacher instructional leadership refers to the leadership ability and influence shown by teachers in the teaching process. It includes teachers' ability to instruct and guide students, make decisions about curriculum and teaching methods, and organize and manage the educational environment.

Zhao Decheng's. (2016). study argues that teacher instructional leadership can be understood as the leadership skills that teachers demonstrate in the classroom and school environment. This kind of leadership goes beyond managing students to being able to stimulate students' learning potential, guide them to achieve instructional goals, and help them reach their personal learning goals. Teacher instructional leadership is not only concerned with the delivery of the curriculum and teaching methods, but also aims to develop students' motivation, independent learning skills, and problem-solving abilities.

Wu, Xiaoying. (2015). and others believe that teacher instructional leadership refers to a teacher's demonstration of personal professional knowledge and literacy, which leads students to learn independently through proficient teaching skills and complete organizational skills.

Liu Yu et al. (2015). pointed out that teacher instructional leadership is composed of teacher instructional influence, student following and classroom culture, which is a kind of teacher's ability to present perfectly in the classroom.

Niu Fu. (2011). believes that teacher instructional leadership is the result of the interaction between teachers' instructional design ability, curriculum development ability, classroom handling ability and evaluation and reflection ability.

According to Nie Yujing. (2019). teacher instructional leadership is the ability of teachers to influence teaching and learning activities and to achieve teaching and learning goals, focusing on the improvement of teachers' teaching ability and the influence of teachers in teaching and research and classroom teaching.

In summary, teacher instructional leadership is a complex and multidimensional concept that involves teachers' leadership and management of students, curriculum, teaching and learning environments, and their own professional development. It has a significant impact on students' learning outcomes and development, and is also able to interact with school leadership, parental cooperation and other factors to promote the holistic development of students.

Structure of Teachers' Instructional Leadership

Division from the micro perspective of teaching process:

According to Chen Yijun. (2008, p.33-35). teacher instructional leadership consists of five aspects: arousing students' interest in learning, helping students achieve quality educational behaviors, providing students with positive guidance and learning directions, helping students remove difficult obstacles to learning, and motivating students to increase their sense of achievement in learning.

Qi Xuan. (2015, p.378-379). believes that teacher instructional leadership includes five elements, which are goal-setting ability, teacher appeal, instructional influence, instructional decision-making, and instructional control.

Another viewpoint divides it from a macro perspective:

Yingqi Hu and Jing Xu. (2010, p.112-113). believe that teacher instructional leadership is reflected in the following aspects: interpersonal skills, the ability to help colleagues, the ability to work in a team, listening skills and communication skills, the ability to observe and analyze, the ability to identify problems, and the ability to solve problems.

Role of Teachers' Instructional Leadership

Li Shaolin. (2018). argued from a macro perspective that teachers exercise instructional leadership roles in different roles. Teachers play the roles of creators and disseminators of the school's cultural atmosphere, builders and implementers of teaching goals, coordinators of interpersonal relationships, leaders of student collectives, and so on. School reform and development cannot be separated from the effective play of teachers' instructional leadership, which helps to establish a positive and harmonious school culture.

Sumi. (2014). believes that teacher instructional leadership has four functions from a micro perspective: the function of promoting teacher growth, the function of promoting student learning, the function of planning, executing and evaluating teaching activities, and the function of coordinating and supporting the instructional leadership environment.

Influencing Factors of Teachers' Instructional Leadership

The influencing factors of teachers' instructional leadership mainly include teachers' own factors and external factors.

Chen, Chun-geun and Wang, Hong. (2010, pp.31-33). believe that teachers' low involvement in school affairs, lack of leadership experience, unclear perception of their leadership roles, and poor communication with the management may hinder the development of teachers' instructional leadership.

Xiao Yueqiang. (2011, pp.66-70). believes that the factors influencing teachers' instructional leadership are philosophy, culture and system. Teachers' philosophy of teaching includes views on educational goals, teaching methods, and student development. The performance of teacher instructional leadership is closely related to individual teachers' educational philosophy, and differences in philosophy may lead to different leadership behaviors in teaching; teacher instructional leadership is influenced by the educational culture in which they live. Different school cultures may have different impacts on the development and implementation of teacher instructional leadership. Teacher instructional leadership is constrained and motivated by the school system. The school system may provide appropriate support and resources for teachers, and it may also influence the exercise of instructional leadership by defining teachers' responsibilities and authority. These factors interact with each other to influence the development and implementation of teachers' instructional leadership.

Shangguan Dandan. (2014). identified the low recognition and insufficient emphasis on teacher leadership in schools as the most significant reason for teachers' lack of willingness to participate in school affairs. In addition, the cultural tradition of individualism and the phenomenon of seniority ranking that exists in schools to some extent constrains the willingness of teacher leaders to share their professional knowledge and teaching skills, and the fact that schools provide teachers with fewer platforms for collaboration and exchange opportunities also makes teachers less capable of sharing teaching experience and interpersonal communication. Finally, the hierarchical organizational structure of the school is also one of the important factors hindering the development of teacher instructional leadership.

Generation and Enhancement of Teacher Instructional Leadership

Zhao Yuanke. (2017, p.83-85). believes that the generation of teacher instructional leadership can be generated in three ways: teacher-generated autonomy, school-based generation, and out-of-school generation. Teacher autonomy-generated instructional leadership relies on the competence, literacy, and professional knowledge of individual teachers, who develop an effective instructional leadership through continuous reflection and improvement of their teaching practices; school-based-generated instructional leadership emphasizes the role and competence of school leaders, who guide and inspire teachers by setting clear instructional goals, building effective instructional teams, and providing professional support; out-of-school-generated instructional leadership emphasizes the role and competence of teachers by setting clear instructional goals, building effective instructional teams, and providing professional support. Instructional leadership generated outside the school includes guidance and promotion from external forces such as educational institutions, government, and professional organizations. These three approaches are interrelated and work together to promote and shape teachers' instructional leadership.

Guo Na. (2011, p.56-57). believes that school-based is an important way to enhance teachers' instructional leadership, including conducting school-based training, school-based teaching and research and school-based curriculum. School-based training can be personalized according to teachers' needs and interests, and help teachers improve their teaching ability and leadership by providing targeted knowledge and skill development. This form of training enables teachers to have a better understanding of the school's educational philosophy and objectives, and enhances their sense of belonging and responsibility to the school. Through conducting school-based teaching and research, teachers can share their teaching experience, study teaching problems, and jointly discuss and improve their teaching methods and strategies. School-based teaching and research can promote cooperation and collaboration among teachers, cultivate their reflective and creative abilities, and enhance their instructional leadership. The school-based curriculum emphasizes personalized and differentiated teaching, with due regard to the

characteristics and needs of students. In participating in the development and implementation of school-based curricula, teachers are able to exert their teaching leadership, flexibly adjust the teaching contents and methods according to the learning situation and needs of students, and improve the effectiveness of teaching.

The methods proposed by the above two scholars all point to the need to take teachers' professional development as the starting point, requiring teachers to take students as the basis, constantly learn new knowledge and new teaching concepts, and establish a new type of harmonious and equal teacher-student relationship; at the same time, schools are required to give more power to teachers, allow teachers to participate in teachers' teaching activities and school affairs, give full play to the role of the main body of the teachers, encourage teachers to communicate with the outside world and to learn, and organize teachers' training etc.

Table 2.1 Results of the synthesis of teachers' instructional leadership factors

Author	Fullan (1994)	Golon (2000)	Wu Qingshan (2003)	Murphy (2007)	Chen Yijun (2008)	Guo Na (2011)	Xiao Yueqiang (2011)	Shangguan Dandan (2014)	Zhao Decheng(2016)	Zhao Yuanke (2017)	Total
Professional Development	√	√	√	√	√	√	√	√	√	√	10
Teaching Practice	√	√	√	√	√	√	√	√	√	√	10
School Culture		√	√	√		√	√	√	√	√	8
Learning outcomes	√	√	√	√	√	√	√		√		8

According to Table 2.1, the researcher analysed and distilled the literature, concepts, theories and related studies on teacher instructional leadership including Fullan. (1994), Golon. (2000), Wu Qingshan. (2003), Murphy. (2007), Chen Yijun. (2008),

Guo Na. (2011). Xiao Yueqiang. (2011), Shangguan Dandan. (2014), Zhao Decheng. (2016), Zhao Yuanke. (2017). The researcher selected the appropriate elements based on the criteria as a framework for the study. The researcher selected elements with a frequency of 8 or more including the following 4 elements: 1) Professional development. 2) Teaching practices. 3) School culture. 4) Learning outcomes.

Context of Secondary School Teacher in Qingdao

The background of secondary school teachers in Qingdao, China, cover various aspects related to their roles, responsibilities and the educational environment in which they work. The following is an overview of the context:

Education System

Qingdao is located in Shandong Province and is a major city in China known for its educational institutions. The city's education system follows the national curriculum set by the Chinese Ministry of Education. The curriculum generally includes subjects such as Chinese, maths, foreign languages, science and social studies.

Level of Instruction

Secondary education in China usually consists of three years of junior high school and three years of senior high school. Secondary school teachers teach specific subjects or multiple subjects depending on their expertise.

Number of Students

Secondary schools in Qingdao have students of varying abilities, backgrounds and interests. Teachers must be prepared to meet the individual needs of students and promote an inclusive learning environment.

Teaching methods

Teaching methods in Qingdao's secondary schools are usually a combination of lectures, group discussions and practical activities. With the increasing emphasis on student-centred learning, teachers are encouraged to engage students in critical thinking, problem solving and collaborative projects.

Curriculum and Assessment

Teachers follow the official curriculum guidelines provided by the Ministry of Education. They are also responsible for helping students prepare for various standardised tests such as the national college entrance exam (gaokao) for high school students.

Professional Development

Teachers in Qingdao are offered professional development opportunities, which include workshops, seminars, and training courses aimed at improving teaching methods and keeping up with the latest educational trends.

Cultural Factors

Understanding and respecting Qingdao's and China's cultural norms and values is crucial for teachers. This affects classroom climate, communication with students and parents, and overall interaction within the school community.

Technology Integration

As in many places, technology is becoming increasingly integrated into education in Qingdao. Teachers may need to adapt to using digital tools for instruction, communication, and assessment.

Community Engagement

Secondary school teachers must interact not only with students, but also with parents, school administrators, and the local community. Building positive relationships with these stakeholders is important to create a supportive learning environment.

Challenges and Opportunities

Teachers can face a variety of challenges, such as large class sizes, varied learning needs, and high parental and community expectations. However, these challenges also provide opportunities for teachers to grow professionally and positively impact the lives of their students.

Specific contexts vary depending on the particular secondary school, its location in Qingdao, and changing educational trends.

Qingdao City High School is placing increasing emphasis on teacher instructional leadership. This requires teachers to take a leadership role not only in

the classroom, but also in shaping the overall instructional culture of the school. Instructional leadership involves creating a collaborative and supportive environment where teachers work together to improve student achievement. In this environment, teachers need to combine instructional expertise, leadership skills, and a commitment to continuous professional growth.

Related Research

The Reality of Teacher Instructional Leadership

Through combing and analyzing the previous literature, it is found that there are few studies on the realistic level of teachers' instructional leadership in Qingdao secondary schools, and most of the existing literature uses adapted or self-adapted questionnaires to investigate teachers' instructional leadership, while a few researchers have also used interviews and observations to investigate. However, due to the large differences in the structural elements constructed by different researchers, it is not possible to compare and analyze these findings. 1) As a whole, the level of teachers' instructional leadership is in the middle of the range, which means that there is some positive performance and room for improvement in terms of teachers' instructional leadership. Teachers are able to effectively organize learning activities and provide appropriate instructional guidance and support in the classroom. They are able to establish positive teacher-student relationships with students, encourage student participation and interaction, and promote student learning outcomes. 2) There is a need to realize that there are still some challenges and room for improvement in the level of teachers' instructional leadership. There may be some teachers' deficiencies in instructional leadership, such as the need to enhance the diversity and innovativeness of teaching methods, the room for improvement in paying sufficient attention to and supporting students' individual differences, as well as the need for improvement in the assessment of and feedback on students' learning outcomes.

Teacher Instructional Leadership Assessment

Hallinger & Muiphy. (1985, p.217-247). developed a widely used assessment tool, the Principal Instructional Management Rating Scale (PIMRS), which is designed

to assess principals' instructional leadership. The PIMRS evaluates the effectiveness of principals in key areas related to instructional management, including curriculum development, instructional planning, classroom observation, teacher supervision, and professional development. PIMRS is often used as part of a comprehensive evaluation process to provide feedback on principals' instructional leadership practices. It helps to identify areas of strength and areas in need of improvement for targeted professional development and support. It is important to note that while the PIMRS is a widely recognized and used tool, different researchers or organizations may adapt the scale differently. Therefore, it is important to refer to the specific version of the PIMRS used in a particular context.

The instructional leadership pathway-goal framework proposed by American scholar Baker. (1996, p.65-174) integrates the factors of students, teachers, and contexts, and is suitable for exploring the process of teaching and learning in which teachers lead their students to achieve teaching goals together. The framework suggests that teacher instructional leadership consists of the following five main dimensions: 1) It is recognising and motivating students' desire to learn, such as diagnosing students' needs prior to the start of a course, preparing a good syllabus that clearly communicates the goals and objectives of the teaching and learning process. 2) It is increasing the chances of quality educational performance and success, such as maintaining high expectations of students and helping students learn to learn. 3) It is to provide positive guidance for students to achieve their goals through counselling and to make the learning pathway to achieve the teaching goals more achievable, e.g. by explaining assignments, recognising and supporting students' efforts through continuous and appropriate feedback. 4) It is to endeavour to help students to remove, or at least to reduce, barriers to their learning, e.g. by maintaining supportive interpersonal communication with students, listening to students in an open and receptive manner. 5) It is to motivate students to become more fulfilled and to develop learning skills, for example, by motivating students to become actively involved in all aspects of the learning process, and by integrating students' experiences into the classroom.

The questionnaire used by Chen Yijun. (2011, pp.45-52). is divided into five dimensions: "stimulating students' desire to learn", "increasing the chances of success", "providing positive guidance and the right direction for learning", "helping students to learn", "helping students to remove barriers to learning" and "motivating students to increase satisfaction".

In the revised version of the scale in Chen Shanshan. (2014), teachers' classroom planning power is based on the study of teaching materials; teachers' classroom guidance power is in the co-enlightenment of vision and the promotion of students' self-leadership; teachers' classroom atmosphere mastery is concerned with the maintenance of teacher-student relationships; and teachers' classroom influence is concerned with their own role modeling and motivational power. In short, teachers' teaching leadership is affected by many factors. 1) Teachers' own knowledge, ability and personality will affect the level of teachers' teaching leadership; 2) The interaction between teachers and students in the process of teaching activities is also one of the factors affecting teachers' teaching leadership. 3) The attitudes of school leaders at all levels towards teachers' instructional leadership and so on also affect teachers' exercise of instructional leadership; 4) Students' own knowledge, ability and learning habits also have an impact on the status of teachers' instructional leadership.

By analyzing the previous literature, from the point of view of evaluation methods, there are mainly two evaluation methods: qualitative and quantitative, but the main method is still based on the questionnaire survey. One of the more authoritative leadership assessment scales is the evaluation scale developed by Hellinger and his collaborators, referred to as PIMRS, which applies to principals; and among the evaluation scales used for teachers, the more authoritative one is the Instructional Leadership Cognitive Scale compiled by Baker, and the questionnaire used by our scholar Chen Yijun is the one that has been adapted from the Baker's scale, as well as Chen Shanshan, and so on.

In terms of components, researchers have analyzed the structure of teachers' instructional leadership from the following two aspects. 1) From the micro level of teachers' classroom teaching activities, the structural elements of teachers'

instructional leadership are broadly categorized according to the process of teaching activities. 2) From the macro perspective, it is believed that teacher instructional leadership is a comprehensive composition of many competencies, which is not only limited to the activity of classroom teaching.

Sorting Out Teacher Instructional Leadership in Relation to the Four Elements

Teacher Instructional Leadership and Professional Development

Michael Fullan in his book *Leading in a Culture of Change*. (2001). emphasized the importance of teacher professional development for instructional leadership. He argues that teacher professional development is the foundation of instructional leadership, and that through continuous learning and reflection, teachers are able to improve their instructional competencies and take leadership roles in the teaching and learning process. Through professional development, teachers can enhance their instructional competencies, increase their impact on student learning, and take on leadership roles in their schools and education systems. Teachers' professional development and instructional leadership are closely related and work together to promote student learning and growth. Fullan's perspective emphasizes that teacher professional development is a key support in the development of teacher instructional leadership and that teachers need to be provided with effective support and opportunities to continually improve their instructional competence and leadership.

Hargreaves and Fullan's. (2012). study emphasized the importance of teachers' professional development in improving instructional leadership. Particular emphasis was placed on the impact of participation in professional learning communities, co-teaching, and interdisciplinary teaching on improving instructional leadership. These practices can help teachers expand their teaching skills and knowledge, learn and grow with other teachers, and enhance their instructional leadership through collaborative and interdisciplinary teaching.

Teacher Instructional Leadership and Teaching Practices

Robinson et al.'s. (2009). study emphasized the close relationship between teachers' instructional practices and their Teaching leadership. Teaching effectiveness:

teachers' instructional leadership is reflected in their teaching methods, strategies, and instructional activities that are effective in guiding student learning, stimulating student interest, and providing support and challenge; Student engagement: students who are actively engaged are more likely to achieve their learning goals and make better academic gains; Instructional feedback and adjustment: by continually reflecting on and improving their instructional practices, teachers are able to improve their own teaching effectiveness and student learning outcomes. Teacher role modeling: By demonstrating professional teaching practices, teachers can serve as role models for their students and colleagues and positively influence the culture and climate of teaching and learning in their schools. Researchers have emphasized teachers' instructional practices as an important component of their instructional leadership. Effective instructional practices not only enhance student learning outcomes and growth, but also shape teacher leadership and positively impact the school climate. Therefore, the development of teacher instructional leadership requires focusing on and strengthening teachers' instructional practice skills and strategies to achieve better learning outcomes.

