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Integrated Leadership Effect on Teacher Satisfaction: Mediating Effects of Teacher Collaboration and Professional Development

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Abstract. School principal can be both instructional and transformational leadership which is regarded as integrated leadership. Prior research has explored the connection between teacher job satisfaction, teacher collaboration, and teacher professional development. The current study aims to investigate the integrated principal leadership style, and its effect on teacher job satisfaction. We examined how integrated leadership indirectly influences teacher job satisfaction through the mediation of teacher collaboration and professional development. Voluntary sampling was conducted to collect research data. Electronic survey sent to 600 Indonesia which was 504 filled the survey completely. The partial least square structural equation modelling (PLS-SEM) was employed to analyze the data. The results showed that integrated leadership directly affected teacher job satisfaction in a positive way. Teacher collaboration and professional development had positively affected teacher satisfaction in their job. It was figured out that teacher collaboration and professional development have partial mediation effect on the relationship between integrated leadership and teacher job satisfaction. Based on results, integrated leadership has affected teacher job satisfaction directly. The effect was also mediated by teacher collaboration and teacher job satisfaction. Institutions should invest in leadership programs to equip principals with a blend of instructional and transformational skills that encourage teachers to develop their professional skills and to collaborate with others.

Keywords: Integrated Leadership; Principal Leadership Styles; Teacher Collaboration; Teacher Professional Development; Teacher job satisfaction

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1. Introduction

Research in the educational field consistently maintains its focus on teachers as primary units of analysis, with a recognition of their substantial impact on student learning outcomes. (Chetty et al., 2013; Darling-Hammond, 2000; Goldhaber & Brewer, 2000; Sirait, 2016). Job satisfaction is a heated topic related to teachers given that it may affect their performance (Mesiono, 2019; Uzun & Özdem, 2017) and confidence in instructions (Harrison et al., 2023; Sadeghi et al., 2021). Researchers have also demonstrated some interest in the connection between teacher collaboration and teacher job satisfaction. Studies in this area have posited that teacher collaboration and job satisfaction are significantly associated with their classroom performance, self-efficacy, innovativeness, and professional development. (Buyukgoze et al., 2022; Duyar et al., 2013; Harris & Jones, 2019; Harrison et al., 2023; Lipscombe et al., 2020; Y. Liu et al., 2021; Sadeghi et al., 2021; Xie et al., 2023). Collaboration between language educators can also exert an influence on their professional development (Kafyulilo, 2013). Professional development may enhance teachers' beliefs about learning and teaching, confidence in their teaching skills, professional commitment, and performance (Ahmad & Rochimah, 2022; Alomiear et al., 2022; Ambussaidi & Yang, 2019; Badri et al., 2016; Bastian et al., 2022; F. Zhang, 2022).

An additional factor that can influence variables associated with teachers is principal related. Variables encompassing instructional and transformational leadership are considered significant in this context. The shifting demographic patterns within educational institutions have resulted in an increased emphasis on the central role of principals in spearheading integrated enhancement (Hallinger, 2003, 2005). Research has shown that instructionally focused leadership has affected teacher's integrated practices and, indirectly, increase student performance (Y. L. Goddard & Madsen, 2010).

Extant research has shown that teacher job satisfaction has been related to principal instructional leadership (Kouali, 2017; Y. Liu et al., 2021; Veletić & Olsen, 2021a; Wiens et al., 2023) and transformational leadership (Maheshwari, 2022; Menon, 2014; Sayadi, 2016; Schoch et al., 2021; Setyaningsih & Sunaryo, 2021; Tesfaw, 2014; J. Zhang, 2023; J. Zhang et al., 2022). A study has also investigated the mediating effect of transformational leadership on the relationship between instructional leadership and teacher job satisfaction (Bellibaş et al., 2021). Research by Bellibas et al. (2021) highlights the positive impact of integrating transformational and instructional leadership on teacher development and satisfaction. Y. Liu et al., (2021) explore the effects of distributed and instructional leadership on teacher satisfaction through collaboration, finding that instructional leadership is associated with job satisfaction, mediated by collaboration.

However, principal instructional leadership cannot be separated from their transformational leadership (G. Shava & Heystek, 2021; G. N. Shava, 2021). Several studies have explored the relationship between these two leadership styles and have found that they complement each other and have a synergistic effect on various

outcomes, including student's learning outcome, teacher professionalism, and integrated practices (Bellibaş et al., 2021; Kwan, 2020). A number of researchers presented the integrated leadership concept, questioning the traditional belief that school principals can only be categorized as either having instructional or transformational leadership style (Kwan, 2020; Marks & Printy, 2003; G. Shava & Heystek, 2021; Urick & Bowers, 2014).

