Enhancing Teacher Leadership to Improve Teachers' Job Performance: A Case of Foreign Languages Department, Fundamental Education School (FES), Beijing Polytechnic (BP)

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Ping Zhang[1], Maria Socorro C L Fernando[2]

[1]Corresponding Author, Beijing Polytechnic, China.
E-mail: zhangping@bpi.edu.cn
[2]Lecturer , Graduate School of Business and Advanced Technology Management
Assumption University, Thailand.
E-mail: mlfernando@gmail.com

Abstract

The purpose of this study was to improve teachers' job performance through enhancing teacher leadership with a four-month Organization Development Intervention (ODI) program in Foreign Languages Department, FES, BP. BP is a Vocation Education and Training (VET) college. This study employed mixed research methodology to study the outcomes and effectiveness of ODI program. 32 language teachers participated the program, responded the questionnaire at pre and post ODI stages, and 15 informants out of 32 participants answered interview questions after ODI. The objectives were to assess the current situation of teacher leadership in terms of teacher leadership awareness, teacher leadership knowledge, teacher leadership skills and teacher leadership collaboration; to design appropriated ODI activities and implement; to determine the significant difference of each variable between pre-ODI and post-ODI according to research findings; and to design future training plan based on juxtaposed results. Quantitative results presented significant differences comparing data at pre and post ODI stages in terms of teacher leadership awareness, teacher leadership knowledge, teacher leadership skills, teacher leadership collaboration, and teachers' job performance. Qualitative results provided ODI reflection and deeper insights. Juxtaposed quantitative and qualitative results generated future training plan. Hence, this study concluded that teachers' job performance could be improved through enhancing teacher leadership. Research hypotheses were tested. Implications of this study and recommendations for future training plan were discussed.

Keywords: VET Teacher Leadership, Teachers' Job Performance, Teacher Leadership Awareness, Teacher Leadership Knowledge, Teacher Leadership Skills, Teacher Leadership Collaboration, ODI

Introduction

In China, VET section in higher education is experiencing great development with legislation support at national level. Law and action plan were promulgated in 2022 respectively (MoE, 2022a, 2022b). *Vocational Education Law of the People's Republic of China* was promulgated on May 1st, 2022 which was revised from the version of September 1, 1996. The revised law bridges the higher education with degree program and higher vocational education, offers students better higher education by attending degree program in VET system, guarantees VET teachers' social status, raises the societal acknowledgement towards vocational education, and VET serves industry and technology development by conducting its training function etc. (MoE, 2022b). Teachers are the key factor in VET development, therefore, *The Notice of Action from The General Office of the Ministry of Education on Enhancing Capacity of Vocational Education Teaching Staff* was issued on May 17, 2022 aiming to ensure VET teachers high-quality job performance (MoE, 2022a).

Organization Background and Organizational Diagnosis

The research organization of this study, FES BP, initiated *Talent Reinforcement Strategy* to improve teachers' job performance. The focal organization, FES, as one of the schools of BP, found their teachers' job performance were lower than BP's expectation according to annual evaluation at college level comparison. To align with BP's *Strategy* and to improve FES teachers' job performance, FES conducted organizational diagnosis with SWOT and interview.

SWOT Analysis of FES

Polat et al. (2019) used SWOT to analyze the characteristics of different generations in education, which provides a diagnosis tool for this study as shown in Table 1.

Table 1

SWOT analysis on Fundamental Education School (FES)

SWOT Analysis of FES	
Opportunities	**Strengths**
- Law and Action Plan were promulgated at national level for VET teachers' identification recognition and performance. - BP initiates *Talent Reinforcement Strategy* to enhance quality teaching and learning through updating teachers' knowledge and upskilling their teaching competence.	- FES has more full-time teachers than any other schools - FES teachers are in the hope of upgrading knowledge and skills. - Relatively more percentage of young teachers than senior teachers, therefore, it is easier to learn updated and advanced knowledge, to get innovative, and more chances to get mutual improvement. - FES teachers are teaching at all schools in BP so there are more chances for them to learn from other counterpart teachers from other disciplines. - FES teachers realize the need of collaboration.
Threats	**Weaknesses**
- VET teachers' relative low recognition in terms of teaching achievement in Beijing Municipal Education	- Lack of proactive awareness both inside and outside classroom.

SWOT Analysis of FES	
Committee (BMEC) annual report (BJGOV, 2022). - Relative lower evaluation of quality teaching from perspective of parents and lower societal acknowledgement (Xiang-rong et al., 2021). - Relative lower contribution to BP success regarding teaching and learning outcome, and team academic achievement comparing with that of other schools.	- Lack of knowledge of VET, 1+X, apprenticeship, and practice in workplaces. - Lack of balance of training between BP offer and teachers' needs. - Clear disciplinary or department boundary. - Lack of collaboration between FES teachers and teachers from other schools, and trainers from enterprises.

Analysis of FES teachers' interview

To generate further organizational diagnosis result, eight teachers from FES different departments were interviewed and the following problems were found out.

Firstly, teachers interviewed think that only those who hold an official position can be leaders. However, teachers do their instruction job with a strong sense of responsibility. Secondly, almost all teachers talked about their desire for professional development and instructional improvement to keep step with the national VET reform requirements. Thirdly, one novice teacher thinks what she needs most at the current moment is guidance from veteran teachers especially how to deliver subject knowledge and how to set and maintain classroom discipline. While one veteran teacher thinks he lacks teaching skills using modern technology aid and online teaching over past three years made it more urgent. Fourthly, as FES teachers are less likely to collaborate with teachers in other schools and employees from enterprises which may cause a lack of update technology knowledge and modern skills in majors related teaching and learning.

Research Problem

Based on organization diagnosis results, it was found that the barrier of improving FES teachers' job performance was low level teacher leadership in terms of teacher leadership awareness, teacher leadership knowledge, teacher leadership skills, and teacher leadership collaboration.

Research Objectives

1. To analyze the current situation and needs for change of FES teacher leadership awareness, teacher leadership knowledge, teacher leadership skills, teacher leadership collaboration, teacher leadership, and teachers job performance

2. To design and implement ODI plan based on the current situation from organization diagnosis

3. To determine the significant relationship between teacher leadership awareness, knowledge, skills, & collaboration, and teacher leadership

4. To determine the significant relationship between teacher leadership and teachers' job performance.

5. To determine the significant difference between pre and post ODI of teacher leadership awareness, teacher leadership knowledge, teacher leadership skills, teacher leadership collaboration, teacher leadership, and teachers job performance

6. To gain the insights using qualitative data between pre and post ODI

7. To design a training plan based on the juxtaposed quantitative and qualitative mixed method research findings.

Significance of the Study

This case study provided opportunity for the researcher to put theories into practice, increased ODI participants' knowledge of teacher leadership and their influence towards others around them, set a pilot study to help FES improve teachers' job performance aligning BP's *Talent Reinforcement Strategy*, and provided one more example for other schools in imparting teacher leadership in teaching and learning practice because FES teachers conduct teaching in every building in BP.