A study by Leithwood et al. (2008). found significant associations between teachers' teaching skills, classroom management and individualized instruction and instructional leadership. Teachers are better able to exercise instructional leadership and improve student learning outcomes and the quality of instruction by continually improving their instructional skills, strengthening their classroom management skills, and implementing individualized instruction.

Teacher Instructional Leadership and School Culture

The findings of Louis et al. (2010). emphasized the important impact of school culture on instructional leadership. School values, leadership styles and support systems can all play a key role in teachers' instructional leadership. Schools should create positive learning environments and establish mechanisms and cultures that support teacher development in order to facilitate the development of teacher instructional leadership. The importance of school culture cannot be overlooked in education reform and instructional leadership development. School leaders should be committed to shaping a positive school culture that emphasizes teacher

instructional leadership and instructional quality, and provides teachers with the necessary support and resources to work together to promote school development and student success.

Hallinger and Murphy's. (1985). model of school leadership effectiveness emphasizes the impact of school culture and leadership on teacher instructional leadership. The positive, supportive, and innovation-encouraging characteristics of school culture, as well as the mentoring and supportive behaviors of school leaders, can inspire teachers' instructional leadership development and practice. School leaders play a key role in shaping school culture and providing support. They should focus on teacher development and instructional leadership, establish a positive school culture, and provide support and resources to facilitate teachers' professional growth and improve the quality of teaching and learning.

Teacher Instructional Leadership and Learning Outcomes

Marzano's. (2003). study found a strong correlation between teachers' instructional leadership and student academic outcomes. By providing high-quality instruction and leadership, teachers are able to promote the development of students' academic achievement, subject matter knowledge, and attitudes toward learning. Teachers should continually improve their instructional leadership to provide a positive learning environment and support for students to promote their learning outcomes and academic development through continuous improvement of teaching strategies, individualized instruction, and student assessment.

The study by Leithwood et al. (2004). did point out that teachers' instructional leadership has a significant impact on the improvement of students' academic achievement and school performance. Teachers' instructional leadership has a significant impact on student academic achievement and school performance. Excellent instructional leadership can stimulate student learning, provide high-quality instruction and learning support, which in turn improves student achievement and contributes to the overall performance of the school.

Chapter 3

Research Methodology

In order to realize the research objectives 1) To study the current level of instructional leadership of secondary school teachers in Qingdao. 2) To develop the guidelines of instructional leadership of secondary school teachers in Qingdao. 3) To evaluate the adaptability and feasibility of secondary school teachers' instructional leadership:

1. The population / sample Group
2. Research Instruments
3. Data Collection
4. Data Analysis

The population / Sample Group

The Population

The population were 9 representative secondary schools in Qingdao, a total 1262 teachers. (Qingdao Education Bureau, 2022)

The Sample Group

The sample group were according to the Krejcie and Morgan sampling table. (1970), the sample group of this research was 291 teachers from 9 secondary schools in Qingdao. By using proportion random sampling and sampling random sample methods.

Interviewees

The interviewees of this study were 9 secondary school teachers in Qingdao. The qualification of interviewees were: 1) have a master's degree or higher, 2) have been working in secondary school for more than 10 years, 3) the academic title is associate Secondary III or above.

leadership", "instructional leadership", "instructional leadership", "instructional leadership" and "instructional leadership", "teacher instructional leadership", etc. to search for relevant literature.

Step 3, Literature screening: According to the preset inclusion and exclusion criteria, the search results were screened. The titles and abstracts of the literature were first read to determine if they fit the research question and purpose. Selected literature was then read in depth to screen for studies related to teacher instructional leadership.

Step 4, Literature Assessment: the screened literature is assessed for quality, methodology, and credibility of the research. This can be assessed by looking at the sample of studies, research design, data collection and analysis methods, etc.

Step 5, Data extraction and organization: extract relevant data and information from the selected literature, including the main findings of the study, theoretical framework, research methods and results. Organize the extracted data into a comparable and synthesized form.

Step 6, Data analysis and synthesis: analyze and synthesize the extracted data. Compare and integrate findings and perspectives from different literatures to identify common themes, patterns, and trends.

Step 7, Presentation of results: the results of the analysis and synthesis are presented, using text, tables to present the main findings and conclusions of the study.

The definition, characteristics and influencing factors of teacher instructional leadership, as well as the relationship between teacher instructional leadership and teachers' professional development, teaching practice, school culture and learning outcomes were systematically sorted out and analysed through the literature research method, with a view to providing important references for the theoretical development and practice of teacher instructional leadership.

Design Questionnaire

The research was conducted using a questionnaire, which was developed based on the indicators for evaluating the instructional leadership of secondary school teachers. The questionnaire was divided into two main sections.

The first part is the basic information, specifically including the title of the respondents, teaching subjects, teaching age, whether they know about instructional leadership as well as participation in instructional leadership related training, reading of related literature, etc.

The second part is the main part of the questionnaire, which is intended to investigate the real level of instructional leadership of secondary school teachers, and it is based on a five-point Likert scale, with the options ranging from "Not at all consistent" to "fully consistent".

The second part of the questionnaire was mainly divided into four dimensions, professional development, teaching practice, school culture and learning outcomes, with 9 questions under each dimension, totaling 36 questions. SPSS and EXCEL software were also used to organize and analyze the recovered data.

Structured Interview Format

Based on the questionnaire survey and data analysis, this paper summarizes the status of instructional leadership of secondary school teachers in Qingdao, designs an interview outline, and forms a structured interview form.

Evaluation Form

Based on the results of questionnaires and interviews, this paper proposes the development model of instructional leadership of secondary school teachers in Qingdao, designs an evaluation form for the implementation of the model, and invites experts to evaluate the adaptability and feasibility of the implementation of the model.

Research Methods and Steps

This study combines qualitative research with quantitative research, and uses a variety of data collection and statistical analysis methods to collect, analyze and count relevant data. The research steps are as follows:

Step 1, Set research ideas. Read and sort out relevant literature at home and abroad, be familiar with the relevant theories and concepts of instructional leadership of secondary school teachers, and understand the four variables professional development, teaching practice, school culture and learning outcomes related to, clarify the purpose of the research, formulate the research plan and ideas.

Step 2, Design and distribute the questionnaire. On the basis of sorting out the relevant literature at home and abroad, through the predecessors' research on issues related to the instructional leadership of secondary school teachers, the corresponding questionnaires were designed and compiled, and the questionnaires were distributed to the teachers of school in Qingdao. Through factor analysis, the reliability and validity of the four variables in the questionnaire are compared, and the feasibility of the research on the development guidelines of instructional leadership of secondary school teachers in Qingdao is verified, so as to analyze and understand the current situation.

Step 3, designing structured interview content. Questions and suggestions were collected through structured interviews, and the influencing factors of instructional leadership of secondary school teachers in Qingdao were analyzed and summarized.

Step 4, Evaluate guidelines suitability and feasibility

Nine experts were invited to evaluate the applicability and feasibility of the implementation of secondary school teachers' instructional leadership in Qingdao. They evaluated the content of influencing factors of development guidelines collected through interviews, and evaluated the appropriateness of implementing development guidelines. The evaluation results provided a basis for optimizing the development guidelines. The research steps are shown in Figure 3.1:

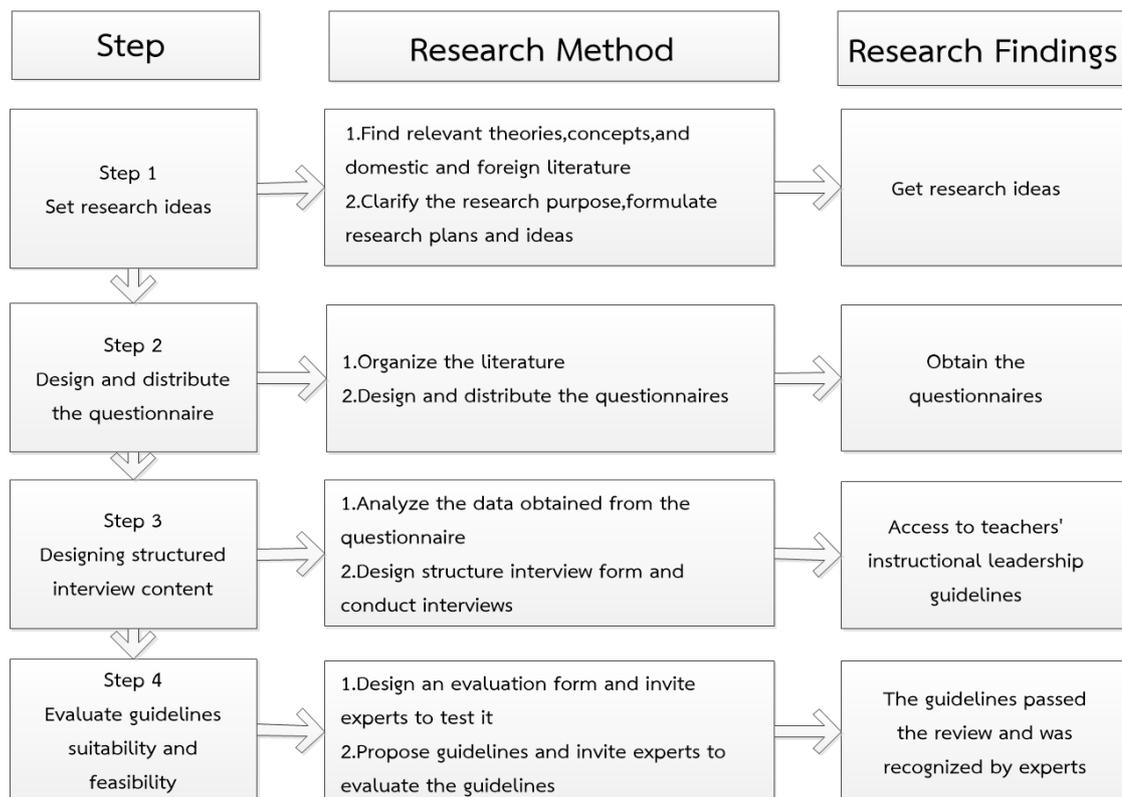


Figure 3.1 Summary of Research Steps

Data Collection

Literature Collection

Searching for "teacher leadership" as the theme, a total of 348 documents were retrieved until 2022, including 187 journals and 72 dissertations, with the earliest date of publication being 2007. The research content of all the dissertations can be broadly categorized into teacher leadership, leadership, teacher informatization leadership, leadership enhancement and other aspects.

Taking "teacher teaching leadership" as the theme, a total of 313 pieces of related literature were searched, including 134 journals and 58 dissertations, the earliest time of publication was 2008, and all the dissertations can be roughly categorized into teacher teaching leadership, instructional leadership, teacher leadership, leadership, etc. The research content of all the dissertations can be

broadly categorized into teacher teaching leadership, instructional leadership, teacher leadership, leadership and other aspects.

Questionnaire

Step 1, Questionnaire design: The researchers design the research questionnaire according to the first research purpose, accept the guidance of the tutor, and then submit it to the School of Graduate Studies for approval.

Step 2, Questionnaire distribution: The researchers distributed questionnaires in 9 schools in Qingdao , and asked respondents to fill in the questionnaires.

Step 3, Questionnaire follow-up: The questionnaire was distributed to the target group (secondary school teachers in Qingdao) to collect their responses and opinions. Follow up the sample size of the questionnaire, stop the questionnaire when the sample size is satisfied, and proceed to the next step of questionnaire data analysis.

Step 4, Questionnaire data collation: sort out the collected questionnaires, check the completeness of the questionnaires, and use SPSS to analyze the complete and valid questionnaire data. Based on the results, an assessment of the instructional leadership of secondary school teachers in Qingdao City and suggestions for improvement were drawn.

Interview

Step 1 Summarize the analysis results of the instructional leadership of secondary school teachers in Qingdao Discovery Questionnaire, and formulate the interview outline. Ensure that the outline adequately covers the objectives and organizes the questions in a logical order.

Step 2 Selecting interviewees: selecting a few representative teachers to be interviewed. In this study, 9 seniro secondary school teachers in Qingdao were selected, who came from different subject areas or had different teaching experiences.

Step 3 Conducting interviews: Conduct face-to-face interviews with each teacher interviewed on a one-to-one basis. Try to create a relaxed and open atmosphere in order to encourage them to share their views and experiences.

Step 4 Active listening: make sure you are an active listener during the interviews. Encourage teachers to describe their instructional leadership practices in detail and avoid interruptions or jumping to conclusions.

Step 5 Recording and organizing information: during the interview, take care to record important information and ideas. At the end of the interview, organize and analyze this information for further assessment and summarization.

Step 6 Analyzing and Assessing: Based on the results of the interviews, analyze the teachers' responses and assess their instructional leadership. Note their perspectives, strategies and responses and their impact on student learning.

Step 7 Summarize and Feedback: After the entire interview process is completed, prepare a summary report and provide feedback to the interviewed teachers. Their strengths and positive aspects are emphasized and suggestions and support are provided to help them further enhance their instructional leadership.

Evaluation Expert

Step 1 Determine the Objective or Construct: Design an evaluation form and check its correctness, feasibility and applicability.

Step 2 Collect Data: Prepare a group of subjects for testing. Invite experts to participate in the guideline evaluation. Make sure the test contains multiple items or questions to cover different aspects of the objective or construct this study have set.

Step 3 Calculate Total Score: For each subject, calculate their score on the entire test, which is usually the total score obtained by adding up the scores on the individual items.

Step 4 Calculate the score for each item: For each item or question, calculate the subject's score on that item.

Step 5 Perform a correlation analysis: Correlation coefficients are used to calculate the correlation between each item's score and the total score.

Repeat Steps 4 and 5 For each item on the test, repeat the calculation of the correlation coefficient between the item score and the total score.

Step 6 Summarize Results: Summarize the correlation coefficients for each item and calculate their average.

Data Analysis

Literature

After organizing and analyzing the collected literature and analyzing the results of previous studies on "teacher instructional leadership", it can be concluded that teacher instructional leadership refers to the leadership and influence shown by teachers in the process of teaching, including professional development, teaching practice, school culture, learning outcomes and other aspects.

The literature research method provides theoretical support for the study of teacher instructional leadership and contributes to a deeper understanding of what constitutes and influences instructional leadership. This study identified four main areas of teacher instructional leadership: professional development, teaching practice, school culture, and learning outcomes.

Professional development: Teachers' continuous learning and growth in professional knowledge and educational skills, based on the theory of professional development of teachers, the model of stages of professional development of teachers, and the model of the learning teacher, etc. The theory emphasizes the growth of teachers in professional knowledge, teaching skills, and career development paths, while the model of the learning teacher emphasizes the role of the teacher as a learner and an educational innovator.

Teaching practice: Teachers' specific teaching activities and methods in the classroom are based on instructional theories, classroom management theories, and instructional design theories. Teaching theory provides principles and methods about effective teaching and student learning, classroom management theory emphasizes the creation of classroom order and learning atmosphere, and instructional design theory focuses on the design of teaching objectives, teaching content and teaching activities.

School Culture: Teachers' roles in the school and their interaction with the school culture are built on the foundations of school culture theories and educational leadership theories, among others. School culture theory focuses on the formation of core values, school climate and cultural atmosphere of the school,

while educational leadership theory emphasizes the shaping and leading of school culture by school leaders.

Learning outcomes: Teachers' influence and facilitation of students' learning outcomes are built on the foundations of educational assessment theory, student outcome assessment theory, and so on. Educational assessment theory provides principles and methods for evaluating students' learning outcomes, and student outcome evaluation theory focuses on the evaluation of students' academic performance, subject knowledge and comprehensive quality.

Questionnaire

Before analyzing the data, the researcher first checks the validity and completeness of the data. If the data is found to be incorrect, invalid or incomplete, it will be deleted first, and completed and summarized to select valid questionnaires for sorting. Then analyze the data according to the two steps of preliminary analysis of data and in-depth analysis of data. Details are as follows:

Step 1 Preliminary data analysis, mainly analyzing the statistical data in line with the research purpose; and analyzing the characteristics of each research variable data. The analysis in this step is to analyze the background of the sample, including the title of the respondents, teaching subjects, teaching age, etc. The basic statistical analysis uses frequency distribution and percentage, while the basic statistical analysis of variables uses the mean and standard Difference.

Step 2 In-depth analysis of the data, in order to achieve the purpose of the research, research and analysis of the current situation of instructional leadership of secondary school teachers in Qingdao, and use the mean and standard deviation for analysis.

The reliability analysis of the questionnaire was carried out by SPSS statistical software. Generally speaking, the reliability of the scale is considered to be ideal if the Cronbach's a coefficient is above 0.8. The statistical results show that the Cronbach's a coefficient of each dimension of the questionnaire is between 0.814-0.851, which is greater than 0.8. This indicates that the reliability of the questionnaire is high and the authenticity and reliability.

Interviews

In order to achieve the purpose of the research, formulate the development guidelines of instructional leadership of secondary school teachers in Qingdao, and analyze the data collected from interviews. The responses to the interview questions of the coded 9 interviewees were collated, from which the interviewees' views on secondary school teachers' instructional leadership were extracted to understand secondary school teachers' understanding of teachers' instructional leadership in Qingdao and to revise the guidelines.

Evaluation Expert

In order to achieve the purpose of the study, the current situation of teachers' instructional leadership in Qingdao is studied, the development guidelines is formulated, and the basic statistical analysis of the mean and standard deviation of the variables is carried out. Calculate the average value (\bar{X}) of the actual possibility, use the statistical average value (\bar{X}) and standard deviation (SD) of data analysis, analyze the applicability and feasibility of the evaluation content, and determine the high applicability and feasibility.

Statistical Data Analysis

The statistics used for data analysis in this study are as follows:

Using frequency distribution and percentage to analyze the distribution of samples, including gender, teaching subjects, teaching age, etc. Using mean analysis and standard deviation to analyze the impact of four variables on professional development, teaching practice, school culture, learning outcomes.

Data Interpretation

In the mean value analysis of the development model of instructional leadership of secondary school teachers in Qingdao, the researchers clarified the criteria for data interpretation. (Likert, 1932).

As follows.