Current educational management and leadership-based knowledge provides limited empirical evidence on the effect of integrated leadership on teacher satisfaction with their job. Empirical research on the effect of integrated leadership provides support to integrated leadership where the principal can be both instructional and transformational leadership. Hence, the current research aims to investigate the effect of principal leadership styles integrating transformational and instructional leadership on teacher job satisfaction. The mediating roles of teacher collaboration and professional development were also investigated. Within the scope of this research, teacher collaboration was centered on subject-specific professional development groups, while professional development was directed toward self-initiated professional growth endeavors.

2. Conceptual Framework

The research is grounded in an extensive body of literature within Educational Leadership and Management (EDLM), exploring causative factors such as principal leadership and outcomes like teacher collaboration, teacher self-efficacy, professional development, and student academic performance (Bellibaş et al., 2021; Çoban et al., 2023; Dou et al., 2017; Kahai et al., 2013; Y. Liu & Watson, 2020; Y. Liu & Werblow, 2019; Menon, 2014; Qadach et al., 2020; Sayadi, 2016; Schoch et al., 2021; Setyaningsih & Sunaryo, 2021; Tesfaw, 2014).. Previous research can be categorized into two threads: examination of contextual impacts on leadership roles, and insights into how these roles shape school processes and individual outcomes. Building on this foundation, our study emphasizes the role of principals in enhancing instructional quality and teacher well-being.

The conceptual framework presents seven hypotheses, each rooted in theoretical and empirical underpinnings. The subsequent section delves into the exploration of each element within the conceptual model, establishing a foundation for each hypothesis.

Integrated Leadership – Historically, scholars viewed Instructional Leadership (IL) and Transformational Leadership (TL) as distinct (Kwan, 2020). However, a more nuanced perspective recognizes the overlap between IL and TL, with IL focusing on immediate effects and TL facilitating organizational changes (Agasisti et al., 2019; Lambrecht et al., 2022). Integrated Leadership, identified by Marks & Printy (2003), acknowledges the simultaneous presence of both leadership types. This concept is further supported by Kwan (2020), who suggests an interaction between IL and TL, emphasizing that excellence in both types leads to more favorable school outcomes.

The present study will also be conducted based on this concept with different points of view. We integrated both leadership styles into one variable. In other words, instructional leadership and transformational leadership will be dimensions of integrated leadership.