Literature Review

Literature review in this section includes theories and practice of teacher leadership, teacher leadership awareness, teacher leadership knowledge, teacher leadership skills, teacher leadership collaboration, and the relationship research or practice between teacher leadership and teachers' job performance.
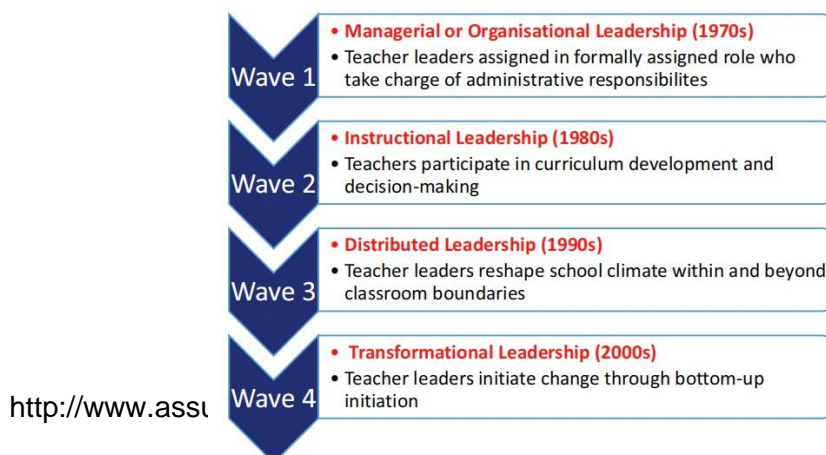
Teacher Leadership (TL)

Teacher leadership, an umbrella term, is a wide variety of work at multiple levels in educational systems, including work with students, colleagues, and administrators and work that is focused on instructional, professional, and organizational development. Teacher leadership is "the process by which teachers, individually or collectively, influence their colleagues, principals, and other members of school communities to improve teaching and learning, practices with the aim of increased student learning and achievement. Such leadership work involves three intentional development foci: individual development, collaboration or team development, and organizational development" (York-Barr & Duke, 2004).

In this study, teacher leadership is "… *a collaborative process which is initiated, organized, and led by teachers with the exclusive purpose to improve teaching practice and learning outcomes through involving all other teachers and stakeholders*" (Pang & Miao, 2017) focusing more on teacher leaders' instructional leadership with VET characteristics based on sub-variables like teacher leadership awareness, knowledge, skills, and collaboration.

Teacher leadership has been developing, during which three waves of teacher leadership development have been discussed (Jingkun et al., 2020; Ng, 2022; Pounder, 2006; Silva et al., 2000). Ng (2022) gives a figure which illustrates the development with the timeline of four waves of teacher leadership (Fig 1).

Figure 1

Four waves of teacher leadership development Ng (2022)

In Chinese context, York-Barr and Duke (2004)'s definition is widely adopted (Chen, 2022), but Pang and Miao (2017) defined teacher leadership according to the case of Shanghai Success by considering the tradition and characteristics of Chinese education. It was said "*Teacher leadership is a collaborative process which is initiated, organized, and led by teachers with the exclusive purpose to improve teaching practice and learning outcomes through involving all other teachers and stakeholders*" (Pang & Miao, 2017). There are some points which deserve attention in their article. First, teacher leadership is a process, a medium, an agent. Second, this collaboration happens between teachers and stakeholders. Third, it is a collaboration process rather than individual. Fourth, teachers, all teachers, exert leadership. Fifth, the outcomes focus on teaching and learning which is teachers' job responsibility and performance purpose which means teachers need to keep updating pedagogical knowledge and honing instructional skills (Pang & Miao, 2017).

Teacher leadership is supported by transformational leadership theory in this study. Comparing with three dimensions of transformational leadership (setting directions, developing people, and building collaboration) and considering Chinese context, there are some research gaps on teacher leadership: First, very limited literatures on teacher leadership are written in Chinese, which is a barrier for teacher leadership knowledge spreading and awareness update; Second, apart from subject and professional knowledge, teachers need to update teacher leadership knowledge especially what teacher leaders do to improve job performance by fulfilling their daily job activities; Third, teacher leadership in practice needs to strengthen job embedded collaboration to align with national VET reform; Fourth, limited leadership practice case studies in VET, especially from China (Wang et al., 2022). To sum up, under the circumstance of VET reform in China, teacher leadership has a role that needs to conducted by teacher leaders with capacity with demands (Mahmudah et al., 2023) of transformation teacher leadership through teacher-driven model (Angelle & DeHart, 2016) in terms of raising awareness, updating professional and leadership knowledge and skills, building collaborative culture in team and organization to sustainably improve teachers' job performance.

Teacher Leadership Awareness (TLA)

Lambert (2003) wrote awareness as "…teachers owning a sense of purpose in their profession which elevates them into leadership as they define instructional problems and seek ways to remedy them". Katzenmeyer and Moller (2009) explained teachers' awareness as teacher leaders within and beyond the classroom, which is a feeling of one's own towards people and environment and also an impact on others. To raise an individual's teacher leadership awareness and recognition that their colleagues are teacher leaders, they developed an instrument to measure readiness for teacher leadership. There is a growing agreement among scholars: raise the teacher leadership awareness and build the common point that teacher leadership is a mindset, a stance, a way of thinking and being, rather than an unchangeable principal-oriented leadership (Alegado, 2018; Cherkowski, 2018; Hunzicker, 2017; Jacobs et al., 2016).

In this study, Teacher Leadership Awareness (TLA) refers to teachers are mindful of their roles in VET teaching and learning as a teacher leader. Specifically, they need to raise their consciousness that they are responsible to be leaders and to parallel their attitude, values, and beliefs to Teacher Leadership (TL).

Teacher leadership awareness in this study is supported by transformation leadership theory which is change-oriented (Toprak, 2020) and has positive impact on inspiring people in organization to act towards shared vision and objective based on needs and goals of current organization (Trigueros et al., 2020). In higher education context, Jingkun et al. (2020) confirmed transformational teacher leadership validity and effectiveness. Transformational leadership become more often the focus or research interest in schools and transformational leadership is the most suitable one within the school conditions (Jovanovica & Ciricb, 2016). To raise teacher leadership awareness, teachers need to overcome "I am just a teacher" syndrome (Helterbran, 2010) and Ghamrawi (2010) reiterated that no teacher should be left behind.

In former researches, there are related frameworks illustrating relationship between awareness, teacher leadership, and job performance. For example, Katzenmeyer and Moller (2009) illustrated the way to awaken teachers' awareness of teacher leadership starting with personal assessment (who am I?) with changing schools (where am I?) and influencing strategies (how do I lead?) followed. Self-assessment instrument measures a teacher leader's self-awareness.

Teacher Leadership Knowledge (TLK)

Neumann et al. (2012) outlined a framework of teacher leadership knowledge: professional knowledge, pedagogical content knowledge, and political knowledge. Political knowledge was presented from the perspective of teacher as leader. Lieberman et al. (2016) introduced teacher leadership knowledge aspects: knowledge of subject matter, pedagogy, organization, and the context in which teacher leaders are. Gess-Newsome et al. (2019) identified six elements of teacher leadership knowledge: facilitate in instructional and students learning, demonstrate leadership attribute & skills, involve in organization development, fostering collaborative culture, improve outreach and collaboration with community & other constituents, and making exemplary contribution towards becoming referral leader.

In this study, Teacher Leadership Knowledge refers to understanding of VET requirements for teachers, instruction inside classroom and beyond, and individual leadership development.

Related research frameworks are presented with models, aspects, or domains, etc. For example, Dibba and Padzil (2016) listed teacher leadership knowledge domains including: first, knowledge of improvements in instruction and student learning; second, knowledge of modeling leadership attributes and skills; third, knowledge of organizational development; fourth, knowledge of collaborative culture; fifth, knowledge of collaboration with communities and knowledge of referral leader.

In the book entitled *Every Teacher a Leader: Developing the Needed Dispositions,*

Knowledge, and Skills for Teacher Leadership, teacher leadership knowledge has two parts, self-knowledge and additional knowledge. Self-knowledge includes the importance of identifying one's beliefs through personal theorizing process, the importance of learning how to think metacognitively as a teacher leader, and information about the needs of adult learners and generational differences within today's teaching force. Additional knowledge focuses on understanding educational policy, systems thinking, school as organizations, change theory, and the importance of school culture and school climate (Levin & Schrum, 2016).

Teacher Leadership Skills (TLS)

Skills are what leaders can accomplish. Leadership skills are defined as the ability to use knowledge and competencies to accomplish a set of goals or objectives (Northouse, 2021).

