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THE INFLUENCE OF PRINCIPAL INSTRUCTIONAL LEADERSHIP BEHAVIOUR ON THE ORGANISATIONAL COMMITMENT OF JUNIOR HIGH SCHOOL TEACHERS IN SURAKARTA

[1]Sukarmin & [2]Ishak Sin
[1]Postgraduate Department of Physics Education,
Universitas Sebelas Maret, Surakarta, Indonesia
[2]School of Education,
Universiti Utara Malaysia, Kedah Darul Aman, Malaysia

[1]Corresponding author: sukarmin67@staff.uns.ac.id

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ABSTRACT

Purpose – The main objective of this study was to identify the influence of principal instructional leadership on teacher organizational commitment in junior high schools in Surakarta. This issue arises because there are discrepancies in the findings of previous studies as well as the lack of studies in Indonesia. Accordingly, no definitive conclusions can be drawn in relation to this issue which is still pending.

Methodology – This study was conducted by applying a quantitative approach and cross-sectional survey design. A total of 264 teachers participated in this study. They were selected using a stratified random

technique. Two standardized questionnaires namely the Principal Instructional Management Rating Scale (PIMRS) developed by Hallinger and Murphy (1985) and the Organizational Commitment Questionnaire (OCQ) developed by Allen and Meyer (1990) were used to measure principal instructional leadership and teacher commitment to their respective organizations. To analyze the data, SPSS version 26 was used to analyze the descriptive data, while SmartPLS 3.0 was used to analyze the measurement model and hypothesis testing.

Findings – Descriptive statistics showed that the mean score of principal instructional leadership was 3.7 and teacher organizational commitment was 3.3. Both of these mean scores indicated that the level of principal instructional leadership and teacher organizational commitment were at moderate levels. In the assessment of the measurement model, the questionnaires used in the study had acceptable convergent and discriminant validity. Meanwhile, in hypothesis testing, this study found that principal instructional leadership had a moderate influence (β= 0.397) on teacher organizational commitment.

Significance – The findings of this study have contributed to the development of knowledge in the field of instructional leadership and organizational commitment in the context of education in Indonesia. This study suggests that if teachers' commitment to the school/ organization is to be enhanced, school principals should practice extensive instructional leadership.

Keywords: Instructional leadership behaviour, school principal, organizational commitment, school teacher, junior high school.

INTRODUCTION

In the era of the Industrial Revolution 4.0, society is exposed to the use of digital technologies intertwined with big data, the internet of things (IoT), artificial intelligence (AI), and robots in all segments of social affairs (Ahmad Supendi & Nurjanah, 2020; Potocan et al., 2020). The effect of IR4.0 is the existence of Society 5.0 (Fukuyama, 2018). Society 5.0 is a super-smart society whose lives depend on digital technology. This development requires each country to strive to ensure its citizens are skillful and able to produce digital-based equipment to compete with other countries (Fukuyama, 2018; Petrillo et al., 2018; Adebayo et al., 2019; Maman Abdurachman Djauhari, 2019; Ahmad

Supendi & Nurjanah, 2020). To address this challenge, the sector that has been identified to be able to do so is education. Community members believe and are confident that schools are the savior in any crisis facing the community. Over the past three decades, Barth (1990, p. 158) has described the role of schools as "Four walls surrounding the future". In line with the need for acquiring skills in digital aspects, STEM (science, technology, engineering, mathematics), AI, problem-solving, and creative and innovative thinking subjects have been introduced.

For the success of STEM education, problem-solving, creative, and innovative thinking, the role of teachers is important because teachers are the pillars of success. Hattie (2003) stated that teachers' knowledge, skills, and attitudes contribute as much as 30 percent to student achievement. What are the most important teacher attitudes that can contribute to student achievement? Studies over the years have identified that teachers who are experts in their field are contributors to teaching effectiveness, and expert teachers comprise highly committed teachers (Hattie, 2003). Krug (1992), Kushman (1992), and Firestone and Pennel (1993) asserted that teacher commitment cannot be ignored when talking about student academic achievement. This is because commitment is a person's desire to perform tasks beyond expectations for the sake of the organization (Mowday et al., 1982). In line with this, several studies have been conducted to validate this claim. Among them, Altun (2017), Billingsley and Cross (1992), and Kalai et al. (2021) found that teacher commitment is a significant contributor to student academic achievement.