4.51 - 5.00 Refers to the highest level

3.51 - 4.50 Refers to high level

2.51 - 3.50 Refers to medium level

1.51 - 2.50 Refers to low level

1.00 - 1.50 Refers to the lowest level

After evaluating the adaptability and feasibility of instructional leadership of secondary school teachers in Qingdao, the criteria for data interpretation were determined. (Likert, 1932).

As follows.

4.51 - 5.00 Refers to the highest level

3.51 - 4.50 Refers to high level

2.51 - 3.50 Refers to medium level

1.51 - 2.50 Refers to low level

1.00 - 1.50 Refers to the lowest level

Chapter 4

Results of Analysis

According to the research objectives of secondary school teachers' instructional leadership in Qingdao: 1) To study the current level of instructional leadership of secondary school teachers in Qingdao. 2) To develop the guidelines of instructional leadership of secondary school teachers in Qingdao. 3) To evaluate the adaptability and feasibility of secondary school teachers' instructional leadership. The researchers distributed questionnaires to 9 schools in Qingdao, and the number of valid questionnaires in the sample group was 291. Data presentation is divided into the following four parts:

Part I: Personal information of instructional leadership of secondary school teachers in Qingdao

Part II: Analysis of Questionnaires on the Current Situation of instructional leadership of secondary school teachers in Qingdao

Part III: Interviews and Analysis Results of guidelines of secondary school teachers' instructional leadership in Qingdao

Part IV: Adaptability and Feasibility Evaluation of guidelines of secondary school teachers' instructional leadership in Qingdao

Part I: Personal information of instructional leadership of secondary school teachers in Qingdao

Table 4.1 Personal Information

	Personal Information	Population	Percent
Gender	Male	107	36.77
	Female	184	63.23
	Total	291	100
Teaching Ages	0-5 years	62	21.31
	10-15 years	104	35.74
	more than 15 years	125	42.96
	Total	291	100
Grade	Junior high school	165	56.71
	Senior high school	126	43.29
	Total	291	100
Professional Title	Elementary	57	19.59
	Intermediate	114	39.18
	Senior	120	41.24
	Total	291	100
Academic Subjects	Art	154	52.92
	Science	103	35.40
	Other subjects	34	11.68
	Total	291	100
Highest Education	Bachelor	146	50.17
	Master	116	39.86
	Ph.D. Postdoctoral	29	9.97
	Total	291	100

Part II: Analysis of Questionnaires on the Current Situation of instructional leadership of secondary school teachers in Qingdao

Based on the collection of questionnaires, this study analyzed the current status of secondary school teachers' instructional leadership in four aspects: professional development, teaching practice, school culture and learning outcomes. Mean and standard deviation were used to analyze the current status of each variable in the study. Exploratory factor analysis was used to test the reliability and validity of each variable. Through factor analysis, the data variables in the questionnaire are related.

Analysis of Influential Factors on the Instructional Leadership Development Guidelines for Secondary School Teachers in Qingdao City

Table 4.2 Analysis of the Current Situation of Secondary School Teachers' Instructional Leadership in Qingdao

Instructional Leadership	\bar{X}	SD	Level	Order
1 Professional Development	4.14	0.59	high	2
2 Teaching Practice	4.16	0.55	high	1
3 School Culture	4.04	0.59	high	4
4 Learning Outcomes	4.13	0.56	high	3
Total	4.12	0.57	high	

Table 4.2 shows that the overall mean scores and the mean scores of the dimensions at each level were above 4, indicating that secondary school teachers in Qingdao had a good level of instructional leadership in general, and in descending order, the dimensions of teaching practice, professional development, learning outcomes and school culture scored well. Among them, the teaching practice dimension has the highest mean score of 4.16, the school culture dimension has the lowest mean score of 4.04, and the professional development and learning outcomes have mean scores of 4.14 and 4.13 respectively.

Analysis of the current situation of Professional Development

Table 4.3 Current Situation of Professional Development

	Professional Development	\bar{X}	SD	Level	Order
1	Continuous improvement of subject knowledge	4.18	0.51	high	1
2	Continuous improvement of teaching skills	4.17	0.51	high	2
3	Importance of Teacher Professional Development	4.18	0.51	high	1
4	Frequency of teachers' participation in professional training or academic seminars	4.14	0.51	high	5
5	Extent of teachers' participation in professional training or academic seminars	4.15	0.51	high	4
6	Impact of teachers' professional training or academic seminars on the quality of education	4.15	0.52	high	3
7	Integration of the latest research results in the discipline	4.09	0.54	high	8
8	Innovative application of teaching methods	4.09	0.54	high	7
9	Linkage of teachers' personal and professional development	4.09	0.54	high	6
Total		4.14	0.52	high	

The provided table 4.3 presents an assessment of professional development aspects based on various criteria. Continuous improvement of subject knowledge, teaching skills, and the importance of teacher professional development are all rated highly, with scores around 4.17. These factors emphasize the critical role of ongoing growth in both subject expertise and teaching methods.

The impact of teachers' participation in professional training or academic seminars on the quality of education receives a high score, around 4.15. This underscores the significance of these opportunities in enhancing the overall educational experience.

Frequency and extent of teachers' participation in professional training or academic seminars receive slightly lower but still high scores, indicating their value in staying updated with current educational trends.

Integration of the latest research results in the discipline, innovative application of teaching methods, and the linkage of teachers' personal and professional development score slightly lower but remain in the high range. These aspects highlight the importance of keeping teaching approaches dynamic and incorporating contemporary research findings.

In summary, the assessment underscores the critical nature of continuous professional development in subject knowledge and teaching skills. The integration of research findings, innovative teaching methods, and the alignment of personal and professional growth contribute to a well-rounded and effective teaching approach.

Analysis of the current situation of teaching practice

Table 4.4 Current Situation of Teaching practice

	Teaching Practice	\bar{X}	SD	Level	Order
1	Diverse teaching methods and strategies	4.24	0.34	high	3
2	Consideration of individual differences	4.24	0.34	high	1
3	Teaching effectiveness and assessment	4.24	0.34	high	2
4	Positive classroom climate building	4.14	0.42	high	5
5	Culture of respect and inclusion	4.14	0.42	high	4
6	Encouraging and supporting student development	4.14	0.42	high	4
7	Understanding and analysing students' needs	4.10	0.44	high	7
8	Application of differentiated instructional strategies	4.10	0.44	high	6
9	Individualised assessment of learning outcomes	4.10	0.44	high	6
Total		4.16	0.40	high	

The provided table 4.4 presents an evaluation of teaching practices based on various criteria. Consideration of individual differences, teaching effectiveness and assessment, and the use of diverse teaching methods and strategies are all rated highly, with scores around 4.24. These components highlight the significance of tailoring teaching approaches to cater to students' unique needs and fostering an engaging learning environment.

Creating a positive classroom climate, promoting a culture of respect and inclusion, and encouraging and supporting student development receive high scores, ranging around 4.14. These factors contribute to a harmonious and empowering classroom atmosphere.

Understanding and analyzing students' needs, application of differentiated instructional strategies, and individualized assessment of learning outcomes score slightly lower but are still rated highly, indicating their role in enhancing teaching effectiveness and supporting student growth.

In summary, the assessment underscores the importance of personalized teaching methods, an inclusive classroom environment, and effective assessment strategies. These practices collectively contribute to a rich and dynamic teaching-learning experience, catering to the diverse needs of students.

Analysis of the Current Situation Of School Culture

Table 4.5 Current Situation of School Culture

	School Culture	\bar{X}	SD	Level	Order
1	Positive emotional climate building	4.27	0.44	high	3
2	Academic support and resource provision	4.28	0.45	high	1
3	Cultivation of co-operation and team atmosphere	4.27	0.44	high	2
4	Rich teaching resources	4.01	0.40	high	6
5	Educational training and seminars	4.02	0.40	high	4
6	Mentoring and feedback mechanism	4.01	0.40	high	5
7	Shaping of co-operative culture	3.84	0.3	high	9

Table 4.5 (Continued)

	School Culture	\bar{X}	SD	Level	Order
8	Establishment of communication platforms	3.85	0.30	high	7
9	Promotion of interdisciplinary collaboration	3.84	0.30	high	8
	Total	4.04	0.38	high	

The table 4.5 summarises the assessment of the school culture components based on different criteria. The cultivation of a positive emotional climate, academic support and resource availability, and the creation of a collaborative and team-based climate were all rated highly, with scores around 4.27. These factors contribute significantly to a positive and supportive educational environment.

The abundance of teaching and learning resources, educational training and seminars, and the presence of guidance and feedback mechanisms also received high ratings, at around 4.01. These factors enhance the overall educational experience and contribute to a culture of continuous improvement.

Shaping a culture of collaboration, establishing communication platforms and promoting interdisciplinary cooperation received slightly lower but still high scores, suggesting that they contribute to a collaborative and communicative school environment.

Overall, the assessment highlights the importance of a positive emotional climate, academic support, collaboration, and resources in shaping a school culture that is conducive to growth and collaboration. Together, these areas create a thriving educational climate.

Analysis of the Current Situation of Learning Outcomes

Table 4.6 Current Situation of Learning Outcomes

	Learning Outcomes	\bar{X}	SD	Level	Order
1	Selection of assessment tools and methods	4.27	0.40	high	3
2	Alignment of learning objectives	4.27	0.40	high	1
3	Continuous feedback and improvement	4.27	0.40	high	2
4	Timely feedback provision	4.19	0.40	high	6
5	Specific feedback content	4.19	0.40	high	4
6	Guidance on improvement strategies	4.19	0.40	high	5
7	Comprehensive quality enhancement	3.93	0.35	high	9
8	Enhancement of learning competencies	3.93	0.36	high	7
9	Achievement of educational goals	3.93	0.35	high	8
Total		4.13	0.39	high	

The table 4.6 illustrates the evaluation of learning outcomes based on different criteria. Assessment tools and methods, alignment of learning objectives, and continuous feedback and improvement were highly rated, with scores around 4.27, indicating that they have a significant impact on learning outcomes. These factors play a crucial role in shaping effective educational practice.

Timely provision of feedback, specific feedback content and guidance on improvement strategies were also rated quite highly, with scores around 4.19. These factors help students to understand their progress and areas for improvement and promote a positive learning experience.

The slightly lower but still high scores for General Improvement, Learning Enhancement and Achievement of Educational Objectives indicate that they contribute significantly to the overall learning outcomes.

In summary, the assessment emphasises the importance of a holistic approach, including assessment methods, feedback, alignment to objectives and quality enhancement to achieve good learning outcomes.

Part III: Interviews and Analysis Results of guidelines of secondary school teachers' instructional leadership in Qingdao

Table 4.7 List of Respondents

Interviewee	Sections Taught	Subjects Taught	Specific Times Of Interviews	Encodings
Mr. Zhao	Junior High	Senior High	10:00-10:40	GZ-YW- Ms. Zhao
Mr. Gao	Junior High	High schol	14:30-14:50	GZ-LS- Mr. Gao
Mr. Mann	Junior High	Senior High	15:00-15:20	GZ-YY- Mr. Man
Mr. Li	Senior High	Junior High	10:00-10:20	CZ-YW- Mr. Li
Mr. Li	High School	Junior High	14:30-15:10	GZ-SW- Mr. Li
Mr. Fan	High School	Junior High	15:30-15:50	GZ-LS- Mr. Fan
Mr. Tang	Middle School	Senior High	16:00-16:20	CZ-YW- Mr. Tang
Mr. Wang	Middle School	Senior High	16:30-16:50	CZ-SX-Mr. Wang
Mr. Huang	High School	Junior High	17:00-17:30	GZ-JS-Mr.Huang

Synopsis of an Interview

Professional Development

1) How do you understand and practice teachers' continuous improvement of subject matter knowledge and teaching skills?

2) How often and to what extent do you participate in professional training or academic seminars?

3) Can you share some examples of how you have incorporated the latest research findings and pedagogical approaches in your discipline into your teaching practice?

Teaching practices

1) What diverse teaching methods and strategies do you use in your teaching? Why do you choose them?

2) How do you create a favourable learning atmosphere to promote active participation and learning growth?

3) In terms of differentiated instruction, how do you tailor your teaching methods to the needs of your students?

School culture

1) How do you think the school creates a positive, supportive, and collaborative learning climate?

2) How do the teaching resources and supports provided by the school contribute to your professional development?

3) How do you think the school's emphasis on co-operation and communication between teachers impacts on the overall school culture?

Learning outcomes

1) How do you assess student learning outcomes and progress? What methods are used?

2) How do you provide students with timely and specific feedback to help them improve their learning outcomes?

3) What positive impacts do you think your teaching has had on students' overall quality and ability to learn? Can you share some examples?

Interview Summary

According to the purpose of this study, the coded responses to the interview questions from the nine interviewees were collated, from which the interviewees' perceptions of secondary school teachers' pedagogical leadership were distilled to explore secondary school teachers' understanding of teachers' pedagogical leadership in Qingdao and to revise the developmental guidelines. The interview questions are organised as follows:

Professional Development

The interviewee highlighted the importance of continuous improvement in subject matter knowledge and teaching skills. They emphasized the value of personalized training plans tailored to teachers' needs, including participation in academic seminars, professional forums, and lectures. These opportunities enable educators to stay updated with the latest subject developments and teaching trends. The interviewee discussed the benefits of an internal training resource bank, such as online education platforms and teaching videos, to facilitate independent learning and

professional knowledge updating. They also stressed the significance of expert guidance and mentorship to deepen subject expertise and teaching skills. The establishment of an academic mentorship program was mentioned as a way for experienced teachers to guide newer colleagues in curriculum design, pedagogy, and subject knowledge. Cross-disciplinary exchanges were emphasized to broaden thinking and creativity. The interviewee also mentioned conducting small-scale teaching research projects to explore specific teaching issues and share empirical findings.

Teaching Practices

Innovative teaching methods were a focus of the conversation. The interviewee highlighted strategies such as organizing instructional design workshops, encouraging classroom observation among teachers, and setting up awards for pedagogical innovations. They shared the benefits of creating a diverse range of teaching methods to engage students effectively. The interviewee discussed the importance of fostering a favorable learning atmosphere to promote active participation and learning growth. They also emphasized the significance of differentiated instruction, tailoring teaching methods to suit students' individual needs, strengths, and challenges.

School Culture

The interviewee discussed how schools can create a positive, supportive, and collaborative learning climate. Initiatives like interdisciplinary teacher collaboration groups and online platforms for teacher exchange were explored as ways to promote communication and cooperation among teachers. The interviewee emphasized the importance of teachers' participation in building a positive school culture, contributing to a supportive and innovative educational environment. They discussed student-teacher collaborative projects and cultural activities as means of enhancing student-teacher interaction and promoting empathy.

Learning Outcomes

Assessing student learning outcomes and progress was discussed, including promoting diversified student assessment methods like project presentations and group discussions. The role of teachers in providing personalized feedback was highlighted, pointing out students' strengths and areas for improvement to aid better understanding of their learning. The interviewee shared the benefits of involving

students in the curriculum design process to enhance autonomy and practical application of knowledge. They encouraged the adoption of problem-based teaching methods to guide students in acquiring skills through solving real-world problems. Designing personalized learning plans was emphasized to enhance motivation, and the interviewee mentioned involving students in practical application projects to apply their learning in real-life scenarios.

Table 4.8 The Guidelines for Development of Secondary School Teachers' Instructional Leadership in Qingdao

Guidelines	How to
Optimising Professional Development	1 Developing personalised training plans
	2 Setting up an Internal training resource bank
	3 Introduce expert guidance or mentorship
	4 Establishment of an academic mentorship programme
	5 Interdisciplinary co-operation and exchange
	6 Conducting small-scale teaching research projects
Enhancing Teaching Practice	1 Organise regular instructional design workshops
	2 Organise classroom observation among teachers
	3 Setting up awards for pedagogical innovations
	4 Establishing regular feedback loops on lessons
	5 Teachers experiment with new educational technology tools
	6 Designing project-driven programmes
Improving School Culture	1 Forming interdisciplinary teacher collaboration groups
	2 Establishing an online platform for teacher exchange
	3 Cultivate teachers' participation in building school culture
	4 Promoting student-teacher collaborative projects
	5 Organising cultural activities

Table 4.8 (Continued)

Guidelines	How to
Promoting Learning Outcomes	1 Promoting diversified student assessment methods
	2 Teachers' role in providing personalised feedback
	3 Student participation in the course design process
	4 Adoption of problem-based teaching methods
	5 Designing personalised learning plans
	6 Student participation in practical application projects

According to Table 4.8, the researcher proposed the Guidelines for Teaching Leadership Development of Secondary School Teachers in Qingdao from four aspects, with a total of 23 articles. Among them, there are 6 guidelines for optimising professional development, 6 guidelines for enhancing teaching practice, 5 guidelines for improving school culture, and 6 guidelines for promoting learning outcomes.

Guidelines for development of secondary school teachers' instructional leadership in Qingdao

Guidelines of Optimising Professional Development

Developing personalised training plans: Schools can develop individualised training programmes based on teachers' subject areas and professional needs. This may include participation in academic seminars, professional forums, lectures, etc. to help teachers keep up with the latest subject development and teaching trends.

Setting up an Internal training resource bank: Schools can set up a library of internal training resources, including online education platforms, teaching videos, teaching cases, etc., for teachers to learn at any time. This can help enhance teachers' independent learning and professional knowledge updating.

Introduce expert guidance or mentorship: Schools can introduce expert guidance or mentorship to provide teachers with regular guidance and feedback. This helps teachers to delve deeper into subject areas and improve their teaching skills.

Establishment of an academic mentorship programme: Schools can set up an academic mentorship programme whereby experienced teachers are brought in to guide new teachers in their professional growth, including curriculum design, pedagogy and development of subject knowledge.

Interdisciplinary co-operation and exchange: Teachers are encouraged to participate in cross-disciplinary exchanges to promote cross-disciplinary co-operation and to broaden their thinking and creativity.

Conducting small-scale teaching research projects: Schools may support teachers to conduct small-scale teaching research projects to explore specific teaching issues and share empirical findings.

Guidelines of Enhancing Teaching Practice

Organise regular instructional design workshops: Schools can organise regular instructional design workshops for teachers to discuss and design innovative teaching and learning solutions. This helps teachers to gain inspiration from their peers and improve the diversity of their programme design.