In this study, teacher leadership skills are instructional and pedagogical skills to impart pedagogical knowledge to students to improve teaching and learning simultaneously, and teacher leadership skills are also organizational skills to communicate with peers and other stakeholders.

Teacher leadership skills in this study is supported by Three-Skill Approach which includes technical skills, human skills, and conceptual skills. Leaders can acquire these three leadership skills and develop them through training (Northouse, 2021).

Former researches presented frameworks to justify the relationship between leadership skills, teacher leadership, and job performance. For example, to justify the importance of teacher leadership skills in classroom and to explore the in-depth concept of classroom teacher leadership and the relationship between teacher leadership skills and student performance & achievement, a synthesis of educational literatures was used through analyzing theoretical background of teacher leadership, development of teacher leadership skills, teacher leaders in the classroom, and making a difference by leading. Teachers with leadership skills can be role models, a facilitator, and a mediator in classroom. The result shows that students taught by skillful teacher leaders are most likely to have academic success (Warren, 2021).

Teacher Leadership Collaboration (TLC)

York-Barr and Duke (2004) said that collaboration is primary means by which teacher leaders influence others. Nguyen et al. (2020) pointed out that collaboration refers to peer collaboration such as meeting of professional learning communities, and informal interactions such as daily work interactions, ideas sharing and communications with other teachers.

In this study, firstly, collaboration among colleagues refers to instructional team work on curriculum, teaching plan, and peer classroom observation, teaching and learning evaluation, etc. to improve instructional performance. Secondly, collaboration broadens its scope because of VET reform in which T stands for training and it means teachers in VET need to collaborate in the workplace with all stakeholders within and beyond their own college.

Teacher leadership collaboration is supported by Professional Learning Communities (PLC) theory which is "… something where teachers inquired into how to improve their practice together and took collective responsibility for implementing what they discovered" (Hargreaves, 2019). The goal of researching PLC is to develop teachers' professionalism and the implementation to make changes. Professional Learning Communities (PLC) is based on the idea that teachers' development in learning occurs through collaboration with shared values

(Andreasen & Duch, 2020).

There are examples in practice to improve teachers' job performance by raising collaboration (Alsaleh, 2021; Datnow, 2018; Durksen et al., 2017; Fulmer et al., 2018; Mora-Ruano et al., 2021; Nguyen & Ng, 2020; Shih-Hsiung et al., 2015; Yin & Zheng, 2018). (Nurkartika & Hartini, 2021) used a descriptive approach to conclude domains which play important roles in Professional Learning Communities (PLC) on teacher leadership in qualitative research. Their descriptive research was conducted through interviews and observation. From the perspective of the role collaboration plays in teacher leadership development, it concluded teacher leadership develops through five dimensions: shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, and supportive conditions (Nurkartika & Hartini, 2021).

**Teachers Job Performance (TJP)**

Teacher performance is teachers' effort to realize their abilities in terms of attitudes, knowledge, and skills in plan, implementation, learning evaluation, and following up on effective and efficient learning evaluation results to get maximum learning outcomes (Kurniasari et al., 2019).

In this study, teachers' job performance is aligned with teacher job performance standards of Saleem et al. (2020) which refers to five Key Performance Indicators (KPIs): teaching planning, classroom organization, monitoring and evaluation, classroom atmosphere and discipline, and teacher leadership which is a self-evaluation pre-ODI and post-ODI by participants themselves through filling in the questionnaire.

Teacher leadership has impact on teachers' job performance at many levels and therefore promote outcomes at corresponding levels. Schott et al. (2020) presented a multi-level conceptual framework from existing literature highlighting three observations: 1) the antecedents of teacher leadership occur at three levels, and the effects of teacher leadership could occur at four levels 2) teacher leadership outcomes can be categorized by literatures 3) teachers are not the only one who benefit from teacher leadership, but also others including students, school or beyond school level.

Conceptual Framework

Based on literature review, this study developed a conceptual framework (Fig 2) with Teacher Leadership Awareness, Teacher Leadership Knowledge, Teacher Leadership Skills, and Teacher Leadership Collaboration as independent variables, Teacher Leadership as Intervening variable, and Teacher Job Performance as dependent variable.

Figure 2

Conceptual Framework
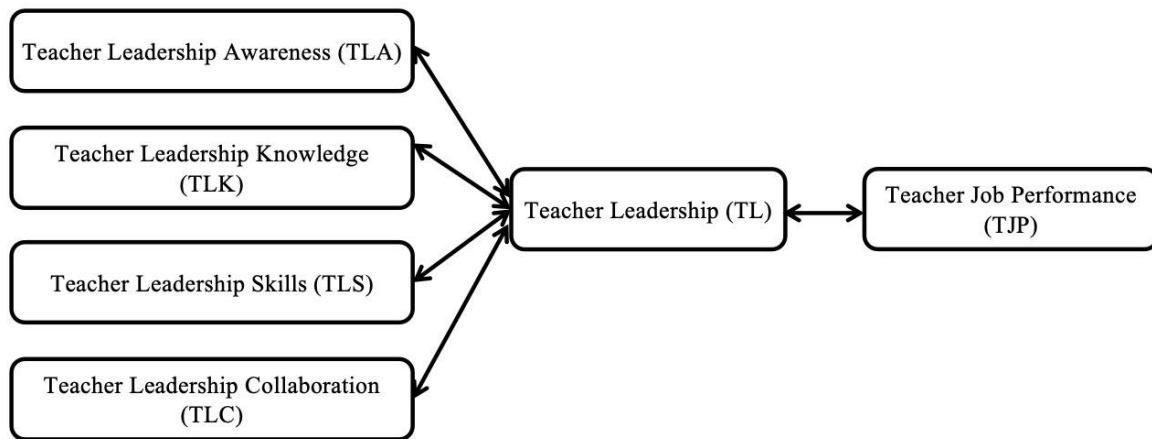
Research Methodology

This section presents research hypotheses, research design, research sampling, research instruments, data collection, and data analysis process.

Research Hypotheses

H1o: There is no significant relationship between teacher leadership awareness, teacher leadership knowledge, teacher leadership skills, teacher leadership collaboration, teacher leadership, and teacher job performance.

H1a: There is a significant relationship between teacher leadership awareness, teacher leadership knowledge, teacher leadership skills, teacher leadership collaboration, teacher leadership, and teacher job performance.

H2o: There is no significant difference in teacher leadership awareness at pre and post ODI stages.

H2a: There is a significant difference in teacher leadership awareness at pre and post ODI stages.

H3o: There is no significant difference in teacher leadership knowledge at pre and post ODI stages.

H3a: There is a significant difference in teacher leadership knowledge at pre and post ODI stages.

H4o: There is no significant difference in teacher leadership skills at pre and post ODI stages.

H4a: There is a significant difference in teacher leadership skills at pre and post ODI stages.

H5o: There is no significant difference in teacher leadership collaboration at pre and post ODI stages.

H5a: There is a significant difference in teacher leadership collaboration at pre and post ODI stages.

H6o: There is no significant difference in teachers' job performance at pre and post ODI stages.

H6a: There is a significant difference in teachers' job performance at pre and post ODI stages.

Research Design

This is a mixed method study aiming to examine the impact of teacher leadership awareness, teacher leadership knowledge, teacher leadership skills, teacher leadership collaboration on teachers' job performance with teacher leadership as intervening variable. 32 ODI participants completed both pre and post ODI surveys which include the same items on variables of this study. 15 informants answered interview questions. The mixed method of quantitative and qualitative research was designed as follows.

At pre-ODI stage, questionnaire survey was distributed in order to collect quantitative data.

At ODI stage, intervention activities such as training, workshop, lecture, and interview were conducted.