LITERATURE REVIEW

Organizational Commitment

Commitment to the organization is an important variable and thus the focus of researchers. Luthans (2008) stated that organizational commitment is an attitude that reflects staff loyalty to the organization and is an ongoing process in which members express their concern for the organization as well as its continued success and improvement. Kusjainah (2004) stated that staff commitment to the organization can be expressed as the staff's level of willingness to identify themselves with the organization and their desire to continue participating actively in the organization. Furthermore, the term

commitment is often associated with loyalty, devotion, and dedication to the organization where employees work. Every organization requires commitment on the part of its employees, who in turn devote themselves to the organization. This naturally includes a commitment from members of educational institutions to the intellectual life of the nation (Babaoglan, 2016).

Almost a century ago, Hubbard as cited in Wright and Bonnet (2002, p. 1183) stated, "An ounce of loyalty [commitment] is worth a pound of cleverness". Mowday et al. (1982), concluded that commitment to the organization has a positive relationship with individual job performance. Kushman (1992) mentioned that to make a school excellent, teacher commitment is very important, and without teacher commitment, school success is difficult to achieve. Tsui and Cheng (1999) stated that teacher commitment is a force that moves teachers in improving school performance. Garrison and Liston (2004) concluded that teachers with a high level of commitment are always passionate about teaching. Previously, Billingsley and Cross (1992) stated that teacher commitment is at the core of quality education. It has an influence on promoting the teaching profession, work performance, and school and student achievement. Recent studies have also shown that teacher commitment is a crucial factor that impacts student achievement (Altun, 2017; Kalai et al., 2021). However, what is meant by organizational commitment?

Mowday et al. (1982, p. 27) defined commitment to an organization as "the relative strength of an individual's identification with and involvement in a particular organization". According to Mowday et al. (1982), there are three things contained in a commitment to an organization, namely (a) a strong trust and acceptance of the organization, (b) a willingness to perform organizational tasks for the sake of the organization and (c) a strong desire to remain in the organization. While Meyer and Allen (1997) view organizational commitment as consisting of three parts: a) Affective commitment (AC): A desire to be part of the organization because of an emotional bond. b) Continuance commitment (CC): A belief that staying in the organization will be beneficial. c) Normative commitment (NC): A sense of obligation or responsibility to serve the organization.

What makes a person committed to an organization or school? Kushman (1992) found that school conditions are an important factor in determining teacher commitment to the school. The school climate as observed by teachers contributed 63 percent to the variance

of commitment to the organization, while the factor of teachers' involvement in decision-making contributed 19 percent. When student background factors were controlled, it was found that school climate contributed 34.2 percent to the commitment variance.

Previously, Firestone (1990) stated that the difficulty of teachers to measuring the effectiveness of their teaching is a factor that causes teachers to be less committed. This situation occurs because teachers do not know whether their teaching contributes to students' success or vice versa, which causes teachers to feel frustrated, and in turn their commitment to the school declines. Therefore, if teachers are provided with feedback, then their commitment will increase.

Moreover, Firestone (1990) asserted that the ambiguity of tasks and unclear things that teachers need to do will cause them to be skeptical about what and how something should be done, while conflicts of responsibilities and roles will result in disagreements with each other. These factors will hinder teachers' efforts to perform tasks more effectively, and as a result, commitment will decrease. Firestone (1990) affirmed that all workplace environmental conditions in a school are shaped by its administrators. In addition, a teacher's commitment to his or her school will increase if the principal strives to reduce teaching and learning disruptions in the classroom (Firestone, 1990). Long before this, Morris and Steers (1980) found that in formal organizational structures, organizations that adopt a decentralized administrative pattern (decentralization), and interdependent organizational functions, are contributors to commitment to the organization. This situation occurs when subordinates observe that there is a decentralized administrative pattern of practice in the organization; work no longer needs to depend on others, and when there are written work procedures, subordinates will be more committed to the organization. Employees will also be more committed if they feel that they are perceived by superiors as people important to their organization (Steers, 1977). And most interesting is the assertion by Morris and Sherman (1981) that the commitment of subordinates to the organization is related to the leadership style of the leader of the organization.

Instructional Leadership

Of late instructional leadership has become a popular topic and has been the focus of researchers in the education sector as it has been

identified as a leadership theory that has a direct impact on teaching and learning activities (Hallinger & Murphy, 1985; Heck, 1992). Findley and Findley (1992, p. 102) affirmed that "If a school is to be an effective one, it will be because of the instructional leadership of the principal", concurred by Flath (1989, p. 20) who stated that, "Research on effective schools indicates that the principal is pivotal in bringing about the conditions that characterize effective schools". Southworth (2002, p. 88) also asserted, "It is now imperative that school leaders develop and sustain high levels of knowledge and understanding about teaching and learning".