Organise classroom observation among teachers: Schools can encourage teachers to observe each other's classes and then engage in reflective discussions. This practice helps teachers learn from each other, share experiences, and improve their teaching methods.

Setting up awards for pedagogical innovations: Schools can set up teaching innovation awards to encourage teachers to try out new teaching methods and share their successes. This will motivate teachers to innovate and improve their teaching effectiveness.

Establishing regular feedback loops on lessons: Teachers can set up regular lesson feedback loops to collect students' opinions and suggestions, which can be used to continuously adjust and improve the design of lessons and teaching methods.

Teachers experiment with new educational technology tools: Teachers are encouraged to experiment with new edtech tools, such as online platforms and virtual labs, to enhance interactivity and learning experience.

Designing project-driven programmes: Teachers can design project-driven programmes that allow students to solve problems through real-life projects and enhance their practical application skills.

Guidelines of Improving School Culture

Forming interdisciplinary teacher collaboration groups: Schools can set up interdisciplinary teacher collaboration groups for teachers to work together on teaching issues, share teaching resources and experiences, and promote collaboration and exchange.

Establishing an online platform for teacher exchange: Schools can set up an online platform for teachers to post teaching tips, share teaching resources and discuss. This will enhance communication and co-operation among teachers.

Cultivate teachers' participation in building school culture: Foster teachers' participation in building school culture so that they can work together to shape a positive, supportive and innovative educational environment.

Promoting student-teacher collaborative projects: such as student participation in curriculum design, joint research, etc., to enhance student-teacher interaction.

Organising cultural activities: Organise cultural activities such as faculty art exhibitions, book clubs, etc. to promote cultural exchange and empathy between students and faculty.

Guidelines of Promoting Learning Outcomes

Promoting diversified student assessment methods: Schools can promote diversified student assessment methods, including project presentations, group discussions, writing assignments, etc., to gain a more comprehensive understanding of students' learning outcomes.

Teachers' role in providing personalised feedback: Teachers can be more specific and personalised when providing feedback, pointing out students' strengths and areas for improvement. This will help students to better understand their own learning.

Student participation in the course design process: Schools can involve students in the process of curriculum design, so that they can jointly plan the

content of their learning according to their interests and needs, and enhance their autonomy in learning.

Adoption of problem-based teaching methods: Teachers are encouraged to adopt problem-based teaching methods to guide students to acquire knowledge and skills through solving practical problems.

Designing personalised learning plans: Teachers can design personalised learning plans according to students' interests and learning styles to enhance learning motivation.

Student participation in practical application projects: Students are involved in practical application projects, such as community services and field trips, so that they can apply what they have learnt in real-life situations.

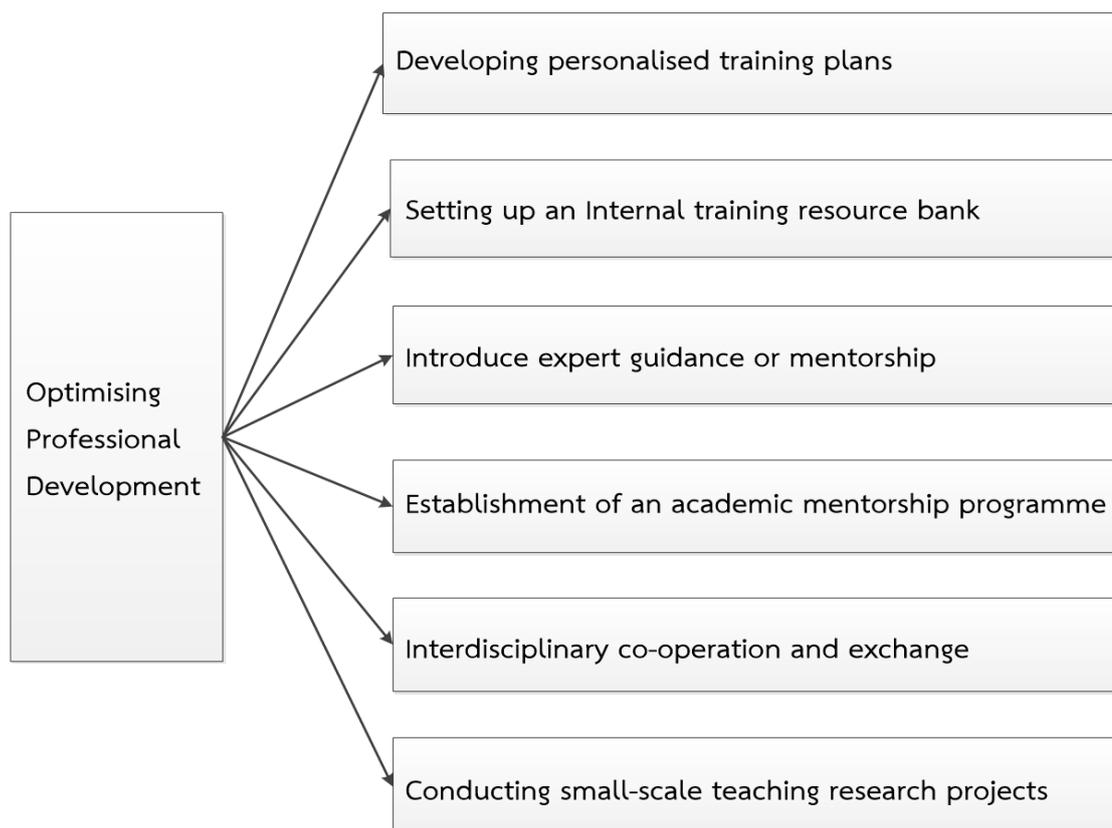


Figure 4.1 Guidelines of Optimising Professional Development

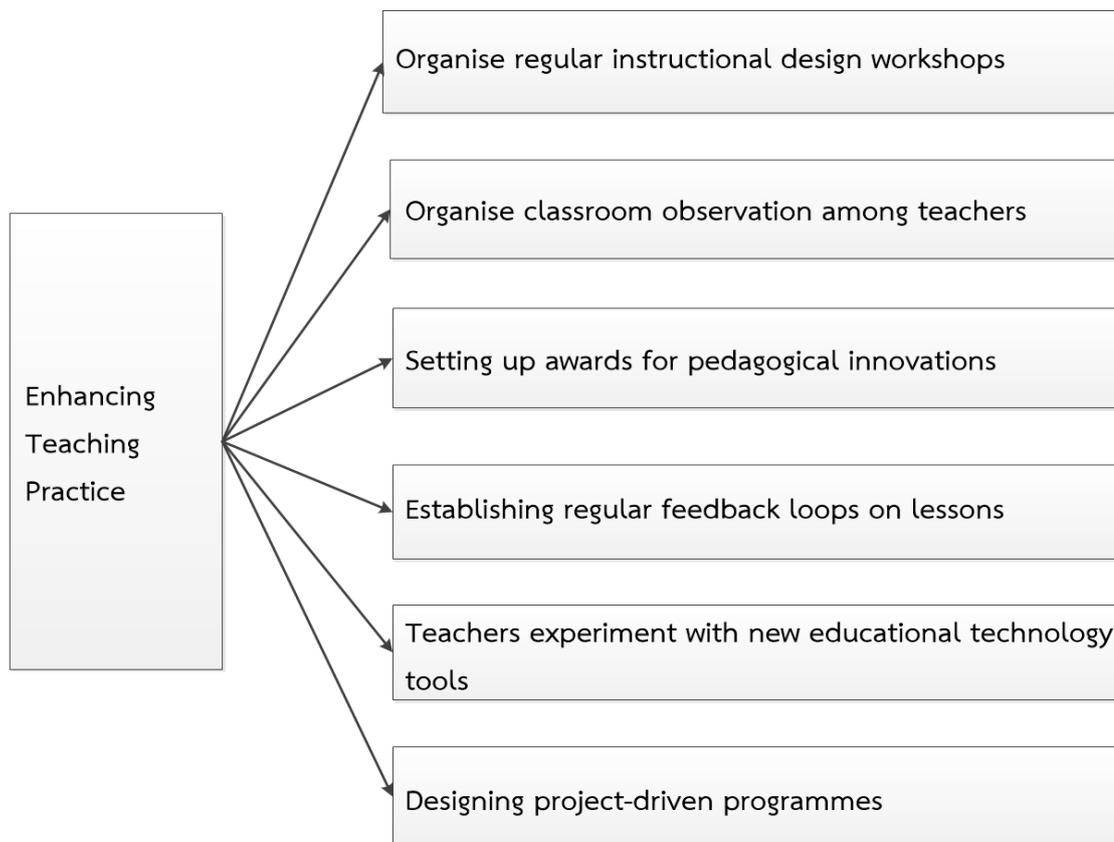


Figure 4.2 Guidelines of Enhancing Teaching Practice

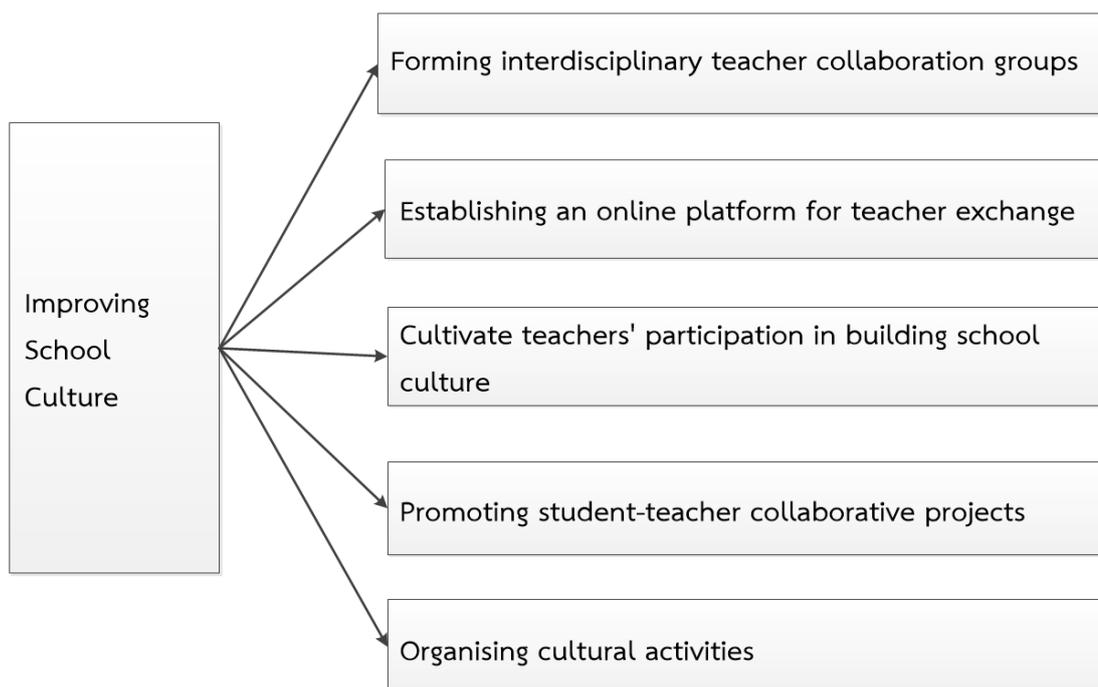


Figure 4.3 Guidelines of Improving School Culture

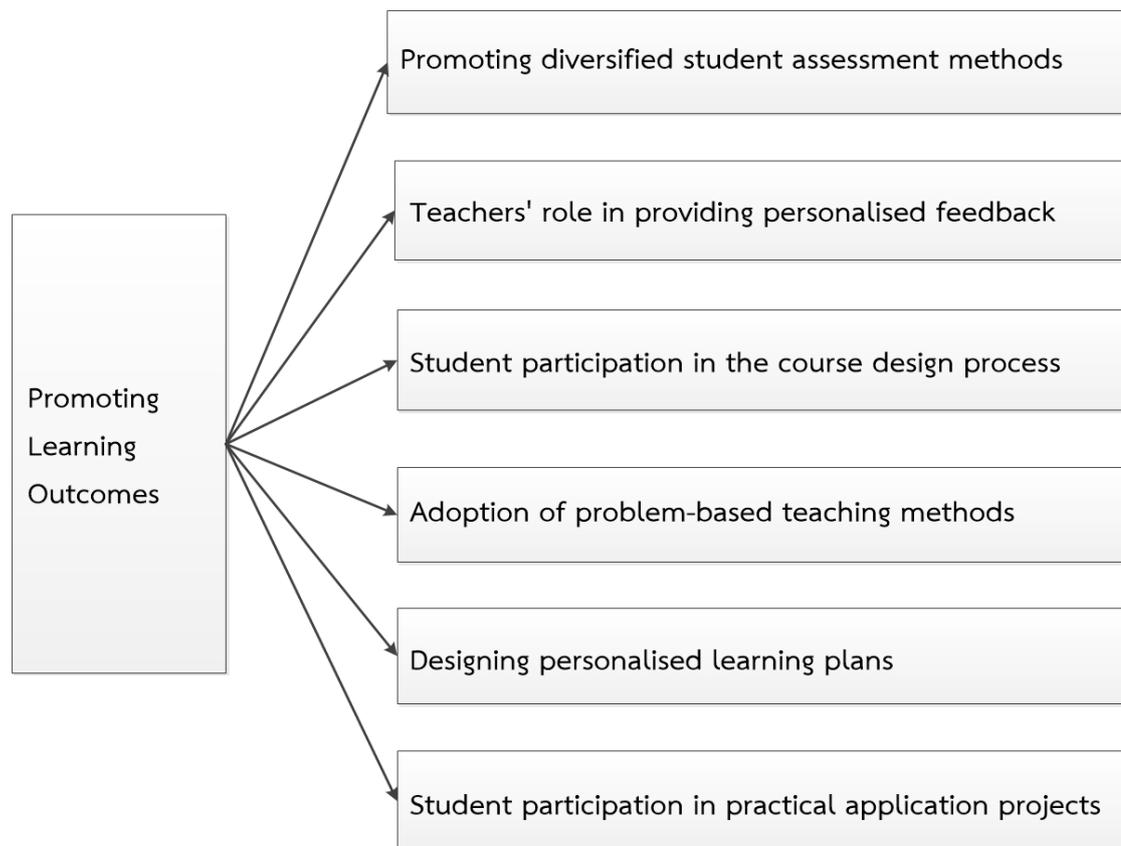


Figure 4.4 Guidelines of Promoting Learning Outcomes

Part IV: Adaptability and Feasibility Evaluation of guidelines of secondary school teachers' instructional leadership in Qingdao

The results of the analyses in this section were evaluated by nine Qingdao secondary school education administrators with senior titles. The evaluation was based on a five-level scale: highest, high, medium, low, and ultra-low. Respondents could only choose one rating.

Table 4.9 List of Evaluation Experts

No.	Title	Post	School
1	Senior	Headmaster	Qingdao Hengxing Senior High School
2	senior	Deputy Principal	Qing Dao Academy
3	senior	Deputy Principal	Qingdao No.2 High School
4	senior	Deputy Principal	Qingdao No.37 School
5	senior	Deputy Principal	Qingdao No.42 School
6	senior	Deputy Principal	Qingdao No.53 School
7	senior	Head of Academic Affairs	Qingdao No.67 High School
8	senior	Head of Academic Affairs	Qingdao No.68 High School
9	senior	Head of Academic Affairs	Qingdao Hongyi Middle School

Table 4.10 Summary Table of Evaluation Data Analysis

Guidelines	Adaptability			Feasibility		
	\bar{X}	SD	Result	\bar{X}	SD	Result
1 Professional Development	4.53	0.53	highest	4.36	0.67	high
2 Teaching practice	4.53	0.53	highest	4.10	0.77	high
3 School culture	4.56	0.64	highest	4.20	0.72	high
4 Learning outcomes	4.66	0.50	highest	4.23	0.67	high
Total	4.57	0.55	highest	4.22	0.71	high

Table 4.10 shows that the mean values of the adaptability were at highest level in four aspects, which Learning outcomes, School culture, Professional Development and Teaching practice and the mean values of the feasibility were at high level. for the four aspects, which Professional Development, Learning outcomes, School culture and Teaching practice.

Table 4.11 Evaluation Data Analysis

Guidelines	Adaptability			Feasibility			
	\bar{X}	SD	level	\bar{X}	SD	level	
Optimising Professional Development							
1	Developing personalised training plans	4.4	0.55	high	4.4	0.55	high
2	Setting up an in-house training resource bank	4.6	0.55	highest	4.2	0.84	high
3	Introduce expert guidance or mentorship	4.4	0.55	high	4.2	0.84	High
4	Establishment of an academic mentorship programme	4.6	0.55	highest	4.6	0.55	highest
5	Interdisciplinary co-operation and exchange	4.8	0.45	highest	4.4	0.71	high
6	Conducting small-scale teaching research projects	4.4	0.55	high	4.4	0.55	high
Enhancing Teaching Practice							
1	Organise regular instructional design workshops	4.4	0.55	high	3.8	0.84	high
2	Organise classroom observation among teachers	4.4	0.55	high	3.8	0.84	high
3	Setting up awards for pedagogical innovations	4.6	0.55	highest	4.2	0.84	high
4	Establishing regular feedback loops on lessons	4.8	0.45	highest	4.6	0.55	highest
5	Teachers experiment with new educational technology tools	4.4	0.55	high	4	0.71	high
6	Designing project-driven programmes	4.6	0.55	highest	4.2	0.84	high

Table 4.11 (Continued)

Guidelines	Adaptability			Feasibility		
	\bar{X}	SD	level	\bar{X}	SD	level
Improving School Culture						
1 Forming interdisciplinary teacher collaboration groups	4.6	0.55	highest	4.4	0.55	high
2 Establishing an online platform for teacher exchange	4.2	0.84	high	3.6	0.89	high
3 Cultivate teachers' participation in building school culture	4.4	0.89	high	3.8	0.84	high
4 Promoting student-teacher collaborative projects	4.8	0.45	highest	4.8	0.45	highest
5 Organising cultural activities	4.8	0.45	highest	4.4	0.89	high
Promoting Learning Outcomes						
1 Promoting diversified student assessment methods	4.6	0.55	highest	3.8	0.84	high
2 Teachers' role in providing personalised feedback	4.8	0.45	highest	4.6	0.55	highest
3 Student participation in the course design process	4.8	0.45	highest	4.6	0.55	highest
4 Adoption of problem-based teaching methods	4.8	0.45	highest	4.6	0.55	highest
5 Designing personalised learning plans	4.6	0.55	highest	4	0.71	high
6 Student participation in practical application projects	4.4	0.55	high	3.8	0.84	high

Table 4.11 shows that the mean values of the adaptability items ranged from 4.20 to 4.80 and the mean values of the feasibility items ranged from 3.60 to 4.80 for the four-factor guide to instructional leadership for secondary school teachers in Qingdao, which are at a high level. This indicates that the development guide has a high level of adaptability and feasibility.