At post-ODI stage, questionnaire survey was done for post-ODI quantitative data collection; interviews questions were answered for post-PDI qualitative data collection. Then, quantitative and qualitative juxtaposed data were analyzed for recommendation.

Research Population

This study adopted random sampling approach in Foreign Languages Department, FES, BP. All 32 teachers participated in this research, join ODI activities, responded questionnaires at pre and post ODI stages. The demographic profile of this focal organization is shown in Table 2. 15 teachers who would like to share reflections of participating ODI and in-depth communication answered interview questions for qualitative part.

Table 2

Demographic Profile of ODI Participants

Gender	N of Participants	Percentage
Male	3	9.4%
Female	29	90.6%
Age	**N of Participants**	**Percentage**
30-35	8	25%
36-40	2	6.3%
41-45	7	21.9%
46-50	6	18.8%
51-55	9	28%
Working Years	**N of Participants**	**Percentage**
5-10	8	25%
11-15	1	3.1%
16-20	5	15.6%
21-25	7	21.9%

26-30	7	21.9%
Over 30	4	12.5%
Degree of Education	**Nof Participants**	**Percentage**
Bachelor	4	12.5%
Master	27	84.4%
Degree of Education	**Nof Participants**	**Percentage**
Doctor	1	3.1%
Total	**32**	**100%**

Research Instruments

The quantitative research instrument was a 5-point Likert Scale questionnaire with six scales. The scales are Teacher Leadership Awareness (TLA), Teacher Leadership Knowledge (TLK), Teacher Leadership Skills (TLS), Teacher Leadership Collaboration (TLC), Teacher Leadership (TL), and Teachers' Job Performance (TJP). When developing these scales, 1) Teacher Leadership Self-Assessment (TLSA) scale from Katzenmeyer and Moller (2009) was referred to and 8 scale items were generated on TLA; 2) TLK scale developed 6 items by adopting Knowledge Teacher Leaders Need to Know and More (Levin & Schrum, 2016) and Questionnaire of Teacher Leadership Skills Framework (CSTP, 2018); 3)TLS scale generated 6 items based on contributions from Questionnaire of Teacher Leadership Skills Framework (CSTP, 2018) and Skills for Teacher Leaders (Levin & Schrum, 2016); 4) TLC scale had 7 items through referring to Resource 19 Collaboration and Climate Survey (Gabriel, 2005) and Questionnaire of Teacher Leadership Skills Framework (CSTP, 2018); 5) TL scale had 5 items by referring to Questionnaire Part: Teacher Leadership (Saleem et al., 2020); 6) TJP had 5 items based on Key Performance Indicators (Saleem et al., 2020).

The qualitative research instrument was semi-structured interview questions at post-ODI stage. 15 informants answered interview questions after ODI. Table 3 shows the interview question outline.

Table 3

Interview Question Outline

Variable	Interview Question
Teacher Leadership Awareness (TLA)	To what extent, do you think teacher leadership closely relates to teachers' daily job responsibilities?
Teacher Leadership Knowledge (TLK) & Teacher Leadership Skills (TLS)	How do you think your professionalism and skills will help you to exert teacher leadership?
Teacher Leadership Collaboration (TLC)	How do you collaborate with peers in terms of teaching, learning, scientific research or school-enterprise collaboration?
Teachers' Job Performance (TJP)	To what extent, do you think teacher leadership will improve teacher job performance?
ODI reflection and future plan	What's your professional development plan in the following three years?

Reliability and Validity of Research Instrument

To test the validity of research instrument in this study, the researcher invited 5 Organization Development (OD) experts to test validity by evaluating each scale item with

Index Objective congruence (IOC).

The IOC results showed validity with average score no less than 0.66 from five experts. In this way, those items whose score is less than 0.66 were removed. Final structure of questionnaire scale items is presented in Table 4.

Table 4

Final structure of questionnaire scale items

Variable	Scale items before IOC	Scale items after IOC	Result
Teacher Leadership Awareness (TLA)	8	8	Keep
Teacher Leadership Knowledge (TLK)	6	5	Remove 1
Teacher Leadership Skills (TLS)	6	4	Remove 2
Teacher Leadership Collaboration (TLC)	7	5	Remove 2
Teacher Leadership (TL)	5	4	Remove 1
Teacher Job Performance (TJP)	5	5	Keep

Table 4 presents the test process with numbers change of scale items before and after IOC, and shows the results of each scale. The validity was tested.

To test reliability, researcher of this study distributed the questionnaire instrument to 30 teachers from different departments in FES. Reliability was test by Cronbach's alpha which is acceptable with no less than 0.7. Table 5 shows the results of Cronbach's alpha and interpretation.

Table 5

Reliability results

Scale	N of reliability participants	N of items	Cronbach's alpha	Interpretation
Teacher Leadership Awareness (TLA)	30	8	.828	Good
Teacher Leadership Knowledge (TLK)	30	5	.717	Good and Acceptable
Teacher Leadership Skills (TLS)	30	4	.721	Good and Acceptable
Teacher Leadership Collaboration (TLC)	30	5	.723	Good and Acceptable
Teacher Leadership (TL)	30	4	.733	Good and Acceptable
Teachers' Job Performance (TJP)	30	5	.780	Good and Acceptable

Table 5 shows the interpretation of each variable based on Cronbach's alpha. According to the interpretation results, the reliability was tested.

Based on the results of validity and reliability, the research instrument met the requirements of validity and reliability. Therefore, the questionnaire was valid and reliable.

Data Collection and Analysis
Quantitative Data

The researcher distributed the questionnaire for the first time at pre-ODI stage. With the

results, the researcher designed ODI activities and conducted them as timeline. When finishing implementing all ODI activities, the researcher distributed the same questionnaire and compared data at pre and post ODI stages. Based on data comparison, the researcher used descriptive analysis and inferential analysis including Pearson's correlation and paired samples t-test. Then, quantitative results were generated.

Qualitative Data

The qualitative data were collected with five interview questions aligned with the research variables. Qualitative research was conducted after ODI activities which aligns with variables. Then, qualitative data were analyzed by content analysis with the help of three coders who are OD lectures or holding OD doctoral degree. The researcher of this study and coders generated codes from informants' answers firstly, then generated themes. 15 informants contributed qualitative research.

Mixed Data

Mixed data were from both quantitative and qualitative data analysis and was for designing future training plan. Findings of quantitative analysis were from descriptive analysis and paired sample t-test analysis based on surveys at pre and post ODI. Findings of qualitative analysis were from generated themes after ODI. By juxtaposing both quantitative and qualitative analysis, insights and recommendation for future training plan on teachers' job performance through teacher leadership were designed.

ODI Process of the Study

Pre-ODI Stage

At pre-ODI stage, the current situation of all variables was assessed among 32 ODI participants with survey questionnaire which was conducted in August, 2023. Based on the results of pre-ODI survey results, appropriate ODI activities were designed.

ODI Stage

The ODI stage spanned from September to December, 2023 with the following ODI activities conducted.

- Program initiating communication. To get ODI participants well prepared, this initiation communication focused on explanation of program design, activities, and evaluation logs.

- Training. To raise teacher leadership awareness, a training was conducted on September 8th, 2023 with four teacher leadership models as training contents. Model No.1 is York-Barr's teacher leadership framework focusing on students learning (York-Barr & Duke, 2004). Model No. 2 is spheres of Teacher Leadership Action for Learning indicating teacher's daily work contexts are where teacher leadership emerge (Fairman & Mackenzie, 2012). Model No. 3 is Teacher Leader Model Standards Teacher Leadership Exploratory Consortium focusing developing teacher leadership competencies (Smylie, 2011). Model No. 4 is Teacher Leadership Skills framework (CSTP, 2018). In the end, interview question #1 was given to informants and answers were collected.