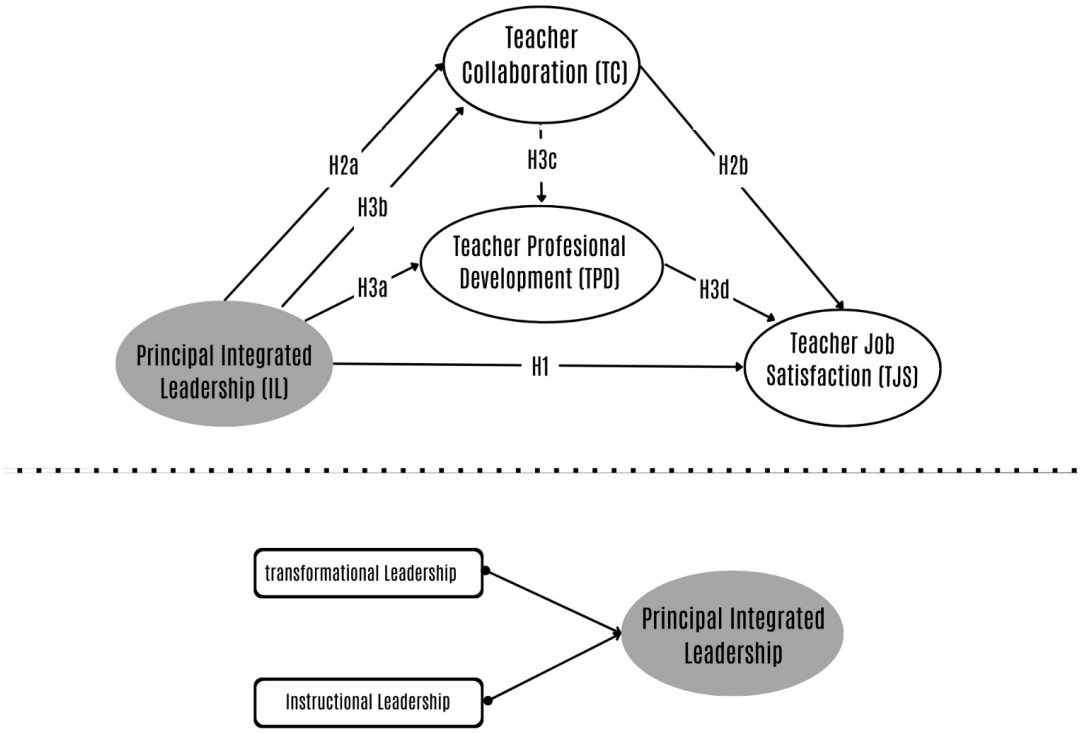

Figure 1. Framework of the study

Teacher Collaboration – Principals significantly shape organizational dynamics, impacting teacher working conditions (Pietsch et al., 2019). Their influence on fostering teacher collaboration is pivotal, involving the establishment of a collaborative environment, facilitation of peer interactions, and the promotion of mutual trust, ultimately enhancing effective teaching practices and student achievement (R. Goddard et al., 2015; Gray et al., 2016; Helm et al., 2019; Moolenaar et al., 2012; Vescio et al., 2008).

Professional Development – Teacher professional development plays a crucial role in translating educational reforms into effective teaching methods (Darling-Hammond, 2000; Geijsel et al., 2009). Recognizing a transformation in learning methodologies, this study highlights the influential role of school principals in organizing and supporting professional development, emphasizing the importance of leadership at both principal and middle-level levels.

Teacher job satisfaction – Job satisfaction, a vital element influencing employee performance and retention, is explored in the context of teachers (Alam & Asim, 2019; Judge et al., 2001; Lambert et al., 2001). The study acknowledges the multifaceted

nature of job satisfaction, encompassing affective and cognitive dimensions (Moorman, 1993; Organ & Near, 1985). Affective satisfaction involves positive emotional well-being, while cognitive satisfaction relates to the perceived alignment of one's job situation with personal expectations (Locke, 1976).