Chapter 5

Discussion Conclusion and Recommendations

Research Objectives

1. To study the current level of instructional leadership of secondary school teachers in Qingdao.
2. To develop the guidelines of instructional leadership of secondary school teachers in Qingdao.
3. To evaluate the adaptability and feasibility of instructional leadership of secondary school teachers in Qingdao.

Combining the evaluation of secondary school teachers' teaching leadership in Qingdao in the four dimensions of professional development, teaching practice, school culture, and learning outcomes and in total, as well as the quantitative analysis of the evaluation indexes of secondary school teachers' teaching leadership, the overall analysis of the situation of secondary school teachers' teaching leadership in Qingdao has been conducted, and based on which, suggestions for improving the teaching leadership of secondary school teachers in Qingdao have been put forward.

The details are as follows.

Conclusion

1. According to the results of the previous statistical analysis, the average score of the total instructional leadership of secondary school teachers in Qingdao is 4.118, which shows that the overall instructional leadership of secondary school teachers is at the upper middle level.

In terms of teaching practice, it shows that secondary school teachers have strong leadership in actual teaching and are able to effectively organize classroom teaching, stimulate students' interest in learning, and achieve teaching goals.

In terms of professional development, secondary school teachers perform better in the development of professional knowledge and skills, and may actively participate in training and seminar activities to continuously improve their teaching skills.

In terms of learning outcomes, secondary school teachers were shown to have some leadership in helping students achieve learning outcomes and may have made some efforts in academic guidance and achievement tracking.

In terms of school culture, this dimension scored the lowest, which may mean that secondary school teachers have more room for improvement in terms of actively passing on school culture and establishing good teacher ethics.

There are differences in secondary school teachers' performance on different leadership dimensions, and these differences can provide valuable feedback to schools and individual teachers, which can help target further teacher training and development programs.

The above terms can be used to assess the performance of secondary school teachers in the area of instructional leadership so that targeted training and support can be provided to facilitate professional development and improve the quality of teaching and learning.

2. According to the second research purpose, the researcher designed the interview outline, and through the summary and analysis of the interview results, established the guidelines for instructional leadership of secondary school teachers in Qingdao. Details are as follows:

Optimising Professional Development: 1) Developing personalised training plans. 2) Setting up an internal training resource bank. 3) Introduce expert guidance or mentorship. 4) Establishment of an academic mentorship programme. 5) Cross-disciplinary co-operation and exchanges. 6) Conducting small-scale teaching research projects.

Enhancing teaching practice: 1) Organise regular instructional design workshops. 2) Organise classroom observations among teachers. 3) Creating awards for teaching innovation. 4) Establishing regular feedback loops for the programme. 5) Teachers experiment with new educational technology tools. 6) Designing project-driven programmes

Improving school culture: 1) Forming interdisciplinary teacher collaboration groups. 2) Establishing an online platform for teacher exchange. 3) Cultivating

teachers' participation in building school culture. 4) Promoting student-teacher collaborative projects. 5) Organising cultural activities

Promoting learning outcomes: 1) Promoting diversified student assessment methods. 2) Teachers' role in providing personalised feedback. 3) Student participation in the course design process. 4) Adoption of problem-based teaching methods. 5) Designing personalised learning plans. 6) Student participation in practical application projects.

3. According to the third research purpose, experts are invited to evaluate the adaptability and feasibility of implementing the instructional leadership of secondary school teachers in Qingdao. The results of data analysis show that the model has highest adaptability and high feasibility, and theoretically plays a positive role in promoting the development of instructional leadership of secondary school teachers in Qingdao.

Discussion

Through the investigation of four variables affecting the of instructional leadership of secondary school teachers in Qingdao, professional development, teaching practice, school culture, learning outcomes, the average and standard values of the four variables are analyzed. The study found that the overall instructional leadership of secondary school teachers is in the upper middle level, but some areas of deficiency need further improvement and enhancement.

Discussion on Professional Development

Inadequate training resources: Participation in professional training or academic seminars scored moderately in the professional development dimension. It reflects the insufficiency of training resources, which limits teachers' professional growth. How to solve the problem of insufficient training resources, and whether training opportunities can be expanded through online training and resource sharing in partner schools.

Difficulties in applying new methods: The low scores on the latest research findings and teaching methods in practical subjects relate to teachers' unfamiliarity with or difficulties in applying new methods. There is a need to explore the specific

barriers teachers face in applying the new methods and how more specific training and guidance can be provided to help them better integrate the new methods.

Time pressure on teachers: Training, attending seminars, etc. takes time and teachers feel pressurised by their teaching commitments. How to optimise time management so that professional development can be better integrated with daily teaching duties without adding extra burdens on teachers.

Inadequate professional development assessment system: How to establish a more comprehensive professional development assessment system so as to accurately measure teachers' professional growth. At the same time, how to translate the assessment results into practical improvement measures to ensure the effectiveness of the assessment.

Insufficient support for pedagogical innovation: Pedagogical innovation is crucial to improving the quality of teaching, but teachers are perplexed by the lack of support and resources for innovation. How to provide teachers with more innovation support, including funding, technology, training, etc., to stimulate their innovation.

Individual Teacher Differences: Every teacher has different needs and learning styles and requires personalised support. How to develop more targeted professional development plans and training programmes to meet the needs of different teachers based on their individual differences.

Challenges of external co-operation and resource integration: There are difficulties in co-operation between schools and other organisations, and problems in resource integration. An in-depth discussion on how to overcome these challenges and build closer partnerships so that teachers can benefit from a wider range of resources.

Through in-depth discussion of the problems, more concrete and practical solutions can be found to provide strong support for teachers' professional development, thereby improving the overall quality of education.

Discussion on Teaching Practice

Practical Application of Diverse Teaching Methods: While teachers scored high on diverse teaching methods and strategies, there is a need to delve deeper into how these methods are being applied in the actual classroom. Whether certain

methods are not being used to full effect and how teachers can make appropriate choices based on student needs and content to ensure better learning experiences and outcomes for students.

Further optimisation of the learning climate: A moderate score means that although the teacher has made some efforts to create a learning climate, there is still room for improvement. Practical practices in classroom management strategies, ways to encourage positive interactions, and providing timely feedback could be discussed in depth to better motivate students to participate and learn.

Challenges and Solutions to Personalised Teaching: Low scores reflect challenges in personalised teaching. In-depth discussion on whether teachers have sufficient knowledge and skills to respond to the needs of diverse students and how to implement personalised teaching within the limited time available. Examples of personalised teaching, practical experience, and ways of providing individual tuition can be explored.

Teaching Evaluation and Feedback Mechanisms: Discuss how to establish more effective teaching evaluation and feedback mechanisms to help teachers better understand the effectiveness of their teaching. Whether specific evaluation criteria exist and how to incorporate student feedback and learning outcomes for teaching reflection and improvement.

Linkage between teachers' professional development and teaching practice: An in-depth examination of the linkage between teachers' professional development and teaching practice. Whether there is an effective professional development plan, whether there are changes reflected in teaching practice, and how to translate the results of professional development into better quality teaching results.

Co-operation and mutual support among teachers: To explore whether there are mechanisms for sharing teaching methods and experiences among teachers, and how to further promote co-operation and mutual support among teachers. The role of sharing successful cases and teaching resources, as well as the establishment of teacher communities can be discussed.

Technology and pedagogical innovations: In-depth discussion on how to integrate technology into teaching practice, the availability of appropriate training and support, as well as challenges and solutions encountered in pedagogical innovations.

Through in-depth discussion of these issues, it is possible to gain a more comprehensive understanding of the problems in the dimension of teaching practice and find practical solutions to enhance teachers' teaching capacity and students' learning experience.

Discussion on School Culture

Sustainability of the learning climate: Although the school scores highly in creating a positive, supportive and co-operative learning climate, there is a need to explore whether this climate can be sustained. Whether there are factors affecting this positive climate, such as staff turnover, external pressures, etc., and how these challenges are being addressed.

Individualisation of resource support: Whilst the school scores moderately well on the provision of teaching and learning resources and support, an in-depth discussion is needed on whether the professional development needs of each teacher have been fully understood. Is there a mechanism in place to identify the specific needs of each teacher and provide support and resources that are customised to the needs.

Barriers to interdisciplinary collaboration: Low scores indicate that the school has barriers to facilitating collaboration and communication among teachers. Discuss further what these barriers are, including barriers between disciplines, poor communication, etc. Also, explore ways to create a more open environment that encourages collaboration.

Leadership roles and cultural influences: High scores are related to the positive role and culture of school leaders. An in-depth discussion of the role that school leaders play in creating this climate and how leadership influences collaboration and communication among teachers.

Teacher engagement and feedback mechanisms: In-depth discussion of whether the school has effective mechanisms for obtaining teacher engagement and

feedback. Are there avenues for teachers to express their views on the school culture and how this feedback is used to continually improve and refine the school culture.

These discussions can lead to a more comprehensive understanding of the problems in the school culture dimension and identify strategies to address them in order to further enhance the school's cultural climate and support systems.

Discussion on learning outcomes

Comprehensiveness of Student Assessment: While teachers scored high on assessing student learning outcomes and progress, the comprehensiveness of assessment needs to be explored in depth. Discuss the presence of assessments that assess the full range of student abilities, including cognitive, affective, and practical application skills, and how these factors are integrated into assessments.

Effectiveness and Implementation of Feedback: Moderate scores indicate that there is room for improvement in the feedback provided by teachers. Discuss whether teacher feedback actually helps students understand what the problem is and can provide specific suggestions for improvement. Explore the need to train teachers to be more effective and actionable in providing feedback.

Impact of teaching on students' overall quality: Low scores are related to the variety of content and methods of teaching. Discuss in depth whether the school focuses on the development of students' overall quality, and how teaching and learning activities can be designed to better develop students' practical application skills, creativity, and so on.

Student engagement and feedback mechanisms: Discuss whether students are sufficiently engaged in the assessment process and their feedback on the dimensions of teaching and learning outcomes. Explore the need for student engagement and feedback mechanisms to better understand students' learning experiences and needs.

Continuous improvement and professional development: An in-depth discussion of whether the school is using the results of the assessment of the learning outcomes dimensions for continuous improvement and the professional development of teachers. Discuss the impact of how assessment results are used to

adjust teaching methods, curriculum design, etc. to improve student learning outcomes and overall quality.

Through above discussion, a more comprehensive understanding of the situation under each dimension can be gained, leading to more specific and targeted improvement plans to help teachers and schools to continuously improve the quality and effectiveness of education. At the same time, this discussion can also help identify potential opportunities and challenges, and provide guidance on the way forward.

Recommendations

Professional Development

In response to teachers' moderate and low ratings on attending professional training or seminars and practicing the latest research findings and teaching methods in their disciplines, here are some suggestions to help teachers further improve their instructional leadership:

Provide diversified professional training opportunities: Schools or educational institutions can provide teachers with more diversified and targeted professional training opportunities. These trainings could cover the latest subject knowledge, teaching methods and educational technologies to meet teachers' learning needs.

Encourage academic exchanges and collaboration: Schools can encourage teachers to actively participate in academic seminars, teaching exchange activities and teacher collaboration groups. By sharing experiences with other teachers and learning from each other, innovation in teaching methods and mutual growth can be fostered.

Provide support for practicing the latest research in the discipline: Schools can establish mechanisms to support teachers in practicing the latest research in the discipline, such as setting up research groups or providing resources for teaching research. At the same time, school management should support and encourage teachers to practice innovative teaching methods in the classroom.

Stimulating teachers' professional development: Schools can set up rewards and incentives to encourage teachers to continuously improve their subject

knowledge and teaching skills. For example, establishing awards for teaching excellence or providing opportunities for further study.

Teacher exchange platform: Establish a teacher exchange platform to facilitate communication and sharing of teaching experience among teachers. Such a platform can be realized online or offline to help teachers learn from each other and grow together.

Teaching observation and reflection: Encourage teachers to engage in mutual observation and reflection so that they can learn from other teachers' good practices and at the same time reflect on and improve their own teaching.

To summarize the above recommendations, schools and management should actively support teachers' professional development and provide diversified and targeted training and learning opportunities. At the same time, teachers should be encouraged to participate in academic exchanges and practise innovative teaching methods, so as to help them enhance their pedagogical leadership and improve the quality of their teaching, and ultimately to promote the all-round development of students' overall quality and learning ability.

Teaching Practice

In view of the fact that teachers scored high in using diverse teaching methods and strategies in teaching, medium in creating a good learning atmosphere, and low in differentiating teaching according to students' needs, the following are some suggestions to help teachers further enhance their instructional leadership:

Enhance differentiated instruction: Schools can provide teachers with professional training and resources to help them understand the learning characteristics and needs of different students and learn to apply differentiated instructional strategies. Teachers can meet students' different learning speeds and styles by flexibly applying different teaching methods, providing individualized learning tasks, and setting up learning groups.

Building a Better Learning Climate: Schools can encourage teachers to actively apply the principles of educational psychology to create a more positive, supportive and cooperative learning climate. Teachers can further enhance the learning climate and motivate students by stimulating their interest in learning,

encouraging students to participate in classroom interactions, and providing positive feedback on learning.

Promote teachers' professional development: Schools can establish regular teaching observation, reflection and exchange mechanisms for teachers to learn from each other and grow together. At the same time, teachers are encouraged to participate in academic seminars, professional training and teaching research activities to continuously improve their teaching skills and teaching methods.

Supporting teachers' innovative practices: School management should encourage teachers to try out new teaching methods and strategies in teaching and support them in carrying out teaching research projects. Provide teachers with space and resources for experimentation and encourage them to make teaching innovations and share their teaching results.

Student participation and feedback: Teachers are encouraged to take the initiative to seek students' feedback and opinions, and to understand students' feelings and needs about teaching. Students' participation and feedback can help teachers better understand students' learning status and make adjustments and improvements accordingly.

By adopting the above improvement measures in a comprehensive manner, teachers can further enhance their abilities in creating a good learning atmosphere and implementing differentiated teaching, thereby raising the overall level of instructional leadership and promoting the overall quality and learning outcomes of students.

School Culture

In response to schools' low scores in emphasizing collaboration and exchange among teachers, as well as moderate scores in providing teaching resources and support to facilitate teachers' professional development, the following are some suggestions to help schools make further improvements:

Establishing a platform for teacher ethics and academic exchange: Schools can establish a regular platform for teacher education and academic exchange to encourage teachers to share their teaching tips and experiences with each other.

Such a platform can promote interaction and exchange among teachers and help them learn and build on each other's strengths.

Encourage collaborative teaching: Schools can promote the model of collaborative teaching so that teachers can work together to design curricula, carry out pedagogical research projects, and work together to solve teaching problems. Such a practice not only facilitates collaboration among teachers, but also helps to improve the quality of teaching.

Provision of teaching resources and training opportunities: Schools can strengthen their support for teachers by providing richer and more diversified teaching resources and training in teaching techniques. This can help teachers better cope with different teaching challenges and enhance their teaching standards.

Formulate teacher development plans: Schools can formulate personalized development plans for each teacher, providing targeted training and development opportunities according to their teaching needs and interests. This can help teachers better plan their professional development and improve their teaching effectiveness.

Establishment of teacher exchange groups: Schools can form teacher exchange groups comprising like-minded teachers for regular exchanges and sharing. Such groups can facilitate exchanges among teachers, help them solve common teaching problems and grow together.

Incentivize cooperation and sharing among teachers: Schools can set up incentives for teacher cooperation to encourage active cooperation and sharing among teachers. This can increase the motivation of teachers to cooperate with each other and enhance the teacher-teacher relationship among them.

By adopting the above improvement measures, schools can further optimize the school culture, promote cooperation and sharing among teachers, and provide more comprehensive support, thus enhancing teachers' job satisfaction and teaching quality. At the same time, schools should continue to monitor and evaluate the effectiveness of the improvement measures, and make continuous improvements and refinements to ensure that the school culture and teachers' professional development make sustained progress.

Learning Outcomes

In response to teachers' low scores on the positive impact of teaching on students' overall quality and learning ability, the following are some suggestions to help teachers further improve their instructional leadership and develop students' overall quality and learning ability:

Establish holistic development goals: Schools and teachers should work together to establish goals for the holistic development of students, including academic achievement, general qualities, and learning competencies. Teachers should focus on developing students' comprehensive qualities such as critical thinking, problem-solving skills, and creativity in the teaching and learning process.

Provide diversified assessment methods: Teachers can try to adopt diversified assessment methods, including project work, group work, oral presentations and other forms, in order to have a more comprehensive understanding of students' comprehensive quality and learning ability. Through diversified assessment methods, students' potentials and strengths can be better identified.

Guiding students to learn independently: Teachers should guide students to develop their ability to learn independently by encouraging them to take the initiative in exploring knowledge and solving problems, as well as fostering students' interest in learning. This will promote active participation and all-round growth of students.

Focus on students' emotional and social development: In addition to academic performance, teachers should focus on students' emotional and social development. Understand the emotional needs of students, establish good teacher-student relationships, and provide students with psychological support and encouragement.

Encourage students to participate in integrated activities: Schools can organize rich and varied integrated activities and encourage students to participate in them, such as social practice, art experience, and science and technology competitions. These comprehensive activities can promote students' overall development and enhance their learning ability.

Establishment of student records: Schools can establish student records to keep track of students' performance in terms of academics, comprehensive quality and learning ability. Through regular assessment and feedback, students' progress and deficiencies can be identified in a timely manner, providing teachers with targeted teaching guidance.