- Workshop. To increase teacher leadership knowledge, teacher leadership skills, and teacher leadership collaboration, three workshops were carried out in October focusing on knowledge, resources & instructional skills through sharing, group discussion or communication. In the end, interview question #2 and question #3 were given to informants and answers were collected. It is worth noting that teacher leadership knowledge on VET part was imparted by researcher of this study at least once a month.

- Lecture. To impart teacher leadership theory and teachers' job performance evaluation, a lecture was given in November. The content was leadership styles and research on teachers' job performance. In the end, interview question #4 and question #5 were given to informants and answers were collected.

Post-ODI Stage

At post-ODI stage, the questionnaire used at pre-ODI was distributed to same respondents to collect post-ODI quantitative data. All interview answers were coded and themed to collect post-ODI qualitative data. The results were used to test research hypotheses and answer research questions. The juxtaposed results of quantitative and qualitative data were used to generated research conclusion and recommendations for future training plan.

Results and Discussion

Overall Descriptive Analysis of Variables at Pre-ODI

The overall results of variables at pre-ODI shows mean value of each variable at pre-ODI is shown in Table 6.

Table 6

Descriptive Analysis of Variables at Pre-ODI

Variables	N	Mean	S.D
Teacher Leadership Awareness (TLA)	32	3.44	.360
Teacher Leadership Knowledge (TLK)	32	3.56	.226
Teacher Leadership Skills (TLS)	32	3.72	.210
Teacher Leadership Collaboration (TLC)	32	3.64	.172
Teacher Leadership (TL)	32	3.59	.243
Teachers' Job Performance (TJP)	32	3.64	.247

Table 6 presents the results of mean value of variables of this study at pre-ODI. The lowest mean value was Teacher Leadership Awareness (3.44), which meant raising teacher leadership awareness would be the first and foremost in ODI conduction. Teacher Leadership Knowledge (3.56) and Teacher Leadership (3.59) ranked the second and the third, which reflected that TLK categories and teacher leadership theory would also be the points of ODI training. Teacher Leadership Collaboration (3.64) and Teachers' Job Performance (3.64) ranked the fourth concurrently which showed respondents well understood collaboration and job performance and the relationship between these two variables were close. Teacher Leadership Skills (3.72) got the highest mean value which reflected the confidence of respondents in terms of building trust relationships with colleagues and students.

Discussion of ODI Design Based on Pre-ODI Quantitative Descriptive Analysis

Based on the pre-ODI data results and analysis, the current situation of each variable in this research was found out and appropriate ODI design was improved with the following activities for variables.

1. Initiation communication and training with teacher leadership models to raise

Teacher Leadership Awareness

2. Workshops focusing on sharing and group discussion to improve teacher leadership knowledge, teacher leadership skills, and teacher leadership collaboration

3. Lecture through imparting teacher leadership theory and job performance evaluation to improve teacher leadership

The ODI lasted for four months and activities were conducted based on improving the effective of each variable. In the meanwhile, those items had got the lowest mean value at pre-ODI were given more attention during the entire ODI.

Post-ODI Quantitative and Qualitative Analysis

Comparison of Pre-ODI and Post-ODI

Quantitative Analysis from Both Pre-ODI and Post-ODI

Descriptive Analysis of Variable Scale Items at pre and post ODI

In order to get more and in-depth research findings in details and recommend future ODI plan, the research compared the results of each scale item at pre and post ODI paying attention to the changes of those that got the lowest mean value at pre-ODI stage.

Table 7

Descriptive analysis of scale items on Teacher Leadership Awareness (TLA)

Items	N	Mean Pre-ODI	S.D Pre-ODI	Descriptive rating	Mean Post-ODI	S.D Post-ODI	Descriptive rating	Improvement by means
I am aware of the conception of teacher leader.	32	2.41	.837	Disagree	4.13	.793	Agree	1.72
I am aware of respecting different values and beliefs.	32	3.53	.803	Agree	4.56	.669	Strongly agree	1.03
I am aware of seeking feedback to improve in working setting as a teacher leader.	32	3.00	.950	Slightly disagree	4.13	.751	Agree	1.13
I am aware of participating in professional development and learning.	32	3.38	.751	Slightly disagree	4.47	.761	Strongly agree	1.09
I am aware of leading others in accomplishing tasks.	32	2.81	.693	Slightly disagree	4.34	.827	Strongly agree	1.53
I am aware of keeping group members on-task on time.	32	2.94	.801	Slightly disagree	4.34	.827	Strongly agree	1.40
I am aware of using research-based instructional practices.	32	3.50	.842	Agree	4.44	.795	Strongly agree	0.54
I am aware of working	32	3.59	.756	Agree	4.50	.672	Strongly	0.91

| effectively as a team member. | | | | | | | agree | |

Table 7 presents Mean value and S.D. value of Teacher Leadership Awareness at pre-ODI and post-ODI stages.

At pre-ODI stage, scale item "I am aware of working effectively as a team member." ranks at the top with the highest Mean value (3.59=Agree), while the scale item with the lowest Mean value is "I am aware of the conception of teacher leader." (2.41=Disagree).

At post-ODI stage, scale item "I am aware of respecting different values and beliefs" ranks at the top with the highest Mean value (4.56=Strongly agree), while two scale items with the lowest Mean value are "I am aware of working effectively as a team member." (4.13=Agree) and "I am aware of seeking feedback to improve in working setting as a teacher leader." (4.13=Agree).

Table 8

Descriptive analysis of scale items on Teacher Leadership Knowledge (TLK)

Items	N	Mean Pre-ODI	S.D Pre-ODI	Descriptive rating	Mean Post-ODI	S.D Post-ODI	Descriptive rating	Improvement by means
I attend trainings on subject knowledge.	32	4.00	.359	Agree	4.47	.671	Strongly agree	0.47
I attend trainings on pedagogical knowledge.	32	3.66	.483	Agree	4.38	.833	Strongly agree	0.72
I attend trainings on VET knowledge.	32	3.28	.457	Slightly disagree	4.19	.780	Agree	0.91
I learn communication knowledge.	32	2.69	.592	Slightly disagree	4.25	.672	Strongly agree	1.56
I understand how to build my instruction based on my knowledge.	32	3.87	.336	Agree	4.37	.833	Strongly agree	0.50

Table 8 presents Mean value and S.D. value of Teacher Leadership Knowledge at pre-ODI and post-ODI stages.

At pre-ODI stage, scale item "I attend training on subject knowledge" ranks at the top with the highest Mean value (4.00=Agree), while the scale item with the lowest Mean value is "I learn communication knowledge." (2.69=Slightly disagree).

At post-ODI stage, scale item "I attend training on subject knowledge" ranks at the top with the highest Mean value (4.47=Strongly agree), while the scale item with the lowest Mean value is "I attend trainings on VET knowledge." (4.19=Agree).

Table 9

Descriptive analysis of scale items on Teacher Leadership Skills (TLS)

Items	N	Mean Pre-ODI	S.D Pre-ODI	Descriptive rating	Mean Post-ODI	S.D Post-ODI	Descriptive rating	Improvement by means
I build trusting relationships with students.	32	4.00	.000	Agree	4.44	.840	Strongly agree	0.44
I build trusting relationships with colleagues.	32	3.87	.336	Agree	4.44	.840	Strongly agree	0.57
I facilitate professional learning for students.	32	3.28	.523	Slightly disagree	4.41	.712	Strongly agree	1.13
I continually reexamine my practice.	32	3.96	.296	Agree	4.28	.729	Strongly agree	0.37

Table 9 presents Mean value and S.D. value of Teacher Leadership Skills at pre-ODI and post-ODI stages.

At pre-ODI stage, scale item "I build trusting relationships with students." ranks at the top with the highest Mean value (4.00=Agree), while the scale item with the lowest Mean value is "I facilitate professional learning for students." (3.28=Slightly disagree).