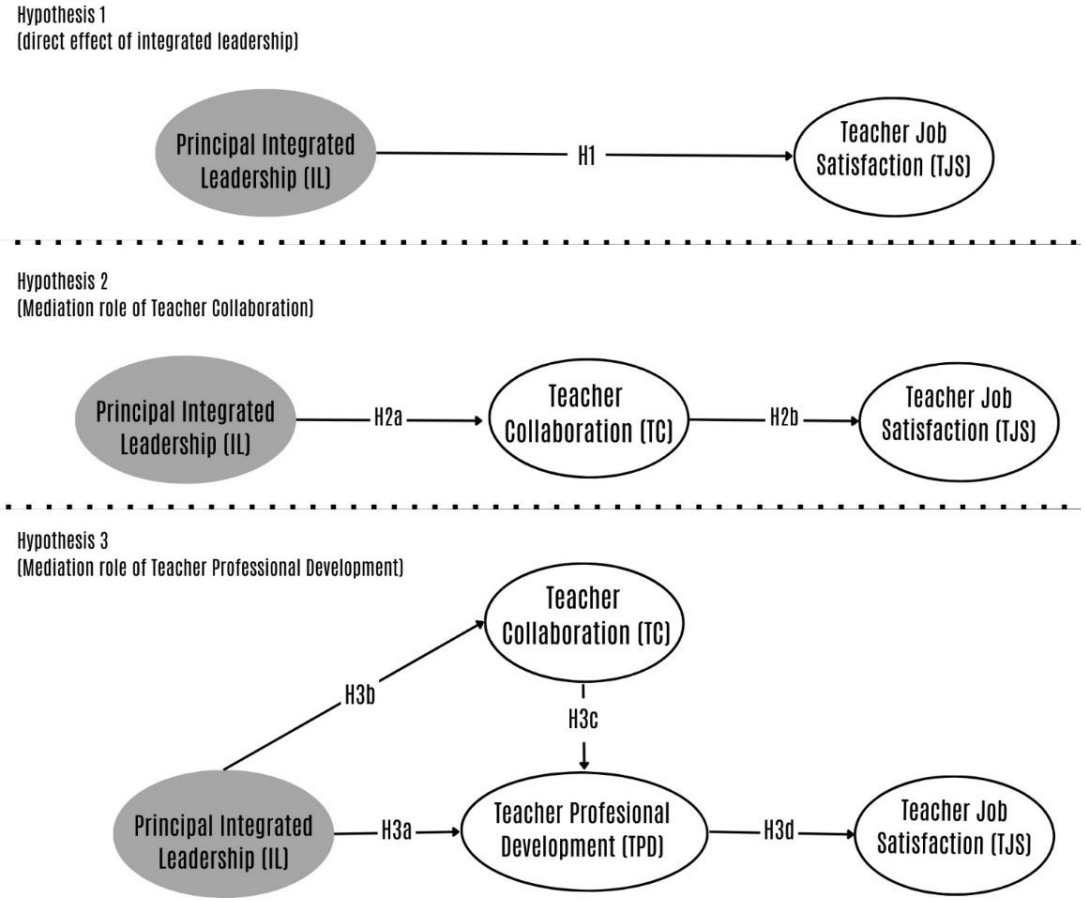

Fig 2. Hypothesis of the research

3. Methods

The study is a quantitative non-experimental study. A cross-sectional survey was conducted in a digital questionnaire form sent via email to 600 teachers in Indonesia. Of those teachers, 504 completely filled the questionnaire. The demographic variables of the respondents are shown on the table below:

Table 1. Demographic variables of the respondents

Variable	Number of Resp.	Proportion	$\chi^2(p)$
School types			1507
Elementary School	14	2.8%	(<.001)
Special School	4	0.8%	
Junior High School	8	1.6%	
Senior High School	29	5.8%	

Vocational High School	449	88%	
Regional			567 (<.001)
Sumatera	50	9.9%	
Jawa	145	28.8%	
Kalimantan	31	6.2%	
Sulawesi	227	45%	
Bali Nusa Tenggara	25	5%	
Maluku Papua	26	5.1%	
Gender			2.03
Male	236	46.8%	(0.154*)
Female	268	53.2%	
Number of Years being Teacher			376 (<.001)
Less than 3 years	23	4.6%	
3 – 5 years	58	11.5%	
5 – 10 years	118	23.4%	
More than 10 years	305	60.5%	

*) the number of respondents in each group of the variables does not significantly differ

A total of 71 items were included in the survey. The item responses were in semantic differential forms ranging from 1 (=strongly inaccurate) to 10 (=strongly accurate). The respondents' answers were analyzed with partial least square structural equation modelling (PLS-SEM) using SmartPLS 4.0. PLS-SEM is more powerful than other types of SEM and is applicable with a sample size or a non-normal sample (Hair et al., 2012). PLS-SEM is also preferrable to CB-SEM for the analysis of a complex model.

4. Instruments

4.1 Integrated Leadership

Integrated leadership was measured as an integration of instructional and transformational leadership. Instructional leadership was measured by the Principal Instructional Management Rating Scale - Teacher Form (PIMRS; Hallinger & Wang, 2015). The reliability estimates for the scale dimensions were 0.88 for School Mission Definition, 0.91 for Integrated Program Management, and 0.93 for Positive School Learning Climate Development. Transformational leadership was measured using the modified transformational scale used in Chang et al., (2021) which consists of five subscales: idealized attributes, idealized behaviors, inspirational motivation, intellectual stimulation, and individualized consideration. Regarding reliability and internal consistency, the Cronbach alpha values were 0.82 for idealized attributes, 0.85 for idealized behaviors, 0.89 for inspirational motivation, 0.90 for intellectual stimulation, and 0.93 for individualized consideration. Each of these figures indicates a significant degree of reliability (Hair Jr et al., 2022). The number of items to measure transformational leadership was reduced to 12 and the number of items to measure instructional leadership was reduced to 10.

4.2 Teacher Collaboration

Teacher collaboration was measured using a brief version of the Teacher Collaboration Assessment Survey measuring DDAE (dialog, decision making, action taking, and evaluation) (*Woodland* et al., 2013). The scale comprises four dimensions

of dialogue ($n = 11\ items$), decision making ($n = 8\ items$), action taking ($n = 10\ items$), and evaluation ($n = 11\ items$). The scale reliability of separation is equal to 0.83 which reflects adequate reliability. The number of items used to measure teacher collaboration was reduced to 12 items to get a brief instrument that may lower the potential of data biases which may come from a long questionnaire with many variables. The items were modified to fit with subject-specific professional development group activities as the focus.