By adopting the above improvement measures in a comprehensive manner, teachers can pay better attention to students' comprehensive quality and learning ability, cultivate students' independent learning ability and comprehensive development, so as to improve the overall impact of teaching on students and help them realize all-round growth. At the same time, schools should provide teachers with appropriate training and support to ensure that they perform better in fostering students' comprehensive quality and learning ability.

Future Researches

1. Longitudinal tracking study: To gain further insight into the development trend of teachers' instructional leadership in secondary schools in Qingdao. Through long-term observation and data collection, we can more accurately assess the changes in teachers' instructional leadership at different stages, and help to formulate more targeted development plans.

2. Cross-regional comparative study: Compare the instructional leadership competence of secondary school teachers in Qingdao with other regions and explore the differences between different regions. This will help to understand the strengths and room for improvement of Qingdao teachers in instructional leadership, and to learn from the experiences of other regions.

3. Association between instructional leadership and students' academic outcomes: To study the relationship between teachers' instructional leadership and students' academic outcomes. By quantitatively analysing the correlation between teachers' instructional leadership and students' academic performance, motivation and other indicators, the potential impact of instructional leadership on student achievement will be revealed.

4. In-depth study of the relationship between instructional leadership and school culture: To address the problem of low scores on the school culture dimension and to explore in depth the interaction between instructional leadership and school culture. Examine how instructional leadership can be promoted by improving school culture and how instructional leadership can positively impact school culture.

5. Research on the Influence Mechanisms of Teacher Instructional Leadership: To explore the influence mechanisms of teacher instructional leadership, and to study in-depth how teachers embody leadership in the teaching process from multiple levels such as cognitive, emotional, and behavioural, and how these leadership behaviours affect students' learning experiences and academic achievements.

6. Construction of a developmental model of teacher instructional leadership: Based on the results of previous studies, a complete developmental model of teacher instructional leadership is constructed, integrating the dimensions of professional development, teaching practice, school culture, and learning outcomes, to provide systematic guidance for the improvement of instructional leadership among secondary school teachers in Qingdao.

In summary, future research can explore the instructional leadership of secondary school teachers in Qingdao from a broader and deeper perspective to further improve the quality of teaching, the professional development of teachers, and the academic achievement of students.

References

- Bailey, J., & Axelrod, R. H. (2001). **Leadership lessons from Mount Rushmore: An interview with James MacGregor Burns.** *The Leadership Quarterly*, 12(1), 113-121.
- Barnett, B. G., Basom, M. R., Yerkes, D. M., & Norris, C. J. (2000). **Cohorts in educational leadership programs: Benefits, difficulties, and the potential for developing school leaders.** *Educational Administration Quarterly*, 36(2), 255-282.
- Borst, J. E. (1994). **Superintendent instructional leadership: Values and administrative control in school districts.** Washington State University.
- Chang, Cun-Chen, Song, Yao-Ting, & Chiu, Hao-Cheng. (2022). **A multilevel mediation study of the effects of teacher collaboration on teachers' self-efficacy in principals' instructional leadership: A discussion of the moderating effect of stage of education.** *Journal of Research in Education Sciences*, 67(4).
- Chen, Chun-geun, & Wang, Hong. (2010). **A review of the development of teacher leadership research in the UK in the last two decades.** *Shanghai Education Research*, (8), 31-33.
- Chen, R.P. (2004). **Principal instructional leadership: Strategies for improving school effectiveness and promoting school change.** *Contemporary Education Science*, (20), 30-32.
- Chen, Yi Jun. (2008). **Analysis of the types of instructional leadership of junior high school teachers: A case study of secondary school teachers in Shanghai.** *Shanghai Education Research*, (1), 33-35.
- Deng Rui. (2020). **Actively exploring the theoretical framework and practical path of school change in the new era Reading John Kotter's Leading Change.** *Shanghai Education* (16), 78-79.
- Ding, Yi-Gu, & Chia-Lin Chen. (2019). **Utilizing Teacher Professional Learning Communities to Enhance Teachers' Professional Capital.** *Taiwan Education Review Monthly*, 8(3), 1-8.
- Du, F.F. (2010). **Teacher leadership: Toward a research agenda.** *Studies in Foreign Education*, 10, 62-67.
- Fullan, M. (1994). **Teacher leadership: A failure to conceptualize.** *Teachers as leaders: Perspectives on the professional development of teachers*, 241-253.
- Fullan, M. (2007). *Leading in a culture of change.* John Wiley & Sons.

- Gilbert, A. D. (2016). **The Framework for 21st Century Learning: A first-rate foundation for music education assessment and teacher evaluation.** *Arts Education Policy Review*, 117(1), 13-18.
- Goleman D. (1999). **What makes a leader?. Clinical laboratory management review :** official publication of the Clinical Laboratory Management Association(3).
- Gronn, P. (2000). **Distributed properties: A new architecture for leadership.** *Educational management & administration*, 28(3), 317-338.
- Guo, Na. (2011). **School-based teacher professional development: An effective way to enhance teachers' instructional leadership.** *Contemporary Education Forum: Teaching and Learning*, (10), 54-55.
- Han, Lai-Kyung. (2012). **A study of teacher leadership in an online environment.** *Education and Career*, (18), 69-71.
- Hargreaves, A., & Fink, D. (2004). **The seven principles of sustainable leadership.** *Educational leadership*, 61(7), 8-13.
- Hsieh, Chuan-Chung, & Wang, Qiong-Man. (2010). **Distributed leadership of elementary school principals and the impact of teachers' organizational citizenship behavior on students' academic performance** (Doctoral dissertation, National Hsinchu University of Education).
- Hu, Y. Q., & Xu, J.. (2010). **Teacher leaders' role orientation and its influencing factors.** *Journal of Science and Education*, (12), 104-105.
- Hunt, A., Adamson, B., Higgs, J., & Harris, L. (1998). **University education and the physiotherapy professional.** *Physiotherapy*, 84(6), 264-273.
- Li, Chongfeng. (2009). **The development of teacher instructional leadership.** *Contemporary Education Science*, 24, 3-7.
- Li, J. (2009). **Research on the connotation of teacher leadership.** *Modern Education Series* (07), 65-70.
- Li, S. (2012). **The basic connotation, characteristics and functions of sense teaching.** *Educational Theory and Practice: Primary and Secondary Education Teaching Edition*, (7), 3-5.
- Li, Shao-Lin, Duan, Q., Zhao, Zhen-Dong, Wang, S. Gen, & Zhou, G. H. (2018). **The practice of informative instructional design in senior Chinese medicine concoction course.** *China Modern Distance Education of Traditional Chinese Medicine*, 16(1), 24-27.
- Lin, H. H. (2006). **New developments in the meaning of instructional leadership.** *Elementary and Middle School Management*, (2), 38-39.

- Liu, C.H. & Luo, L.W. (2015). **A study on the relationship between learning-centered principal leadership and teacher leadership.** *Journal of South China Normal University (Social Science Edition)*(03),62-68.
- Liu, Y., & Koh, G.M. (2015). **Teacher Instructional Leadership: A Perspective on Classroom Teaching Effectiveness in Higher Education.** *Journal of Educational Science, Hunan Normal University*, 1.
- Lu, Xianhua. (2002). **From Instructional Leadership to Curriculum Leadership-An Exploration of Related Issues.** *Curriculum and Instruction*, 5(2), 55-64.
- Ma, Huimei. (2008). **Teachers' instructional leadership behavior and students' development.** *Journal of Yangzhou University: Higher Education Research Edition*, 12(2), 83-86.
- Majida Ahmad Aljaloudi & Ahmad Battah. (2019). **Degree of Availability and Practice of Level 5 Leadership by the Principals of Palestinian Private High Schools Based on Jim Collins Concepts.** *Modern Applied Science*(1). doi:10.5539/mas.v13n1p172.
- Murphy, J. (2007). **Teacher leadership: Barriers and supports.** In *International handbook of school effectiveness and improvement* (pp. 681-706). Dordrecht: Springer Netherlands.
- Nicholas A. Bowman. (2019). **Four Critical Years: Effects of College on Beliefs, Attitudes, and Knowledge by Alexander W. Astin** (review). *Journal of College Student Development*(2).
- Nie Yujing. (2019). **On the Enhancement of Faculty Leadership in Colleges and Universities in Connotative Development[J].** *Heilongjiang Higher Education Research*, 2019,37(03):90-93.
- Nie, Yujing. (2016). **Current status of teacher leadership research in foreign countries.** *Modern Educational Science* (04), 122-126. doi:10.13980/j.cnki.xdjyxx.2016.04.027.
- Niu Fu, & Zhang Hui. (2011). **Teacher Instructional Leadership in Informationalized Teaching and Learning.** In *Proceedings of Conference on Creative Education*. Central China Normal University (pp. 3-6).
- Northouse, P. G. (2021). **Leadership: Theory and practice.** Sage publications.
- Qi, Xuan. (2015). **A Study on the Structure and Enhancement of Teachers' Instructional Leadership.** *Chinese Journal of Education*.
- Rutherford, C. (2006). **Teacher leadership and organizational structure: The implications of restructured leadership in an Edison school.** *Journal of educational change*, 7(1-2), 59-76.

- Sandholtz, J. H. (2000). **Interdisciplinary team teaching as a form of professional development.** *Teacher Education Quarterly*, 39-54.
- Shen, W., & T. C. Sun. (2021). **The history and multiple perspectives of research on Chinese teacher-researchers.** *Journal of East China Normal University (Education Science Edition)*, 39(5), 116.
- Spillane, J. P., Halverson, R., & Diamond, J. B. (2001). **Investigating school leadership practice: A distributed perspective.** *Educational researcher*, 30(3), 23-28.
- Sun, J. (2006). **Action research and teacher professional development.** *Educational Research and Experimentation* (01), 18-20.
- Tan Charlene. (2020). **Revisiting Donald Schöns notion of reflective practice: a Daoist interpretation.** *Reflective Practice*(5).
doi:10.1080/14623943.2020.1805307.
- Thomas D. Cairns, John Hollenback, Robert C. Preziosi & William A. Snow. (1998). **Technical note: a study of Hersey and Blanchards situational leadership theory.** *Leadership & Organization Development Journal*(2).
doi:10.1108/01437739810208692.
- Viczko. (2016). **A Rich Seam: How New Pedagogies Find Deep Learning**, by Michael Fullan and Maria Langworthy. *Leadership and Policy in Schools*(2).
doi:10.1080/15700763.2015.1073331.
- W. James Weese. (1994). **A Leadership Discussion with Dr. Bernard Bass.** *Journal of Sport Management*(3).
- Winston Yu. (2019). **Positive Leadership of Elementary School Principals, Teacher Organizational Citizenship Behavior, and the Relationship between School Effectiveness.** *School Administrators*, (122).
- Wu, Ching-Shan. (2003). **Taiwan: A key concept in school effectiveness.** *Basic Education Reference*, (11), 46-47.
- Wu, Xiaoying, & Zhu, Dequan. (2015). **Dilemmas and breakthroughs in teacher instructional leadership generation.** *Chinese Journal of Education*, 5, 71-75.
- Wu, Y.M. (2008). **Overseas research on teacher leadership in primary and secondary schools and its implications.** *Comparative Education Research*, (8), 52-57.
- Wu, Zong-xiu, & Zhou, Pei-xuan. (2011). **A new species of the genus Pseudococcus (Hymenoptera, Staphylinidae).** (2020). **Re-examining Reddin's Three-Level Leadership Theory: School Leadership Effectiveness in the 108 Curriculum.** *School Administrators*, (126).

- Xiao, Yueqiang & Yuan, Yongxin. (2011). **Research on the construction of teacher leadership in higher education institutions.** *Journal of National College of Education Administration* (04), 66-70.
- Xiao, Yueqiang, & Yuan, Yongxin. (2011). **Research on Teacher Leadership Development in Colleges and Universities.** *Journal of National College of Education Administration*, (4), 66-70.
- Yan, X. L., & Zhao, H. Z. (2006). **The relationship between teaching, research and social service in higher education and its coordination.** *Journal of Liaoning College of Education and Administration*, 23(8), 9-10.
- York-Barr, J., & Duke, K. (2004). **What do we know about teacher leadership? Findings from two decades of scholarship.** *Review of educational research*, 74(3), 255-316.
- Yu, Wen-Cong. (2018). **Role change of teacher leadership and its path exploration.** *Teaching and Management* (18), 48-50.
- Yukl, G. (1989). **Managerial leadership: A review of theory and research.** *Journal of management*, 15(2), 251-289.
- Zhang, T. (2006). **The meaning, function and strategy of instructional leadership.** *Journal of Southwest University for Nationalities: Humanities and Social Sciences*, 27(3), 85-90.
- Zhang, W. Y. & Zhang, S. P. (2013). **A review of the Model Standards for Teacher Leadership in U.S. elementary and secondary schools.** *Educational Science* (06), 83-88.
- Zhao, D., & Ma, X. R. (2016). **Problems and Prospects in Instructional Leadership Research.** *Research on Foreign Education*, 43(9), 60-70.
- Zhao, Yuanke. (2017). **Implications, Dilemmas and Generative Paths of Teacher Instructional Leadership.** *Modern Primary and Secondary Education*, 33(3), 83-85.
- Zhong, Qiaoru, Zhaoyou Guo, & Zhimin Tang. (2017, August). **A study of the relationship between spatial leadership, teacher community functioning, and student learning outcomes among national elementary school principals.** In *Educational Policy Forum* (Vol. 20, No.3).

Appendix

Appendix A

List of Specialists and Letters of Specialists Invitation
for IOC Verification

Appendix A

List of Specialists and Letters of Specialists Invitation for IOC Verification

Name of Experts	Position/Office
Mr. Yang Shuzeng	Professor of Qufu Normal University Doctor of philosophy (Education Management) Discipline leader
Mr. Wang Wei	Professor of Qingdao University Doctor of philosophy (Education Management) Head of Department
Mr. Li Ping	Professor of Shandong Normal University Doctor of philosophy (Education Management) Head of Department

Appendix B
Official Letter



Ref.No. MHESI 0643.14/ ๕๑1

Bansomdejchaopraya Rajabhat University
1061 Itsaraparb Hirunrujee
Thonburi Bangkok 10600

3 July 2023

RE: Invitation to validate research instrument

Dear Professor Dr. Wang Wei

Mr. Huang Yonggang is a graduate student in Doctor of Philosophy Program in Educational Administration of Bansomdejchaopraya Rajabhat University. He is undertaking research entitle "Guideline to development secondary school teachers' teaching leadership in Qingdao"

The thesis adversity committee has considered that you are an expert in this topic. Your recommendations would be useful for further improvement of this research instrument.

With your expertise, we would like to ask your permission to validate the attached research instrument. Would like to avail ourselves of this opportunity to express our sincere thanks and appreciation for your help.

Sincerely,

(Assistant Professor Dr. Kanakorn Sawangcharoen)
Dean of Graduate School

Bansomdejchaopraya Rajabhat University
Tel.+662-473-7000
www.bsru.ac.th
E-mail: grad@bsru.ac.th



Ref.No. MHESI0643.14/ 592

Bansomdejchaopraya Rajabhat University
1061 Itsaraparb Hirunrujee
Thonburi Bangkok 10600

3 July 2023

RE: Invitation to validate research instrument

Dear Professor Dr. Li Ping

Mr. Huang Yonggang is a graduate student in Doctor of Philosophy Program in Educational Administration of Bansomdejchaopraya Rajabhat University. He is undertaking research entitle "Guideline to development secondary school teachers' teaching leadership in Qingdao"

The thesis adversity committee has considered that you are an expert in this topic. Your recommendations would be useful for further improvement of this research instrument.

With your expertise, we would like to ask your permission to validate the attached research instrument. Would like to avail ourselves of this opportunity to express our sincere thanks and appreciation for your help.

Sincerely,

(Assistant Professor Dr.Kanakorn Sawangcharoen)
Dean of Graduate School

Bansomdejchaopraya Rajabhat University
Tel.+662-473-7000
www.bsru.ac.th
E-mail: grad@bsru.ac.th



RefNo. MHESI0643.14/ 513

Bansomdejchaopraya Rajabhat University
1061 Itsaraparb Hirunrujee
Thonburi Bangkok 10600

3 July 2023

RE: Invitation to validate research instrument

Dear Professor Dr. Yang Shuzeng

Mr. Huang Yonggang is a graduate student in Doctor of Philosophy Program in Educational Administration of Bansomdejchaopraya Rajabhat University. He is undertaking research entitle "Guideline to development secondary school teachers' teaching leadership in Qingdao"

The thesis adversity committee has considered that you are an expert in this topic. Your recommendations would be useful for further improvement of this research instrument.

With your expertise, we would like to ask your permission to validate the attached research instrument. Would like to avail ourselves of this opportunity to express our sincere thanks and appreciation for your help.

Sincerely,

(Assistant Professor Dr.Kanakorn Sawangcharoen)
Dean of Graduate School

Bansomdejchaopraya Rajabhat University
Tel.+662-473-7000
www.bsru.ac.th
E-mail: grad@bsru.ac.th

Appendix C
Research Instruments

Questionnaire

Title: Guidelines for development instructional leadership for secondary school teachers in Qingdao

Explanation

1. This questionnaire is about Guidelines for development instructional leadership for secondary school teachers in Qingdao. The objectives of this research were to study the current level of instructional leadership of secondary school teachers in Qingdao, to develop the guidelines of instructional leadership of secondary school teachers in Qingdao, and to evaluate the adaptability and feasibility of instructional leadership of secondary school teachers in Qingdao.

2. The questionnaire was divided into two parts. The first part contained personal information about the respondents and the second part was a 42-question survey on the current status of instructional leadership among secondary school teachers.

3. Please tick \checkmark in the columns that represent your opinion about instructional leadership among secondary school teachers in Qingdao.