At post-ODI stage, scale items "I build trusting relationships with students." and "I build trusting relationship with colleagues." rank at the top with the highest Mean value (4.44=Strongly agree), while the scale item with the lowest Mean value is "I continually reexamine my practice." (4.28=Strongly agree).

Table 10

Descriptive analysis of scale items on Teacher Leadership Collaboration (TLC)

Items	N	Mean Pre-ODI	S.D Pre-ODI	Descriptive rating	Mean Post-ODI	S.D Post-ODI	Descriptive rating	Improvement by means
I value diverse opinions in my team.	32	3.97	.177	Agree	4.44	.878	Strongly agree	0.47
I match my language to the situation.	32	3.16	.369	Slightly disagree	4.22	.751	Agree	1.06
I share responsibility to enhance the collaborative work process.	32	3.84	.369	Agree	4.47	.671	Strongly agree	0.63
I welcome feedback of class observation.	32	4.06	.246	Agree	4.62	.660	Strongly agree	0.52
I facilitate open communication in my work settings.	32	3.16	.515	Slightly disagree	4.31	.780	Strongly agree	1.15

Table 10 presents Mean value and S.D. value of Teacher Leadership Collaboration at pre-ODI and post-ODI stages.

At pre-ODI stage, scale item "I welcome feedback of class observation." ranks at the

top with the highest Mean value (4.06=Agree), while the scale items with the lowest Mean value is "I match my language to the situation." (3.16=Slightly disagree) and "I facilitate open communication in my work setting" (3.16=Slightly disagree).

At post-ODI stage, scale items "I welcome feedback of class observation." ranks at the top with the highest Mean value (4.62=Strongly agree), while the scale item with the lowest Mean value is "I match my language to the situation." (4.22=Agree).

Table 11

Descriptive analysis of scale items on Teacher Leadership (TL)

Items	N	Mean Pre-ODI	S.D Pre-ODI	Descriptive rating	Mean Post-ODI	S.D Post-ODI	Descriptive rating	Improvement by means
My colleagues consider me as a teacher leader.	32	2.28	.729	Disagree	4.00	.916	Agree	1.72
I keep learning to be an effective teacher.	32	4.00	.000	Agree	4.41	.756	Strongly agree	0.41
My team members consider me as an effective team player.	32	3.75	.440	Agree	4.41	.798	Strongly agree	0.66
I collaborate well with colleagues to improve instructional quality.	32	4.00	.000	Agree	4.47	.718	Strongly agree	0.47

Table 11 presents Mean value and S.D. value of Teacher Leadership at pre-ODI and post-ODI stages.

At pre-ODI stage, scale items "I keep learning to be an effective teacher." and "I collaborate well with colleagues to improve instructional quality." rank at the top with the highest Mean value (4.00=Agree), while the scale items with the lowest Mean value is "My colleagues consider me as a teacher leader." (2.28=Disagree).

At post-ODI stage, scale items "I collaborate well with colleagues to improve instructional quality." ranks at the top with the highest Mean value (4.47=Strongly agree), while the scale item with the lowest Mean value is "My colleagues consider me as a teacher leader." (4.00=Agree).

Table 12

Descriptive analysis of scale items on Teachers' Job Performance (TJP)

Items	N	Mean Pre-ODI	S.D Pre-ODI	Descriptive rating	Mean Post-ODI	S.D Post-ODI	Descriptive rating	Improvement by means
I prepare well for lessons.	32	3,94	.354	Agree	4,53	.671	Strongly agree	0.59

Items	N	Mean Pre-ODI	S.D Pre-ODI	Descriptive rating	Mean Post-ODI	S.D Post-ODI	Descriptive rating	Improvement by means
I well monitor learners' learning.	32	3.75	.440	Agree	4.38	.660	Strongly agree	0.63
I organization my class effectively.	32	3.53	.567	Agree	4.44	.669	Strongly agree	0.91
I manage my class in a disciplined way.	32	3.63	.492	Agree	4.41	.665	Strongly agree	0.78
I have positive influence on learners.	32	3.41	.499	Slightly disagree	4.44	.716	Strongly agree	1.03

Table 12 presents Mean value and S.D. value of Teacher Job Performance at pre-ODI and post-ODI stages.

At pre-ODI stage, scale item "I prepare well for lessons." ranks at the top with the highest Mean value (3.94=Agree), while the scale items with the lowest Mean value is "I have positive influence on learners." (3.41=Slightly disagree).

At post-ODI stage, scale items "I prepare well for lessons." ranks at the top with the highest Mean value (4.53=Strongly agree), while the scale item with the lowest Mean value is "I well monitor learners' learning." (4.38=Strongly agree).

Hypotheses Testing

To test research hypotheses, Pearson Correlation Analysis and Paired Sample t-Test results were used. Based on Pearson Correlation Analysis result as shown in Table 13, Hypothesis 1 was tested. Based on the results of Paired Samples t-Test as shown in Table 14, research hypotheses H2 to H6 of this study were tested.

Table 13

Result of Pearson Correlation Analysis

Independents Variables & Intervening Variable	Correlation Coefficient	Significance (p value)	Dependent Variable	N	Interpretation
Teacher Leadership Awareness (TLA)	.389	.028	Teachers' Job Performance (TJP)	32	Positive significant correlation
Teacher Leadership Knowledge (TLK)	.376	.034	Teachers' Job Performance (TJP)	32	Positive significant correlation
Teacher Leadership Skills (TLS)	.418	.017	Teachers' Job Performance (TJP)	32	Positive significant correlation
Teacher Leadership Collaboration (TLC)	.358	.044	Teachers' Job Performance (TJP)	32	Positive significant correlation
Teacher Leadership (TL)	.504	.003	Teachers' Job Performance (TJP)	32	Positive significant correlation
*. Correlation is significant at the 0.05 level (2-tailed)					

Table 13 shows the result of Pearson Correlation Analysis statistics which indicate correlation coefficient value, Sig value (*p<0.05) and interpretation.

The result shows that the correlation coefficient value between Teacher Leadership Awareness and Teachers' Job Performance is .389 which means significant Low positive correlation.

The result shows that the correlation coefficient value between Teacher Leadership Knowledge and Teachers' Job Performance is .376 which means significant Low positive correlation.

The result shows that the correlation coefficient value between Teacher Leadership Skills and Teachers' Job Performance is .418 which means significant Low positive correlation.

The result shows that the correlation coefficient value between Teacher Leadership Collaboration and Teachers' Job Performance is .358 which means significant Low positive correlation.

The result shows that the correlation coefficient value between Teacher Leadership and Teachers' Job Performance is .504 which means significant Moderate positive correlation.

Therefore, Ho1 "There is no significant relationship between teacher leadership awareness, teacher leadership knowledge, teacher leadership skills, teacher leadership collaboration, teacher leadership, and teacher job performance" is rejected.

Table 14

Results of Paired Sample t-Test

Variables	Mean Pre-ODI	S.D Pre-ODI	Mean Post-ODI	S.D Post-ODI	*t*	*p*
Teacher Leadership Awareness (TLA)	3.44	.360	4.36	.575	8.608	<.001
Teacher Leadership Knowledge (TLK)	3.56	.226	4.33	.598	6.473	<.001
Teacher Leadership Skills (TLS)	3.72	.210	4.39	.635	6.189	<.001
Teacher Leadership Collaboration (TLC)	3.64	.172	4.41	.599	7.326	<.001
Teacher Leadership (TL)	3.59	.243	4.32	.629	5.830	<.001
Teachers' Job Performance (TJP)	3.64	.247	4.44	.560	7.828	<.001
p<0.05 **p<0.01						

Table 14 shows the results of Paired Samples t-Test indicating the significance with p value and t value of each variable.