What is instructional leadership? Andrews and Soder (1987) state that instructional leadership is the routine responsibility of a principal in resolving issues related to teaching and learning, and staff development. Whereas Greenfield (1987, p. 60) defined instructional leadership as "… actions undertaken with the intention of developing a productive and satisfying working environment for teachers and desirable learning conditions and outcomes for children". Blase and Blase (2000) described instructional leadership as a set of behaviours including giving advice, providing input, offering effective learning models, soliciting opinions, supporting collaboration, providing professional development, and rewarding or praising effective teaching. Meanwhile, Hallinger et al. (1996) suggested that principals as instructional leaders should focus on building a school environment where teachers can teach more effectively and students can learn better.

Currently, there are many models of instructional leadership that have been established. Yet the instructional leadership model that has been the most focused on by researchers since the 1980s is the instructional leadership model constructed and developed by Hallinger and Murphy (1985). This model contains eleven actions of the principal as an instructional leader namely; 1) Framing school goals, 2) Communicating school goals, 3) Supervising and evaluating instruction, 4) Coordinating curriculum, 5) Monitoring students' progress, 6) Protecting instructional time, 7) Promoting professional development, 8) Maintaining high visibility, 9) Providing incentives for teachers, 10) Enforcing academic standards, 11) Providing incentives for students.

Studies conducted to test this model found that instructional leadership not only affects student academic improvement but also

teacher commitment. Previously a review of studies on instructional leadership between 1980 and 1995 conducted by Hallinger and Heck (1998) concluded that instructional leadership has an impact either directly or indirectly on student academic achievement. In addition, several studies found that instructional leadership contributes namely to student academic improvement (Basri et al., 2017; Heck et al. 1990; Lee et al., 2012; Robinson et al., 2008; Witziers et al., 2003). Other research findings have identified an indirect positive influence of principal instructional leadership on student academic performance through teacher organizational commitment (Geijsel et al., 2003; Hassan et al., 2019; Krug, 1992; Wahab et al., 2020; Wu et al., 2020). In addition, many studies have found a significant relationship between instructional leadership and teacher commitment (Alazmi & Alenezi, 2020; Al-Mahdy et al., 2018; Cansoy et al., 2020; Cilek, 2019; Geijsel et al., 2003; Harahap et al., 2019; Hosseingholizadeh et al., 2020; Krug, 1992; Sugandi et al., 2021). These findings indicate that when principals practice instructional leadership at a high level, there will be an increase in teacher commitment to the school. When the level of teacher commitment to the school increases it will cause teachers to work harder and the results translate into improvement in student academic performance. Therefore, schools with higher levels of instructional leadership have better teacher commitment to the school, and higher student academic performance (Khan et al., 2020).

PROBLEM STATEMENT

Teacher commitment is an important factor in student academic performance (Altun, 2017; Park, 2005; Krug, 1992; Geijsel et al., 2003; Wu et al., 2020). Hattie (2003) stated that the teacher factor is the most dominant factor in student academic performance. Studies have found that teacher commitment is a determining factor in student academic performance. What are the factors that cause teacher commitment to emerge, grow and remain in a teacher? There are many factors that determine the commitment of teachers to the school. Among the factors identified is school leadership.

One of the leadership styles that is often studied is instructional leadership. Studies conducted by Al-Mahdy et al. (2018), Cansoy et al. (2020), Harahap et al. (2019), Hosseingholizadeh et al. (2020), Krug (1992), Sarıkaya and Erdoğan (2016), Sugandi et al. (2021) and Vally et al. (2016) found that principal instructional leadership had an influence on teacher commitment to the school.

However, there are also studies that have found that instructional leadership is not the dominant leadership in influencing teacher commitment. A study conducted by Kiral and Suçiçeği, (2017) found that one of the dimensions of commitment which is continuance commitment had no relationship with the instructional leadership of principals. Pietsch et al. (2018) also found that instructional leadership was not an important factor in teacher organizational commitment because the findings of their study were inconsistent, where one dimension in organizational commitment had a negative relationship with instructional leadership. Similarly, a study conducted by Skelton (2019) found that not all dimensions of instructional leadership had a significant influence on teacher organizational commitment.