Part 1: Basic personal information

1) Your gender ()

Male Female

2) Your teaching experience

0-5 years 5-10 years 10-15 years 15 years or more

3) Grade

Junior high Senior high

4) Your title ()

Not rated Secondary I Secondary II

Secondary III Senior and above

5) Subject taught

Art B.Science Other Subjects

6) Your last education ()

College and below Bachelor Master D.Doctor

Part 2: The following questions are to investigate the instructional leadership of teachers, please tick the options that match your situation

5 express the level of secondary school teachers' instructional leadership were at very high level

4 express the level of secondary school teachers' instructional leadership were at high level

3 express the level of secondary school teachers' instructional leadership were at medium level

2 express the level of secondary school teachers' instructional leadership were at low level

1 express the level of secondary school teachers' instructional leadership were at very low level

Num	Factors influencing of secondary school teachers' instructional leadership in Qingdao	5	4	3	2	1
Professional Development						
1	Continuous improvement of subject knowledge					
2	Continuous improvement of teaching skills					
3	Importance of Teacher Professional Development					
4	Frequency of teachers' participation in professional training or academic seminars					
5	Extent of teachers' participation in professional training or academic seminars					
6	Impact of teachers' professional training or academic seminars on the quality of education					
7	Integration of the latest research results in the discipline					
8	Innovative application of teaching methods					
9	Linkage of teachers' personal and professional development					

Num	Factors influencing of secondary school teachers' instructional leadership in Qingdao	5	4	3	2	1
Teaching Practice						
1	Diverse teaching methods and strategies					
2	Consideration of individual differences					
3	Teaching effectiveness and assessment					
4	Positive classroom climate building					
5	Culture of respect and inclusion					
6	Encouraging and supporting student development					
7	Understanding and analysing students' needs					
8	Application of differentiated instructional strategies					
9	Individualised assessment of learning outcomes					
School Culture						
1	Positive emotional climate building					
2	Academic support and resource provision					
3	Cultivation of co-operation and team atmosphere					
4	Rich teaching resources					
5	Educational training and seminars					
6	Mentoring and feedback mechanism					
7	Shaping of co-operative culture					
8	Establishment of communication platforms					
9	Promotion of interdisciplinary collaboration					

Num	Factors influencing of secondary school teachers' instructional leadership in Qingdao	5	4	3	2	1
Learning Outcomes						
1	Selection of assessment tools and methods					
2	Alignment of learning objectives					
3	Continuous feedback and improvement					
4	Timely feedback provision					
5	Specific feedback content					
6	Guidance on improvement strategies					
7	Comprehensive quality enhancement					
8	Enhancement of learning competencies					
9	Achievement of educational goals					

This is the end of the questionnaire. Thank you again for your participation and wish you all the best!

Mr Huang Yonggang
A doctoral student in Educational administration program
Bansomdejchaopraya Rajabhat University

Qingdao Senior Management Interview Questions

Guidelines for development instructional leadership for secondary school
teachers in Qingdao

This Interview is divided into two parts:

Part 1 : Personal Information

Part 2 : The current level of instructional leadership of secondary school
teachers in Qingdao

Part 1: Personal Information

Interviewer:

Interview Date:

Interview Time:

Interviewee:

Gender;

Age:

years old

Education:

Position:

Work place:

Part 2: The current level of instructional leadership of secondary school teachers in
Qingdao

1. How do you understand and practice teachers' continuous improvement
of subject matter knowledge and teaching skills?

2. How often and to what extent do you participate in professional training
or academic seminars?

3. Can you share some examples of how you have incorporated the latest
research findings and pedagogical approaches in your discipline into your teaching
practice?

4. What diverse teaching methods and strategies do you use in your teaching? Why do you choose them?

5. How do you create a favourable learning atmosphere to promote active participation and learning growth?

6. In terms of differentiated instruction, how do you tailor your teaching methods to the needs of your students?

7. How do you think the school creates a positive, supportive, and collaborative learning climate?

8. How do the teaching resources and supports provided by the school contribute to your professional development?

9. How do you think the school's emphasis on co-operation and communication between teachers impacts on the overall school culture?

10. How do you assess student learning outcomes and progress? What methods are used?

11. How do you provide students with timely and specific feedback to help them improve their learning outcomes?

12. What positive impacts do you think your teaching has had on students' overall quality and ability to learn? Can you share some examples?

Collation of Interviews

Interviewee 1

1. How do you understand and practice teachers' continuous improvement of subject matter knowledge and teaching skills?

I see continuous improvement as a professional responsibility. I regularly read journals, engage in online courses, and attend conferences to stay up-to-date with the latest developments in my field. This enables me to provide accurate and relevant information to my students.

2. How often and to what extent do you participate in professional training or academic seminars?

I participate in at least two professional training sessions or seminars each semester. These opportunities expose me to new teaching techniques, curriculum updates, and networking with other educators.

3. Can you share some examples of how you have incorporated the latest research findings and pedagogical approaches in your discipline into your teaching practice?

In my biology class, I integrated recent research on epigenetics into the curriculum. This enabled students to understand how environmental factors can influence gene expression, making the subject matter more relatable and engaging.

4. What diverse teaching methods and strategies do you use in your teaching? Why do you choose them?

I employ a mix of lectures, group discussions, and hands-on experiments. The variety caters to different learning styles and helps students grasp complex concepts more effectively.

5. How do you create a favourable learning atmosphere to promote active participation and learning growth?

I foster a positive atmosphere by encouraging respectful debates, active participation, and a sense of community in my classroom. This encourages students to share their thoughts without fear of judgment.

6. In terms of differentiated instruction, how do you tailor your teaching methods to the needs of your students?

I identify students' learning preferences through assessments and discussions. For visual learners, I use diagrams and videos, while for kinesthetic learners, I incorporate interactive activities.

8. How do you think the school creates a positive, supportive, and collaborative learning climate?

The school promotes cooperation through group projects and peer evaluations. The open communication between teachers and students, along with supportive administration, cultivates a positive and collaborative environment.

8. How do the teaching resources and supports provided by the school contribute to your professional development?

The school's extensive library, online databases, and regular workshops provide invaluable resources for enhancing my teaching methods and subject knowledge.

9. How do you think the school's emphasis on co-operation and communication between teachers impacts on the overall school culture?

The emphasis on cooperation and communication among teachers fosters an environment where we exchange ideas, share successes, and collectively address challenges. This creates a culture of mutual support and growth.

10. How do you assess student learning outcomes and progress? What methods are used?

I use a combination of quizzes, assignments, presentations, and practical assessments to evaluate students' understanding and progress. This multifaceted approach provides a comprehensive view of their learning journey.

11. How do you provide students with timely and specific feedback to help them improve their learning outcomes?

I provide prompt feedback on assignments and assessments, highlighting strengths and areas for improvement. This detailed feedback assists students in making targeted revisions and enhancing their understanding.

12. What positive impacts do you think your teaching has had on students' overall quality and ability to learn? Can you share some examples?

Many students have developed a deeper appreciation for biology and its applications in real life. One student even pursued a biology-related internship after my class, demonstrating the practical impact of my teaching.

Interviewee 2

1. How do you understand and practice teachers' continuous improvement of subject matter knowledge and teaching skills?

To me, continuous improvement is a lifelong commitment. I regularly read academic journals, engage in online courses, and participate in workshops to stay updated in both my subject matter and teaching methodologies.

2. How often and to what extent do you participate in professional training or academic seminars?

I make it a point to attend at least one professional training session or academic seminar each semester. These opportunities allow me to explore fresh teaching approaches and network with educators from diverse backgrounds.

3. Can you share some examples of how you have incorporated the latest research findings and pedagogical approaches in your discipline into your teaching practice?

In my history class, I incorporated recent research on local historical events into the curriculum. This connected students with their community's history, making the subject more relatable and meaningful.

4. What diverse teaching methods and strategies do you use in your teaching? Why do you choose them?

I employ a mix of lectures, debates, role-playing, and multimedia presentations. Different methods cater to different learning preferences and ensure active engagement.

5. How do you create a favourable learning atmosphere to promote active participation and learning growth?

A positive learning environment is established by promoting open discussions, mutual respect, and a sense of inclusivity. I encourage students to share their opinions and support each other's growth.

6. In terms of differentiated instruction, how do you tailor your teaching methods to the needs of your students?

Through periodic assessments and class interactions, I identify individual learning styles. Visual learners benefit from maps and charts, while auditory learners thrive in debates and discussions.

7. How do you think the school creates a positive, supportive, and collaborative learning climate?

The school nurtures a sense of community through cross-grade mentorship programs and collaborative projects. This sense of belonging fosters a positive and supportive learning atmosphere.

8. How do the teaching resources and supports provided by the school contribute to your professional development?

The school's library and access to digital resources have been instrumental in expanding my teaching materials. Workshops and peer support groups also aid in refining my instructional techniques.

9. How do you think the school's emphasis on co-operation and communication between teachers impacts on the overall school culture?

The school's emphasis on cooperation encourages teachers to share insights, co-create lessons, and collectively contribute to a culture of continuous improvement, which greatly benefits both educators and students.

10. How do you assess student learning outcomes and progress? What methods are used?

I use a combination of quizzes, essays, presentations, and projects to evaluate students' progress. This comprehensive approach assesses their understanding and practical application of knowledge.

11. How do you provide students with timely and specific feedback to help them improve their learning outcomes?

I provide constructive feedback promptly after assessments, highlighting strengths and areas for growth. This empowers students to refine their skills and take ownership of their learning journey.

12. What positive impacts do you think your teaching has had on students' overall quality and ability to learn? Can you share some examples?

Several students have pursued further studies in history or related fields after taking my class. Witnessing their passion and growth is a testament to the impact of effective teaching.

Interviewee 3

1. How do you understand and practice teachers' continuous improvement of subject matter knowledge and teaching skills?

Continuous improvement involves a commitment to staying current in both subject matter and teaching strategies. I dedicate time to reading academic literature, attending webinars, and collaborating with colleagues to enhance my expertise.

2. How often and to what extent do you participate in professional training or academic seminars?

I actively engage in professional development activities, attending workshops, conferences, and online courses around three times per semester. This ensures I remain up-to-date with the latest trends in education.

3. Can you share some examples of how you have incorporated the latest research findings and pedagogical approaches in your discipline into your teaching practice?

In my physics class, I integrated recent research on kinetic energy and its practical applications into the curriculum. This made the subject more relevant and allowed students to see the real-world implications.

4. What diverse teaching methods and strategies do you use in your teaching? Why do you choose them?

I utilize simulations, hands-on experiments, interactive demonstrations, and Socratic questioning. These methods encourage critical thinking and active engagement among students.

5. How do you create a favourable learning atmosphere to promote active participation and learning growth?

I foster a positive atmosphere by encouraging students to voice their opinions without fear of judgment. This sense of psychological safety stimulates discussion and collaborative learning.

6. In terms of differentiated instruction, how do you tailor your teaching methods to the needs of your students?

By understanding each student's learning preferences, I tailor activities and materials. For example, visual learners benefit from diagrams, while kinesthetic learners engage with experiments.

7. How do you think the school creates a positive, supportive, and collaborative learning climate?

The school promotes a culture of respect and collaboration through team projects and joint activities. This inclusive environment encourages students to support one another's growth.

8. How do the teaching resources and supports provided by the school contribute to your professional development?

The school provides access to a variety of teaching resources, including digital libraries and instructional technology tools. These resources empower me to experiment with new methodologies.

9. How do you think the school's emphasis on co-operation and communication between teachers impacts on the overall school culture?

The school's emphasis on cooperation and communication among teachers fosters a community of educators who share best practices and collectively contribute to a positive learning environment.

10. How do you assess student learning outcomes and progress? What methods are used?

I assess learning outcomes through a mix of quizzes, problem-solving tasks, practical demonstrations, and collaborative projects. This multifaceted approach provides a holistic view of students' progress.

11. How do you provide students with timely and specific feedback to help them improve their learning outcomes?

I offer timely feedback on assignments and assessments, focusing on both strengths and areas for growth. This guidance helps students understand their progress and refine their skills.

12. What positive impacts do you think your teaching has had on students' overall quality and ability to learn? Can you share some examples?

Witnessing students' improved problem-solving skills and increased enthusiasm for physics is deeply rewarding. One student's decision to pursue engineering after my class reaffirms the positive impact of effective teaching.

Interviewee 4

1. How do you understand and practice teachers' continuous improvement of subject matter knowledge and teaching skills?

Continuous improvement involves dedicating time to self-study and professional growth. I engage in reading, online courses, and attending subject-specific workshops to enhance both my knowledge and teaching skills.

2. How often and to what extent do you participate in professional training or academic seminars?

I make it a habit to attend at least one professional training session or academic seminar every semester. These opportunities broaden my horizons and expose me to new teaching methodologies.

3. Can you share some examples of how you have incorporated the latest research findings and pedagogical approaches in your discipline into your teaching practice?

In my literature class, I integrated recent research on literary analysis techniques into the curriculum. This allowed students to engage more deeply with the texts and develop critical thinking skills.

4. What diverse teaching methods and strategies do you use in your teaching? Why do you choose them?

I employ a mix of close reading, group discussions, creative writing exercises, and multimedia presentations. This variety ensures that students with different learning preferences can excel.

5. How do you create a favourable learning atmosphere to promote active participation and learning growth?

A positive atmosphere is fostered through open communication, mutual respect, and a sense of community. Students know that their perspectives are valued and are more likely to participate actively.

6. In terms of differentiated instruction, how do you tailor your teaching methods to the needs of your students?

By identifying students' strengths and weaknesses, I adjust my teaching methods. For instance, advanced readers might engage in in-depth analysis, while struggling students receive more guided support.

7. How do you think the school creates a positive, supportive, and collaborative learning climate?

The school actively encourages collaborative projects, student-led initiatives, and supportive peer relationships. This creates an atmosphere where learning is not confined to the classroom.

8. How do the teaching resources and supports provided by the school contribute to your professional development?

The school's library, online databases, and peer networks provide valuable resources for enhancing my teaching approach and deepening my understanding of my subjects.

9. How do you think the school's emphasis on co-operation and communication between teachers impacts on the overall school culture?

The school's emphasis on cooperation enhances the exchange of ideas among teachers. This collaborative environment contributes to the nurturing of a positive and innovative school culture.

10. How do you assess student learning outcomes and progress? What methods are used?

I assess learning outcomes through essays, presentations, and group projects. These methods allow students to demonstrate their understanding and creativity.

11. How do you provide students with timely and specific feedback to help them improve their learning outcomes?

I provide constructive feedback on assignments promptly, highlighting specific areas for improvement and offering guidance on how to enhance their work.

12. What positive impacts do you think your teaching has had on students' overall quality and ability to learn? Can you share some examples?

Witnessing students develop a deeper appreciation for literature and express their ideas more confidently is truly gratifying. One student's transformation from shy to eloquent is a testament to the power of effective teaching.

Interviewee 5

1. How do you understand and practice teachers' continuous improvement of subject matter knowledge and teaching skills?

Continuous improvement means staying informed about the latest developments in my subject and refining my teaching practices. I engage in self-directed learning, attend workshops, and collaborate with colleagues to enhance my expertise.

2. How often and to what extent do you participate in professional training or academic seminars?

I participate in professional training sessions and academic seminars at least twice per semester. These opportunities expose me to new educational techniques and insights that I can implement in my classes.

3. Can you share some examples of how you have incorporated the latest research findings and pedagogical approaches in your discipline into your teaching practice?

In my chemistry class, I incorporated recent research on chemical reactions into hands-on experiments. This allowed students to see the practical applications of theoretical concepts.

4. What diverse teaching methods and strategies do you use in your teaching? Why do you choose them?

I use a combination of lectures, demonstrations, group work, and virtual simulations. This approach caters to diverse learning styles and helps students grasp complex concepts effectively.

5. How do you create a favourable learning atmosphere to promote active participation and learning growth?

A positive atmosphere is nurtured by establishing an environment of trust, where students feel comfortable expressing their thoughts and exploring new ideas without fear of criticism.

6. In terms of differentiated instruction, how do you tailor your teaching methods to the needs of your students?

I assess students' strengths and weaknesses through various assessments and tailor my teaching methods accordingly. Visual aids help visual learners, while interactive discussions engage auditory learners.

7. How do you think the school creates a positive, supportive, and collaborative learning climate?

The school promotes a culture of inclusivity and cooperation through student clubs, collaborative projects, and open communication. This fosters a sense of belonging and mutual support.

8. How do the teaching resources and supports provided by the school contribute to your professional development?

The school provides access to a well-stocked library, online databases, and professional development resources. These tools contribute significantly to my growth as an educator.

9. How do you think the school's emphasis on co-operation and communication between teachers impacts on the overall school culture?

The emphasis on cooperation and communication among teachers promotes the exchange of innovative ideas and strategies. This collaborative environment enriches the overall school culture.

10. How do you assess student learning outcomes and progress? What methods are used?

I assess learning outcomes through a mix of quizzes, practical experiments, projects, and presentations. This comprehensive approach evaluates both theoretical understanding and practical skills.

11. How do you provide students with timely and specific feedback to help them improve their learning outcomes?

I offer timely feedback on assignments and assessments, pinpointing areas for improvement and suggesting ways to enhance their work. This helps students understand their progress and take ownership of their learning.

12. What positive impacts do you think your teaching has had on students' overall quality and ability to learn? Can you share some examples?

I've seen students develop a deep interest in chemistry and take on advanced research projects. Witnessing their growth and enthusiasm for the subject is the most rewarding aspect of my teaching journey.

Interviewee 6

1. How do you understand and practice teachers' continuous improvement of subject matter knowledge and teaching skills?

Continuous improvement is a journey that involves staying curious and open to learning. I actively explore research articles, attend webinars, and engage in professional discussions to enhance my subject knowledge and teaching methods.

2. How often and to what extent do you participate in professional training or academic seminars?

I make it a point to participate in professional training or academic seminars at least once per semester. These opportunities provide fresh insights and help me refine my instructional strategies.

3. Can you share some examples of how you have incorporated the latest research findings and pedagogical approaches in your discipline into your teaching practice?

In my mathematics class, I integrated recent research on problem-solving techniques into the curriculum. This enabled students to approach mathematical challenges from different angles, enhancing their problem-solving skills.

4. What diverse teaching methods and strategies do you use in your teaching? Why do you choose them?

I employ a mix of traditional lectures, interactive problem-solving sessions, collaborative group work, and technology-assisted learning. This variety keeps students engaged and caters to different learning preferences.