The result of Teacher Leadership Awareness at pre and post ODI calculated t=8.608 and p value (p<.001) which means there is significant difference at post-ODI. Therefore, Ho2 "There is no significant difference in teacher leadership awareness at pre and post ODI stages" is rejected.

The result of Teacher Leadership Knowledge at pre and post ODI calculated t=6.473 and p value (p<.001) which means there is significant difference at post-ODI. Therefore, Ho3 "There is no significant difference in teacher leadership knowledge at pre and post ODI stages" is rejected.

The result of Teacher Leadership Skills at pre and post ODI calculated t=6.189 and p value (p<.001) which means there is significant difference at post-ODI. Therefore, Ho4 "There

is no significant difference in teacher leadership skills at pre and post ODI stages" is rejected.

The result of Teacher Leadership Collaboration at pre and post ODI calculated t=7.326 and p value (p<.001) which means there is significant difference at post-ODI. Therefore, Ho5 "There is no significant difference in teacher leadership collaboration at pre and post ODI stages" is rejected.

The result of Teacher Job Performance at pre and post ODI calculated t=7.828 and p value (p<.001) which means there is significant difference at post-ODI. Therefore, Ho6 "There is no significant difference in teacher job performance at pre and post ODI stages" is rejected.

Table 15

Hypotheses Testing Results

Hypotheses	Pearson Correlation Analysis			Result
H1o: There is no significant relationship between teacher leadership awareness, teacher leadership knowledge, teacher leadership skills, teacher leadership collaboration, teacher leadership, and teacher job performance. H1a: There is a significant relationship between Teacher leadership awareness, teacher leadership knowledge, teacher leadership skills, teacher leadership collaboration, teacher leadership, and teacher job performance.	Positive correlation			H1o is rejected
Hypotheses	**Variable**	***t***	***p***	**Result**
H2o: There is no significant difference in teacher leadership awareness at pre and post ODI stages. H2a: There is a significant difference in teacher leadership awareness at pre and post ODI stages.	Teacher Leadership Awareness	8.608	<.001	H2o is rejected
H3o: There is no significant difference in teacher leadership knowledge at pre and post ODI stages. H3a: There is a significant difference in teacher leadership knowledge at pre and post ODI stages.	Teacher Leadership Knowledge	6.473	<.001	H3o is rejected
H4o: There is no significant difference in teacher leadership skills at pre and post ODI stages. H4a: There is a significant difference in teacher leadership skills at pre and post ODI stages.	Teacher Leadership Skills	6.189	<.001	H4o is rejected
H5o: There is no significant difference in teacher leadership collaboration at pre and post ODI stages. H5a: There is a significant difference in teacher leadership collaboration at pre and post ODI stages.	Teacher Leadership Collaboration	7.326	<.001	H5o is rejected
H6o: There is no significant difference in teachers' job performance at pre and post ODI stages. H6a: There is a significant difference in teachers' job performance at pre and post ODI stages.	Teachers' Job Performance	7.828	<.001	H6o is rejected

Qualitative Analysis Post-ODI

Qualitative data were collected through answering interview question after ODI activities. Then answers were analyzed with content analysis by three coders. The results of each variable are shown in the following table.

Table 16

Results of qualitative analysis

Variable	Interview question	Themes
Teacher Leadership Awareness (TLA)	Q # 1: To what extent, do you think teacher leadership closely relates to teachers' daily job responsibilities?	**Theme 1,** respondents realized or agreed that there is high/close relationship between teacher leadership and daily job. **Theme 2,** teacher leadership have impact on teachers' effectiveness and students' learning. **Theme 3,** after training, some changed/awakened their previous/traditional consciousness/cognition on teachers' role changed and realized that teacher can be a leader; some strengthened that teacher can be a leader. **Theme 4,** there is also an argument saying that the relationship between them is not very close. **Theme 5,** there is a suggestion suggesting to shape school culture related to teacher leadership so as to enhance education effectiveness.
Teacher Leadership Knowledge (TLK) and Teacher Leadership Skills (TLS)	Q # 2: How do you think your professionalism and skills will help you to exert teacher leadership?	**Theme 1,** workshops are helpful for attendants to learn knowledge and skills of teacher leadership. **Theme 2,** teacher leadership knowledge and skills can improve teachers' job performance and teachers' professional development. **Theme 3,** knowledge and skills should be integrated. **Theme 4,** knowledge and skills need to be put into practice focusing on students' learning. **Theme 5,** knowledge and skills acquisition need to be professional and systematic. **Theme 6,** some is not 100% sure that knowledge and skills help exert leadership by using "to a certain extent". **Theme 7,** VET knowledge was mentioned as part of knowledge improvement.
Teacher Leadership Collaboration (TLC)	Q # 3: How do you collaborate with peers in terms of teaching, learning, scientific research, or school-enterprise collaboration?	**Theme 1,** collaboration, or cooperation/team/interaction in respondents' words, is important as consensus and collaboration happens in teaching, learning, scientific research, projects applying, school-enterprise cooperation, etc. **Theme 2,** communication stands out as the most frequent words from all answers which means communication in collaboration is not satisfying at present. Respondents are expecting communication to be good, effective, since, positive, honest, active and open based on mutual trust and mutual discussion. **Theme 3,** for vocational teachers, especially teachers in this study, it is still difficult to collaborate with enterprise. **Theme 4,** collaboration based on school culture and organizational structure is recommended.
Teacher Leadership (TL)	Q # 4: To what extent, do you think teacher leadership will improve teacher job performance?	**Theme 1,** with awareness awakened or strengthened, teacher leadership improve work efficiency. **Theme 2,** teacher leadership promote teachers' self-motivation or internal motivation. **Theme 3,** teacher leadership needs practice. **Theme 4,** in addition to job performance improvement and effectiveness, more outcomes were mentioned, such as teachers broaden vision, empathetic management in teaching, proactive awareness, etc. **Theme 5,** at a higher level, teacher leadership has positive impact on

Variable	Interview question	Themes
		educational environment or triggers educational policies.
Teachers' Job Performance (TJP)	Q # 5: What's your professional development plan in the following three years?	**Theme 1,** based on daily work, teacher leadership will be a new way or facilitator in teachers' professional development. **Theme2,** respondents are willing to demonstrate/implement/practice teacher leadership. **Theme 3,** respondents will continue to learn leadership theories and improve teacher leadership. **Theme 4,** some are considering to study for a doctorate. **Theme 5,** based on research with academic data-base, organization power got attention. Research of teacher leadership in Chinese context will be on the list of planning over the coming three years.

Juxtaposed Quantitative and Qualitative Results at Post-ODI

Based on analysis of quantitative and qualitative results at post-ODI, juxtaposed data is shown in Table 17.

Table 17

Juxtaposed Data of Quantitative and Qualitative Results at Post-ODI for Future Training Plan

Juxtapose Quantitative and Qualitative					
Variable	**Quantitative**		**Qualitative**		**Future Training Plan**
	Highest Mean Question	**Lowest Mean Question**	**ODI**	**Theme**	
Teacher Leadership Awareness (TLA)	I am aware of respecting different values and beliefs. (4.56)	I am aware of the conception of teacher leader. (4.13) I am aware of seeking feedback to improve in working setting as a teacher leader. (4.13)	Trainings Q & A	**Theme 1,** respondents realized or agreed that there is high/close relationship between teacher leadership and daily job. **Theme 2,** teacher leadership have impact on teachers' effectiveness and students' learning. **Theme 3,** after training, some changed/awakened their previous/traditional consciousness/cognition on teachers' role changed and realized that teacher can be a leader; some strengthened that teacher can be a leader. **Theme 4,** there is also an argument saying that the relationship between them is not very close. **Theme 5,** there is a suggestion suggesting to shape school culture related to teacher leadership so as to enhance education effectiveness.	In the future, raising teachers' leadership awareness will be a priority. Future training may focus on reflection of teacher leadership practice in daily job to connect awareness to behavior.