4.3 Teacher Professional Development

Teacher professional development was measured using self-developing questionnaire based on the Teacher Professional Development Questionnaire, TPDQ ($n = 18\ items, Cronbach\ \alpha = 0.838$) (Saberi & Sahragard, 2019). The modified questionnaire consists of 12 items developed thorough expert judgements. The items were also modified to measure a teacher's self-initiated professional development.

4.4 Teacher Satisfaction

Teacher satisfaction was measured with the 9-items Teacher job satisfaction Scale (TJSS-9; Pepe et al., 2017). The original scale has three dimensions that are related to the principal, co-workers, and students' parents ($Cronbach\ \alpha = 0.794$). However, we also considered student-related satisfaction as part of teacher satisfaction. Therefore, we modified the scale by adding three items of student-related satisfaction. In total, the scale used in this study to measure teacher job satisfaction has twelve items.

5. Results

The PLS-SEM analysis in this study was conducted in two steps of measurement and structural model. The measurement model was used to investigate the reliability and validity of the items and constructs whereas structural model was used to investigate the relationships between constructs (Hair et al., 2021).

Descriptive Statistics and Correlations between Variables

Table 2 shows the descriptive statistics of the variables in this study and the correlations between variables. The average score of the participants' responses for the variables integrated leadership, teacher collaboration, professional development, and teacher job satisfaction all exceeded 8 ($8.425 \pm 1.906, 8.147 \pm 1.993, 8.283 \pm 1.900, 8.726 \pm 1.458$, respectively, the last being the highest).

Table 2. Descriptive statistics and correlations between variables

Variables	M	SD	Correlations			
			1	2	3	4
1. Integrated Leadership	8.425	1.906	—			
2. Teacher Collaboration	8.147	1.993	0.750***	—		
3. Teacher Professional Development	8.283	1.900	0.603***	0.682***	—	
4. Teacher job satisfaction	8.726	1.458	0.777***	0.634***	0.666***	—

* p < .05, ** p < .01, *** p < .001

Measurement model

The first metric evaluated in the measurement model was factor loadings reflecting the item relative contributions to their respective constructs (Ringle & Sarstedt, 2016). Since items should reflect a minimum of 50% of their construct variance, factor loadings have to be at least 0.708 (the square root of 50%) (Hair et al., 2017; Henseler et al., 2015). However, item with loadings ranging from 0.4 to 0.7 should not be excluded from the model unless the exclusion of the items improve the construct convergent validity (Hair et al., 2021). PROD1 (the first item of professional development) was the only item excluded from the model for its low factor loadings. Other items remained in the model for their satisfactory loadings.

Table 3. Reliability and Validity of the scale used

Variable	***Rho A***	**AVE**	**HTMT**
1. Integrated Leadership	0.953	0.683	0.819
2. Teacher Collaboration	0.972	0.763	0.782
3. Teacher Professional Development	0.938	0.541	0.743
4. Teacher Satisfaction	0.940	0.643	0.819

The second metrics was reliability rho (Rho A). Rho A is considered a better representation of construct reliability than Cronbach's Alpha and Composite reliability (Dijkstra & Henseler, 2015). Rho A gives a more stable results than those two (Henseler, 2021). As a reliability measure, the rule of thumb is that the metrics must be valued at least 0.708 (Hair et al., 2021). The construct rho A in this study had a value larger than 0.708, indicating adequate reliability (table 1).

The third metrics in the assessment of the measurement model was average variance extracted (AVE) reflecting to what extent a variable converges to explain its item variance (Hair et al., 2019). The rule of thumb is that AVE must be valued at least 0.5 which means that the variable explains a minimum of 50% of its items (Akter et al., 2017; Chin, 2010). The constructs gave AVE values larger than 0.5 meaning that they fulfilled the AVE criterion.

The last metrics to assess was the Heterotrait-Monotrait ratio (HTMT) measuring the discriminant validity of a construct (Hair et al., 2017). Discriminant validity is used to investigate whether a construct used in SEM is empirically unique from other constructs (Hair et al., 2017). Since HTMT measures the average correlation between items in different construct, the rule of thumb is the upper bound should not exceed 0.85 (Henseler et al., 2015). Table 2 shows that the HTMT between constructs had a value lower than the upper bound meaning that the construct in the model was empirically unique.

Structural Model

The measurement model showed that the items and constructs in the study had good psychometry properties. Thus, the structural model could be conducted to investigate the relationship between constructs. The structural model analysis was conducted by

bootstrapping (resampling the data) with 10,000 replications (Streukens & Leroi-Werelds, 2016).