5. How do you create a favourable learning atmosphere to promote active participation and learning growth?

A positive learning atmosphere is cultivated by respecting students' opinions, encouraging open dialogue, and celebrating diverse perspectives. This encourages active participation and mutual respect.

6. In terms of differentiated instruction, how do you tailor your teaching methods to the needs of your students?

By understanding students' learning profiles, I adapt my teaching methods. Visual learners benefit from diagrams, while logical thinkers engage in step-by-step problem-solving approaches.

7. How do you think the school creates a positive, supportive, and collaborative learning climate?

The school's emphasis on cooperative projects and inclusive activities creates a culture where students feel valued and supported, contributing to an overall positive learning climate.

8. How do the teaching resources and supports provided by the school contribute to your professional development?

The school offers access to a wealth of teaching resources, including digital tools and library materials. Workshops and professional development sessions also equip me with innovative teaching strategies.

9. How do you think the school's emphasis on co-operation and communication between teachers impacts on the overall school culture?

The school's emphasis on cooperation enhances peer collaboration and fosters a culture where educators share insights and collectively contribute to an environment of growth and excellence.

10. How do you assess student learning outcomes and progress? What methods are used?

I assess learning outcomes through quizzes, problem-solving assessments, project presentations, and discussions. This allows students to demonstrate both their understanding and their ability to apply concepts.

11. How do you provide students with timely and specific feedback to help them improve their learning outcomes?

I provide timely feedback on assignments, highlighting strengths and offering constructive suggestions for improvement. This targeted feedback supports students in refining their skills.

12. What positive impacts do you think your teaching has had on students' overall quality and ability to learn? Can you share some examples?

Observing students' increased confidence in tackling complex mathematical problems and witnessing their achievements in regional mathematics competitions brings immense satisfaction and underscores the impact of effective teaching.

Interviewee 7

1. How do you understand and practice teachers' continuous improvement of subject matter knowledge and teaching skills?

For me, continuous improvement involves a commitment to lifelong learning. I regularly explore educational literature, attend workshops, and engage in discussions with fellow educators to enhance both my subject knowledge and teaching techniques.

2. How often and to what extent do you participate in professional training or academic seminars?

I actively engage in professional training sessions and academic seminars, usually attending two sessions per semester. These experiences provide fresh insights that enrich my teaching approach.

3. Can you share some examples of how you have incorporated the latest research findings and pedagogical approaches in your discipline into your teaching practice?

In my social studies class, I incorporated recent research on global issues into our discussions. This connected theoretical concepts to real-world events, fostering a deeper understanding among students.

4. What diverse teaching methods and strategies do you use in your teaching? Why do you choose them?

I utilize a blend of multimedia presentations, debates, case studies, and experiential activities. This diverse approach caters to different learning styles and encourages critical thinking.

5. How do you create a favourable learning atmosphere to promote active participation and learning growth?

I establish a positive atmosphere by actively encouraging student contributions, respecting diverse viewpoints, and creating a safe space for open discussions.

6. In terms of differentiated instruction, how do you tailor your teaching methods to the needs of your students?

I identify students' learning preferences through assessments and classroom interactions. This helps me tailor activities and materials to better suit their individual needs.

8. How do you think the school creates a positive, supportive, and collaborative learning climate?

The school cultivates a supportive environment through cross-grade collaboration and joint projects. This encourages students to learn from one another and fosters a sense of unity.

8. How do the teaching resources and supports provided by the school contribute to your professional development?

The school provides an array of teaching resources, from a well-stocked library to access to online platforms. These tools contribute significantly to my professional growth.

9. How do you think the school's emphasis on co-operation and communication between teachers impacts on the overall school culture?

The school's emphasis on cooperation among teachers nurtures a culture of knowledge sharing and collaboration. This translates into a more enriching learning experience for both educators and students.

10. How do you assess student learning outcomes and progress? What methods are used?

I assess learning outcomes through class discussions, presentations, essays, and practical applications. This holistic approach evaluates not only understanding but also students' ability to apply knowledge.

11. How do you provide students with timely and specific feedback to help them improve their learning outcomes?

I provide timely and constructive feedback on assignments, pinpointing strengths and suggesting ways for improvement. This empowers students to take ownership of their learning journey.

12. What positive impacts do you think your teaching has had on students' overall quality and ability to learn? Can you share some examples?

Witnessing students develop a passion for social studies and engage in informed discussions about global issues is a true testament to the impact of effective teaching.

Interviewee 8

1. How do you understand and practice teachers' continuous improvement of subject matter knowledge and teaching skills?

Continuous improvement entails staying curious and updated in both subject matter and teaching methodologies. I actively read educational research, attend workshops, and engage in discussions to refine my expertise.

2. How often and to what extent do you participate in professional training or academic seminars?

I participate in professional training sessions and academic seminars around twice per semester. These opportunities expose me to innovative teaching strategies and help me stay current.

3. Can you share some examples of how you have incorporated the latest research findings and pedagogical approaches in your discipline into your teaching practice?

In my geography class, I integrated recent research on environmental sustainability into lessons. This allowed students to connect theoretical concepts to practical applications, fostering a deeper understanding.

4. What diverse teaching methods and strategies do you use in your teaching? Why do you choose them?

I use a blend of lectures, group projects, case studies, and interactive demonstrations. This variety caters to different learning styles and encourages active participation.

5. How do you create a favourable learning atmosphere to promote active participation and learning growth?

I establish a positive atmosphere by encouraging open dialogue, respecting diverse perspectives, and fostering a sense of belonging. This promotes a safe space for students to express themselves.

6. In terms of differentiated instruction, how do you tailor your teaching methods to the needs of your students?

Through assessments and discussions, I identify students' strengths and weaknesses. This enables me to adapt materials and activities to match their learning preferences.

7. How do you think the school creates a positive, supportive, and collaborative learning climate?

The school encourages collaboration through interdisciplinary projects and promotes a culture of respect among students. This contributes to an environment where learning thrives.

8. How do the teaching resources and supports provided by the school contribute to your professional development?

The school's library, online resources, and professional development opportunities greatly enhance my teaching strategies and contribute to my professional growth.

9. How do you think the school's emphasis on co-operation and communication between teachers impacts on the overall school culture?

The school's emphasis on cooperation among teachers fosters an environment where we share ideas, collaborate on projects, and collectively contribute to a culture of excellence.

10. How do you assess student learning outcomes and progress? What methods are used?

I assess learning outcomes through quizzes, projects, class discussions, and presentations. This multifaceted approach provides a comprehensive view of students' understanding.

11. How do you provide students with timely and specific feedback to help them improve their learning outcomes?

I provide constructive feedback on assignments promptly, focusing on strengths and areas for improvement. This supports students in their growth and development.

12. What positive impacts do you think your teaching has had on students' overall quality and ability to learn? Can you share some examples?

Observing students' increased enthusiasm for geography and their ability to apply concepts to real-world scenarios is a testament to the positive impact of effective teaching.

Interviewee 9

1. How do you understand and practice teachers' continuous improvement of subject matter knowledge and teaching skills?

Continuous improvement means staying intellectually curious and dedicated to refining my teaching practices. I consistently explore research literature, engage in online courses, and collaborate with fellow educators to enhance both my subject knowledge and pedagogical skills.

2. How often and to what extent do you participate in professional training or academic seminars?

I actively engage in professional training sessions and academic seminars, attending them around twice per semester. These opportunities offer fresh perspectives and innovative teaching approaches that I can apply in my classes.

3. Can you share some examples of how you have incorporated the latest research findings and pedagogical approaches in your discipline into your teaching practice?

In my music class, I incorporated recent research on music therapy into lessons. This allowed students to see the practical applications of music beyond traditional performance, fostering a deeper appreciation for the subject.

4. What diverse teaching methods and strategies do you use in your teaching? Why do you choose them?

I employ a variety of teaching methods including practical instrument demonstrations, interactive workshops, group performances, and theoretical discussions. This diversity caters to various learning styles and keeps students engaged.

5. How do you create a favourable learning atmosphere to promote active participation and learning growth?

I foster a positive atmosphere by encouraging open communication, valuing every student's unique voice, and creating an inclusive space where creative expression is nurtured.

6. In terms of differentiated instruction, how do you tailor your teaching methods to the needs of your students?

By understanding students' musical preferences and abilities, I tailor my lessons. Visual learners might benefit from music notation analysis, while auditory learners engage with listening exercises.

7. How do you think the school creates a positive, supportive, and collaborative learning climate?

The school promotes a collaborative environment through ensemble performances, music clubs, and cross-grade musical collaborations. This sense of unity contributes to a supportive learning atmosphere.

8. How do the teaching resources and supports provided by the school contribute to your professional development?

The school provides access to a wide range of musical instruments, recording studios, and music theory resources. Workshops and training sessions also enhance my skills as a music educator.

9. How do you think the school's emphasis on co-operation and communication between teachers impacts on the overall school culture?

The school's emphasis on cooperation allows music educators to share innovative teaching strategies and collaborate on musical events. This collective effort enriches the overall school culture.

10. How do you assess student learning outcomes and progress? What methods are used?

I assess learning outcomes through practical performances, written assignments, music theory quizzes, and student-led musical projects. This comprehensive approach evaluates both technical proficiency and creative expression.

11. How do you provide students with timely and specific feedback to help them improve their learning outcomes?

I provide prompt and specific feedback on performances and assignments, highlighting strengths and suggesting areas for improvement. This helps students refine their musical skills and self-expression.

12. What positive impacts do you think your teaching has had on students' overall quality and ability to learn? Can you share some examples?

Witnessing students evolve from novices to confident musicians and watching their performances showcase their growth is the most rewarding aspect of my teaching journey.

Evaluation Form

No.	Guidelines for development instructional leadership for secondary school teachers in Qingdao	adaptability					feasibility				
		5	4	3	2	1	5	4	3	2	1
Optimising Professional Development											
1	Developing personalised training plans										
2	Setting up an in-house training resource bank										
3	Introduce expert guidance or mentorship										
4	Establishment of an academic mentorship programme										
5	Interdisciplinary co-operation and exchange										
6	Conducting small-scale teaching research projects										
Enhancing Teaching practice											
1	Organise regular instructional design workshops										
2	Organise classroom observation among teachers										
3	Setting up awards for pedagogical innovations										
4	Establishing regular feedback loops on lessons										
5	Teachers experiment with new educational technology tools										
6	Designing project-driven programmes										

No.	Guidelines for development instructional leadership for secondary school teachers in Qingdao	adaptability					feasibility				
		5	4	3	2	1	5	4	3	2	1
Improving School culture											
1	Forming interdisciplinary teacher collaboration groups										
2	Establishing an online platform for teacher exchange										
3	Cultivate teachers' participation in building school culture										
4	Promoting student-teacher collaborative projects										
5	Organising cultural activities										
Promoting Learning Outcomes											
1	Promoting diversified student assessment methods										
2	Teachers' role in providing personalised feedback										
3	Student participation in the course design process										
4	Adoption of problem-based teaching methods										
5	Designing personalised learning plans										
6	Student participation in practical application projects										

Appendix D

The Results of the Quality Analysis of Research Instruments

The Quality Analysis Results of Research Instruments

The consistency evaluation results of questionnaire of Survey about the current level of instructional leadership of secondary school teachers in Qingdao.

The result of IOC

Num	Guidelines to development instructional leadership for secondary school teachers in Qingdao	Experts			IOC	Conclusion
		1	2	3		
	Basic personal information					
1	Gender	1	1	1	1	consistent
2	Years of teaching	1	1	1	1	consistent
3	Grade	1	1	1	1	consistent
4	Title	1	1	1	1	consistent
5	Subject	1	1	1	1	consistent
6	Academic qualifications	1	1	1	1	consistent
	Professional Development					
1	Continuous improvement of subject knowledge	1	1	1	1	consistent
2	Continuous improvement of teaching skills	1	1	1	1	consistent
3	Importance of Teacher Professional Development	1	1	1	1	consistent
4	Frequency of teachers' participation in professional training or academic seminars	1	1	1	1	consistent
5	Extent of teachers' participation in professional training or academic seminars	0	1	1	0.67	consistent
6	Impact of teachers' professional training or academic seminars on the quality of education	1	1	1	1	consistent
7	Integration of the latest research results in the discipline	1	1	1	1	consistent
8	Innovative application of teaching methods	1	1	1	1	consistent
9	Linkage of teachers' personal and professional development	1	1	1	1	consistent

Num	Guidelines to development instructional leadership for secondary school teachers in Qingdao	Experts			IOC	Conclusion
		1	2	3		
	Teaching Practice					
1	Diverse teaching methods and strategies	1	1	1	1	consistent
2	Consideration of individual differences	1	1	1	1	consistent
3	Teaching effectiveness and assessment	1	1	1	1	consistent
4	Positive classroom climate building	1	1	1	1	consistent
5	Culture of respect and inclusion	1	1	1	1	consistent
6	Encouraging and supporting student development	1	1	1	1	consistent
7	Understanding and analysing students' needs	1	1	1	1	consistent
8	Application of differentiated instructional strategies	1	1	1	1	consistent
9	Individualised assessment of learning outcomes	1	1	0	0.67	consistent
	School Culture					
1	Positive emotional climate building	1	1	0	0.67	consistent
2	Academic support and resource provision	1	1	1	1	consistent
3	Cultivation of co-operation and team atmosphere	1	1	1	1	consistent
4	Rich teaching resources	1	1	1	1	consistent
5	Educational training and seminars	1	1	1	1	consistent
6	Mentoring and feedback mechanism	1	1	1	1	consistent
7	Shaping of co-operative culture	1	1	1	1	consistent
8	Establishment of communication platforms	1	1	1	1	consistent
9	Promotion of interdisciplinary collaboration	1	1	1	1	consistent
	Learning Outcomes					
1	Selection of assessment tools and methods	1	1	1	1	consistent
2	Alignment of learning objectives	1	1	1	1	consistent
3	Continuous feedback and improvement	1	1	1	1	consistent
4	Timely feedback provision	1	1	1	1	consistent
5	Specific feedback content	1	1	0	0.67	consistent
6	Guidance on improvement strategies	1	1	1	1	consistent

Num	Guidelines to development instructional leadership for secondary school teachers in Qingdao	Experts			IOC	Conclusion
		1	2	3		
7	Comprehensive quality enhancement	1	1	1	1	consistent
8	Enhancement of learning competencies	1	1	1	1	consistent
9	Achievement of educational goals	1	1	1	1	consistent

Reliability and Validity test

Reliability analysis of the questionnaire

Dimension	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Alpha coefficient
Professional Development	0.887	0.854	0.812	0.824	0.865	0.815	0.886	0.865	0.854	0.851
Teaching Practice	0.886	0.865	0.833	0.866	0.841	0.865	0.887	0.853	0.852	0.861
School Culture	0.824	0.813	0.812	0.826	0.821	0.781	0.815	0.824	0.812	0.814
Learning Outcomes	0.866	0.821	0.784	0.867	0.824	0.812	0.824	0.813	0.805	0.824

The reliability analysis of the questionnaire was carried out by SPSS statistical software. Generally speaking, the reliability of the scale is considered to be ideal if the Cronbach's alpha coefficient is above 0.8. The statistical results show that the Cronbach's alpha coefficient of each dimension of the questionnaire is between 0.814-0.851, which is greater than 0.8. This indicates that the reliability of the questionnaire is high and the authenticity and reliability of the data is good.

Validity analysis of the questionnaire

Dimension	F1	F2	F3	F4	F5	F6	F7	F8	F9
Professional Development	0.745	0.603	0.425	0.724	0.618	0.744	0.704	0.635	0.531
Teaching Practice	0.845	0.635	0.533	0.736	0.741	0.732	0.643	0.535	0.553
School Culture	0.643	0.535	0.553	0.739	0.746	0.671	0.845	0.635	0.533
Learning Outcomes	0.704	0.635	0.531	0.685	0.801	0.748	0.745	0.603	0.525

In the factor analysis in the table, the loading values between each question and the factor to which it belongs are observed. A higher loading value indicates a stronger correlation between the question and the dimension it belongs to.

Appendix E
Certificate of English

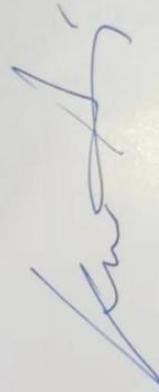
This is to certify that

Mr. Yonggang Huang

Achieved BSRU English Proficiency Test (BSRU-TEP) level

C1

Given on 3rd October 2020



(Assistant Professor Dr Kulsirin Aphiratvoradej)
Director

Appendix F

The Document for Accept Research / Full Paper

Acceptance Letter

Dear Author(s): Huang Yonggang, Nonnadhi Dulyadaweesid, Niran Sutheeniran, Patchara Dechhome

Paper ID	JPT_237
Paper Title	Guidelines for development instructional leadership for secondary school teachers in Qingdao

This is to enlighten you that the above manuscript was reviewed and appraised by the review committee members of the **IFERP** and it is accepted for the purpose of publication in the “**Journal of Propulsion Technology**”.

You have to send the following documents to swathi@iferp.net before 13th October 2023.

- 1. Proof of Registration/Payment - Scanned | Online Received Email**
- 2. IFERP Copyright form <https://www.iferp.in/copyright/>**

Note:

1. The above manuscript will be published on or before 10th November 2023.
2. Author(s) will receive Publication information and Published Paper.
3. You will receive the Volume/ Issue information of your paper very soon.
4. It is mandatory to submit the copyright form before the article gets processed for final publication.

Research Profile

Name-Surname: Huang Yonggang

Birthday: 30 01 1976

Place of Birth: Baoji, Shaanxi, China

Educational background:

- Doctor of Philosophy Program in Educational Administration, Bansomdejchaopraya Rajabhat University, in 2023
- Master of Computer Science and Technology, Ocean University of China, in 2005
- Bachelor of Computers and Applications, Jinan University, in 1998

Work experience:

- Teacher, Qingdao Hengxing Institute of Science and Technology, 2001-2020
- Director, Qingdao Hengxing Senior High School, 2020-

Office Location:

No.58, Wolun Road, Qingdao, Shandong, China

Current Contact Location:

No.58, Wolun Road, Qingdao, Shandong, China