Juxtapose Quantitative and Qualitative					
	Quantitative		Qualitative		Future Training Plan
Variable	Highest Mean Question	Lowest Mean Question	ODI	Theme	
Teacher Leadership Knowledge (TLK)	I attend trainings on subject knowledge. (4.47)	I attend trainings on VET knowledge. (4.19)	Workshops	**Theme 1,** workshops are helpful for attendants to learn knowledge and skills of teacher leadership. **Theme 2,** teacher leadership knowledge and skills can improve teachers' job performance and teachers' professional development. **Theme 3,** knowledge and skills should be integrated. **Theme 4,** knowledge and skills need to be put into practice focusing on students' learning.	Teacher leadership knowledge and skills will be integrated in the future. Knowledge will be more professional and systematic and skills will focus on practice.
Teacher Leadership Skills (TLS)	I build trusting relationships with students. (4.44) I build trusting relationships with colleagues. (4.44)	I continually reexamine my practice. (4.28)	Workshops	**Theme 5,** knowledge and skills acquisition need to be professional and systematic. **Theme 6,** some is not 100% sure that knowledge and skills help exert leadership by using "to a certain extent". **Theme 7**, VET knowledge was mentioned as part of knowledge improvement.	
Teacher Leadership Collaboration (TLC)	I share responsibility to enhance the collaborative work process. (4.47)	I match my language to the situation. (4.22)	Workshops	**Theme 1,** collaboration, or cooperation/team/interaction in respondents' words, is important as consensus and collaboration happens in teaching, learning, scientific research, projects applying, school-enterprise cooperation, etc. **Theme 2,** communication stands out as the most frequent words from all answers which means communication in collaboration is not satisfying at present. Respondents are expecting communication to be good, effective, since, positive, honest, active and open based on mutual trust and mutual discussion. **Theme 3,** for vocational teachers, especially teachers in this study, it is still difficult to collaborate with enterprise. **Theme 4**, collaboration based on school culture and organizational structure is	Promoting open, sincere, honest, effective and active communication may be the priority or future training to realize in-depth collaboration.

	Juxtapose Quantitative and Qualitative				
	Quantitative		Qualitative		Future Training Plan
Variable	Highest Mean Question	Lowest Mean Question	ODI	Theme	
				recommended.	
Teacher Leadership (TL)	I collaborate well with colleagues to improve instructional quality. (4.47)	My colleagues consider me as a teacher Leader. (4.00)	Lecture Q & A	**Theme 1,** with awareness awakened or strengthened, teacher leadership improve work efficiency. **Theme 2,** teacher leadership promote teachers' self-motivation or internal motivation. **Theme 3,** teacher leadership needs practice. **Theme 4,** in addition to job performance improvement and effectiveness, more outcomes were mentioned, such as teachers broaden vision, empathetic management in teaching, proactive awareness, etc. **Theme 5,** at a higher level, teacher leadership has positive impact on educational environment or triggers educational policies.	In the future research on teacher leadership, there will be more practice. Researcher of this study will advocate to in-plant teacher leadership into teacher training programs in the future and shape culture gradually.
Teachers' Job Performance (TJP)	I prepare well for lessons. (4.53)	I well monitor learners' learning. (4.38)	Lecture Q & A	**Theme 1,** based on daily work, teacher leadership will be a new way or facilitator in teachers' professional development. **Theme2,** respondents are willing to demonstrate/implement/practice teacher leadership. **Theme 3,** respondents will continue to learn leadership theories and improve teacher leadership. **Theme 4,** some are considering to study for a doctorate. **Theme 5,** based on research with academic data-base, organization power got attention. Research of teacher leadership in Chinese context will be on the list of planning over the coming three years.	In the future, researcher of this study needs to clarify evaluation of job performance involving teacher leadership. The outcome of teacher leadership can be seen not only at teachers' individual level, but also at other levels like team, organization, school, and community, etc.

With the juxtaposed results of quantitative and qualitative data, future training plans for variables were generated.

- Teacher leadership awareness

According to the juxtaposed results, teacher leadership awareness remains the barrier to be crossed in future training plan. First, awareness needs to be raised; second, awareness need connection with daily work behaviors.

- Teacher leadership knowledge and skills

According to the juxtaposed results, VET professional knowledge, knowledge and skills are lack of practice. In the future training plan, knowledge and skills may be integrated and practiced professionally and systematically.

- Teacher leadership collaboration

According to the juxtaposed results, communication, as the basis of collaboration, needs to be open, sincere, honest, effective and active in informants' words. Therefore, communication will be paid more attention in the future training plan for in-depth and effective collaboration.

- Teacher leadership

According to the juxtaposed results, in addition to raise teacher leaders' self-awareness, others' awareness of teacher leadership needs to be raised as well which advocate to shape a working setting or organization culture with teacher leadership in the future training plan.

 - Teacher job performance

According to the juxtaposed results, individual development is just one of the outcomes of teacher leadership. Schott et al. (2020) developed a multi-level conceptual framework presenting that the outcomes of teacher leadership could be seen at four levels: teacher outcome, school level, supra-school level, and student level. Therefore, in the future training plan, researcher needs to clarify the evaluation dimensions when designing.

Conclusions and Recommendations

Conclusions

This study was designed to improve teachers' job performance by enhancing teacher leadership in terms of teacher leadership awareness, teacher leadership knowledge, teacher leadership skills, and teacher leadership collaboration through ODI program with 32 language teachers as participants and 15 as informants. The ODI program lasted for four months. Based on the quantitative, qualitative, and juxtaposed results, conclusion can be drawn as follows.

Firstly, the ODI program was appropriate. Based on organization diagnosis and pre-ODI quantitative results, current situation was determined and ODI design was made which included program initiation communication, training, workshops, lecture, and class observation. Qualitative results showed that there was improvement for each variable. Therefore, ODI activities were effective and ODI design was appropriate.

Secondly, research hypotheses were tested. All null hypotheses were rejected based on the results or Paired Samples t-Test and Pearson Correlation analysis. Therefore, there is significant relationship between teacher leadership awareness, teacher leadership knowledge, teacher leadership skills & teacher leadership collaboration and teacher leadership. There is significant difference in teacher leadership awareness, teacher leadership knowledge, teacher

leadership skills, teacher leadership collaboration, and teachers' job performance at pre and post ODI stages.

Thirdly, future training plan could be generated based on juxtaposed quantitative and qualitative results. In future training, teacher leadership awareness needs to be further raised and awareness needs closer connection with daily work behaviors; teacher leadership knowledge and skills may be integrated and practiced professionally and systematically; communication will be paid more attention in the future training plan for in-depth and effective collaboration; in addition to raise teacher leaders' self-awareness, others' awareness of teacher leadership needs to be raised as well which advocate to shape a working setting or organization culture with teacher leadership; teachers' job performance can be seen at many levels, so researcher needs to clarify the evaluation dimensions when designing.

Recommendations

Based on the findings, recommendations and suggestions for future plan are as follows.

First, future and further ODI plan is needed. To make it more effective, future ODI may focus on the items which generated the lowest or relatively low mean values at both pre and post ODI in this study.

Second, future ODI may last for longer period time to ensure it functions fully.

Third, future ODI may involve more teachers from more disciplinaries to increase the diversity of ODI participants.

Fourth, research method. Future following up study needs to use mixed method because qualitative data counts and they reflect more in-depth information.

To conclude, this ODI program was appropriate to improve teachers' job performance through enhancing teacher leadership, all variables improved after ODI. As a case study, this research contributed to teacher leadership research in a Chinese context. This study confirmed the effectiveness of ODI design contribution of teacher leadership research, and it provided insights and recommendations for future research as well.

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