Table 4. Direct, indirect, and total effect of paths in the study model

Hypothesis	Path	Path Coefficient			f^2
		Direct Effect	Indirect Effect	Total Effect	
H1	IL -> TJS	0.586***	0.196***	0.782***	0.511
H2	IL -> TC	0.709***		0.709***	1.099
H3	IL -> TPD	0.265***	0.355***	0.620***	0.071
H4	TC -> TJS	-0.046	0.184***	0.139*	0.003
H5	TC -> TPD	0.501***		0.501***	0.255
H6	TPD -> TJS	0.367***		0.367***	0.211

* p < .05, ** p < .01, *** p < .001
Note: IL, integrated leadership; TC, teacher collaboration; TPD, teacher professional development; TJS, teacher job satisfaction
Source: Own elaboration

The bootstrapping results showed that Integrated Leadership had positive significant effects on teacher collaboration ($\beta = 0.709, p < .001$), teacher professional development ($\beta = 0.620, p < .001$), and teacher satisfaction ($\beta = 0.782, p < .001$). Teacher collaboration also gave a similar result by showing positive significant effects on teacher professional development ($\beta = 0.501, p < .001$), and teacher satisfaction ($\beta = 0.139, p = .017$). Lastly, teacher professional development had a positive significant effect on teacher satisfaction ($\beta = 0.367, p < .001$).

5. Discussion

In this study, we combined principal instructional and transformational leadership as integrated leadership and investigated its relationship with teacher job satisfaction. The mediating effect of teacher collaboration and professional development on the leadership-satisfaction relationship were also investigated. Findings showed that integrated leadership was positively related to teacher's jobs satisfaction, teacher collaboration, and professional development. These findings may add new knowledge and provide mutual understanding on the relationship between principal leadership and teacher job satisfaction, specifically for leadership style integrating instructional and transformational leadership (Bellibaş et al., 2021; Kwan, 2020). We also consider this study to be important not only because it confirms the connections when all variables are combined but also because it offers a nuanced proof, showcasing the size effect of integrated leadership on teacher-related variables.

Direct Effect of Integrated Leadership on Teacher job satisfaction

The first research question asked the direct effect of integrated leadership on teacher job satisfaction. The findings revealed that there was a statistically significant relationship between integrated leadership and teacher satisfaction with moderate-size effect. The result is in line with other research associating principal instructional leadership with teacher job satisfaction (Kouali, 2017; Y. Liu et al., 2021; Veletić &

Olsen, 2021b) and principal transformational leadership with teacher satisfaction (Maheshwari, 2022; Maria & Androula, 2016; Sayadi, 2016). However, these studies focused on leadership styles of instructional or transformational leadership in isolation. The current study adds new knowledge that integrated instructional and transformational leadership has a positive effect on teacher satisfaction. Principal instructional and transformational leadership may enhance teacher instructional collaboration and shapes a conducive school climate which in turn increases teacher's satisfaction on their job (Dou et al., 2017; Y. Liu et al., 2021). Schools that exhibit greater diversity in leadership and grant more autonomy to teachers tend to be more successful in meeting teacher needs (J. Liu & Du, 2022).

Mediating Effect of Teacher Collaboration

The second research question asked the mediating effect of teacher collaboration on the relationship between integrated leadership and teacher satisfaction. The findings showed that teacher collaboration had a statistically significant relationship with integrated leadership. Several scholars have shown similar results stating that principal leadership positively affects teacher collaboration (Gumus et al., 2013; Lin, 2022; Meyer et al., 2022; Mora-Ruano et al., 2021). The way and frequency of teacher's collaboration is likely supported by their school condition. In particular, principal leadership has shaped the school climate and with whom teachers can work and collaborate (Charner-Laird et al., 2017; Grissom et al., 2021; Rigby et al., 2020; Seashore et al., 2010; Talbert, 2009). Specifically, principals with integrated leadership will show trust in teachers playing a role in predicting staff leadership, and subsequently influencing the culture of teacher collaboration (Kwan, 2020).

However, teacher collaboration showed no significant relationship with teacher job satisfaction. Cultural factors, such as individualism and a preference for maintaining individual autonomy, can hinder collaboration among Indonesian teachers (Zulfikar, 2018). These factors may give teachers discomfort in their effort to fulfill the teacher obligations mandated by the Indonesian education system which leads to a decrease in their job satisfaction.

These results may reflect that teacher collaboration has no mediating effect on the relationship. Nevertheless, teacher collaboration showed a statistically significant relationship with teacher professional development. The results may reflect similar research findings emphasizing the importance of teacher's collaboration for their professional development (Kafyulilo, 2012, 2013; Lumpe, 2007). The relationship between teacher professional development and teacher satisfaction will be discussed in the next subsection.

Mediating Effect of Teacher Professional Development

The third research question asked the mediating effect of teacher professional development on the relationship between integrated leadership and teacher satisfaction. The result gave statistically significant evidence that integrated leadership positively affected teacher professional development. The findings correspond to research stating that principal leadership may encourage teacher

professional development (Amzat et al., 2022; Belay et al., 2022; Hosseingholizadeh et al., 2023; Robinson et al., 2008). Instructional leadership as part of integrated leadership encourages principal to provide teachers with professional development opportunities (Y. Liu et al., 2021).

The research findings also show that teacher professional development positively affects their job satisfaction. It is in line with other research relating professional development and teacher job satisfaction (Thahir et al., 2021). Several factors may be associated to teacher satisfaction including providing opportunities for teachers to develop their professionalism (J. Zhang, 2023). Professional development aligns with teacher needs and goals. In conclusion, teacher professional development had mediating effect on the relationship between principal integrated leadership and teacher job satisfaction. The significant relationship between professional development and teacher job satisfaction also completes the mediation effect of teacher collaboration. Teacher collaboration provides a mediating effect by affecting teacher professional development and then indirectly affecting teacher satisfaction through professional development.

To summarize, this study offers evidence supporting both the direct and indirect impact of principal leadership on teachers' job satisfaction. Our findings extend prior research conducted in several countries in the field of principal leadership by giving empirical evidence of how school principals as leaders with integrated instructional and transformational leadership encourages teacher job satisfaction by promoting teacher instructional collaboration and self-initiated professional development. More generally, the study generates new knowledge on principal leadership especially in the Indonesian context.

6. Study Limitations

The results of this study carry significant practical and future research implications. First, using the cross-sectional research design, the research collected data at one point of time. This design can produce biases in associating two or more variables. Longitudinal design may be the fittest design to overcome these potential biases. Second, the participants were selected using convenience sampling which might produce poorer estimation compared with probability sampling techniques. The participants also came from the Indonesian teacher population which limited the generalization of the findings on Indonesian teachers.

7. Conclusion

School leadership holds a crucial position in the advancement of schools, and its importance in enhancing teaching and learning will remain pivotal. Given the ongoing initiatives to enhance teaching and the education system in Indonesia, it is advisable to begin the process of reforming the educational system by emphasizing the development of school leadership. It is widely acknowledged that, next to classroom instruction, school leadership is the most influential factor contributing to student achievement. Thus, this study examined the direct and indirect effect of principal integrated leadership, integrating instructional and transformational

leadership, on teacher job satisfaction. The mediating effects of teacher collaboration and teacher professional development were also investigated. The findings suggested that the implementation of ideal instructional and transformational leadership may enhance teacher job satisfaction. Principal integrated leadership may also encourage teachers to collaborate and develop their teacher-related skills leading to the fulfilment of teacher needs and goals and increasing teacher job satisfaction.

This research contributes novel insights to the field of principal leadership and teacher job satisfaction by introducing the concept of integrated leadership. Going beyond traditional models, our study reveals how integrated leadership influences teacher satisfaction, highlighting two key mediators—teacher professional development and collaboration. This fills a significant gap in the literature, offering practical implications for school administrators and policymakers aiming to enhance the overall well-being of educators within educational institutions.

This research can also be basic evidence for policymakers to strengthen principal leadership, especially instructional and transformational leadership. Both leadership styles have been proven to have significant effect on teacher collaboration, professional development, and job satisfaction. This research also suggests key recommendations for improving the educational landscape. Firstly, institutions should invest in leadership development programs to equip principals with a balanced skill set, integrating instructional and transformational leadership. Encouraging regular teacher collaboration and prioritizing continuous professional development are essential for fostering a positive teaching environment. Policymakers are urged to integrate these elements into educational policies to provide a structured foundation for schools. Lastly, establishing robust monitoring and evaluation mechanisms ensures the ongoing effectiveness of these recommendations, fostering a sustained positive impact on teacher job satisfaction.

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Appendix

Integrated Leadership

Transformational Leadership

1. The principal has the capacity and ability to deal with problems that arise in the school.
2. The principal illustrates that we are able to get the job done when done together.
3. The principal leads us by example, not by telling us what to do.
4. My principal models the ideal professional teacher
5. The principal works together with staff and teachers to determine school goals/programs.
6. The principal gives all staff and teachers the opportunity to participate in the schoolwork program.
7. The principal encourages me to develop myself through training, workshops and the like.
8. The principal listens to every opinion of the staff and teachers in running the school program.
9. The principal stimulates me to think independently in order to complete the school program.
10. The principal provides assistance in the form of information when I experience difficulties in carrying out my duties as a teacher.
11. The principal asks us to give our best in carrying out our duties.
12. The principal often emphasizes that teachers are always given high expectations by the community**.**

Instructional Leadership

1. The school, together with stakeholders, formulates the vision and mission of the school that focuses on improving student achievement and socializes the vision and mission to the school community.
2. The school's vision and mission are achieved by involving all staff, teachers and students.
3. The principal ensures the curriculum is in line with the school's learning objectives.
4. The principal is actively involved in improving the quality of learning in the classroom through regular supervision.
5. The principal monitors student learning progress and makes decisions based on student learning outcome data 6.
6. The principal rarely calls teachers to the office during the learning process.
7. The principal often visits classrooms when students are learning or discussing with teachers 7.
8. The principal supports continuous self-development for teachers either through PPG or other trainings.
9. The principal gives appreciation to outstanding teachers or teachers who show good performance.
10. The principal gives appreciation to outstanding students.

Teacher Collaboration

1. Teachers often hold meetings (professional learning community) to improve the quality of the learning process in the classroom.

2. Meetings between teachers (professional learning community) to discuss and improve the quality of learning in the classroom are attended by all teachers.
3. Each teacher is given an equal opportunity to express his or her opinion in the professional learning community meetings that discuss the learning process.
4. Professional learning community meetings make decisions about what learning practices should be initiated, maintained, developed and even discontinued.
5. Decisions in the teachers' meeting (professional learning community) are made in order to improve the quality of learning practices in the classroom and improve student learning outcomes.
6. Every decision made in the teachers' meeting is the result of consensus among all members.
7. Each teacher is committed to applying the results of the professional learning community meetings in their learning.
8. As a result of decision-making, each teacher (professional learning community) will improvise the learning process in the class he/she teaches.
9. Each teacher already has an idea of what he/she should do in the classroom during learning after the teachers' meeting (professional learning community).
10. We often evaluate the learning practices that have been carried out by professional learning community members.
11. We take turns going into the classroom and observing the learning process carried out by other teacher colleagues.
12. We discuss the results of evaluations and observations of the learning process professionally and openly.

Teacher Professional Development

1. I have participated in the teacher professional education program.
2. I have observed the learning process carried out by fellow teachers and provided suggestions and feedback as a result of my observations.
3. I often ask my co-teachers about good learning practices.
4. I usually read educational research journals to improve my learning practices in the classroom.
5. I have attended educational conferences and seminars several times.
6. I often read regulations, tips and other rules related to education and learning practices.
7. I enjoy reading educational books.
8. I often attend learning coaching conducted by fellow teachers.
9. I have received feedback from my co-teachers on how to improve the learning process in my class.
10. I often gain new knowledge through the learning process in the classroom 10.
11. I often do self-reflection to identify problems and challenges in the learning process 11.
12. The textbook I teach is a source of my self-development.
13. I learn from the natural responses of students in the classroom when I teach.
14. My experience as a teacher so far has been a provision for me in developing myself and learning in class.
15. I often ask for suggestions from students and use these suggestions as a basis for improving my learning in the classroom.

Teacher job satisfaction

1. I have a good relationship with the principal.
2. The principal supports and encourages the work that I do.
3. In general, I am happy and satisfied with the good relationship that exists between me and the principal.
4. I have a good relationship with all my fellow teachers in the school where I teach.
5. My colleagues at school support the work that I do 6.
6. In general, I am happy with the good relationships I have with teachers and staff at the school 6.
7. Students at school show good self-discipline.
8. Students in the school exhibit good self-behavior
9. In general, I am satisfied with the attitudes and behaviors of students at school.
10. Parents of students show interest and involvement in educating students at school.
11. Parents provide support and are involved in the success of the school's work program 11.
12. In general, I am satisfied with parents' support for the school 12.