Although instructional leadership is crucial to be applied in Indonesian education, to date, no research has been conducted on the role of instructional leadership in Indonesia. Therefore, no definite conclusion can be drawn in relation to the influence of principal instructional leadership on teacher organizational commitment in junior high schools in Surakarta and Indonesia, in general. Apart from that, the discrepancies and inconsistencies of the findings of these studies have raised new questions that is, does the instructional leadership of principals have an influence on the commitment of teachers? Hence, a study is especially necessary to be conducted to identify the influence of instructional leadership of principals on the commitment of teachers in public junior high schools in Surakarta.

METHODOLOGY

Population and Sampling

To achieve the objectives of this study, a cross-sectional survey design with a quantitative research approach was used. A total of 264 teachers from 27 public junior high schools in Surakarta, Indonesia participated in this study. They were selected using a stratified random sampling technique. Stratified sampling was set based on the following criteria: (1) Teachers who had been at their current school for at least two years, and (2) Teachers who taught one of nine subjects: Bahasa Indonesia, science, social studies, civics, mathematics, religion, sports, English, and arts (Jahanian & Bagherpour, 2017). In such instances, stratified random sampling has the advantage of ensuring that the final sample is

distributed proportionately to the population in terms of stratification requirements (Lynn, 2019). In terms of sample size, experts agree that many factors influence the minimum sample size. However, Loehlin (1998) suggests that in using structural equation modeling, the minimum sample size is 200. This group was chosen since they all worked in the same city and shared the same culture, thus there was no difference in their background (Zahed-Babelan, 2019).

Instrumentation

The standardized PIMRS questionnaire constructed by Hallinger and Murphy (1985) was used for principal instructional leadership, while the OCQ developed by Allen and Meyer (1990) was used to measure teacher commitment. Both of these questionnaires are established questionnaires and have been validated by previous researchers. Hallinger and Murphy (1985) reported that the PIMRS questionnaire was a valid questionnaire for measuring principal instructional leadership. Whereas for the OCQ questionnaire, Allen and Meyer (1990) reported that this questionnaire was a valid questionnaire to measure someone's commitment to the organization.

Since both of these questionnaires are originally in English, while the respondents of this study were more comfortable with Bahasa Indonesia, the researchers translated the questionnaire using the back-translation method as suggested by Brislin (1970). The translation process was done by two experts who were proficient in both English and Bahasa Indonesia. Then the questionnaires were tested for reliability using the Cronbach's alpha test. The results of the Cronbach's alpha test found that both questionnaires had a high level of reliability where the PIMRS Cronbach's alpha index was 0.92 and the OCQ was 0.85, respectively. This indicated that both questionnaires were reliable because the values fell within the range of 0.84–0.90 (Taber, 2018).

Data Analysis

To achieve the objectives of this study, two types of data were analyzed, namely descriptive statistics and inferential statistics. SPSS version 26 software was used to analyze descriptive statistics, while SmartPLS 3.0 developed by Ringle et al. (2015) was used to assess the measurement model and hypothesis testing. Convergent validity

and discriminant validity criteria were used in making an assessment of the measurement model. While the bootstrapping method was used to conduct hypothesis testing.

RESULTS

Descriptive Statistics

A total of 264 usable questionnaires were analyzed. Of the 264 participants, 105 (40%) teachers were male and 159 (60%) were female, while 211 (80%) were graduate teachers and 53 (20%) were postgraduate teachers. The mean and standard deviation of the scales used in this study are shown in Table 1 as follows.

Table 1

Mean, Standard Deviation, Skewness, and Kurtosis of the Dimensions of IL and TOC

Variables	Mean	Median	Min	Max	Standard Deviation	Kurtosis	Skewness
A1	24.144	25	7	30	4.12	1.506	-0.981
A2	24.053	25	6	30	4.307	1.4	-1.137
A3	40.182	41	14	55	7.382	0.801	-0.778
A4	28.114	29	7	35	4.626	1.888	-1.071
A5	30.155	30	11	40	4.802	1.32	-0.732
A6	17.572	18	6	25	3.449	1.003	-0.695
A7	16.92	17	5	25	3.765	0.267	-0.511
A8	14.625	15	7	20	2.796	-0.288	-0.07
A9	37.299	37	17	50	6.111	0.199	-0.217
A10	20.034	20	6	25	2.966	1.542	-0.754
A11	15.223	15	4	20	2.858	0.254	-0.344
B1	31.705	32	14	41	4.109	2.374	-0.85
B2	21.47	21	11	32	4.131	-0.545	0.154
B3	20.64	21	9	30	3.375	0.318	-0.416

Table 1 shows that all skewness statistics for IL dimensions and OCQ are between -1.137 and 0.154. Meanwhile, the kurtosis statistics are

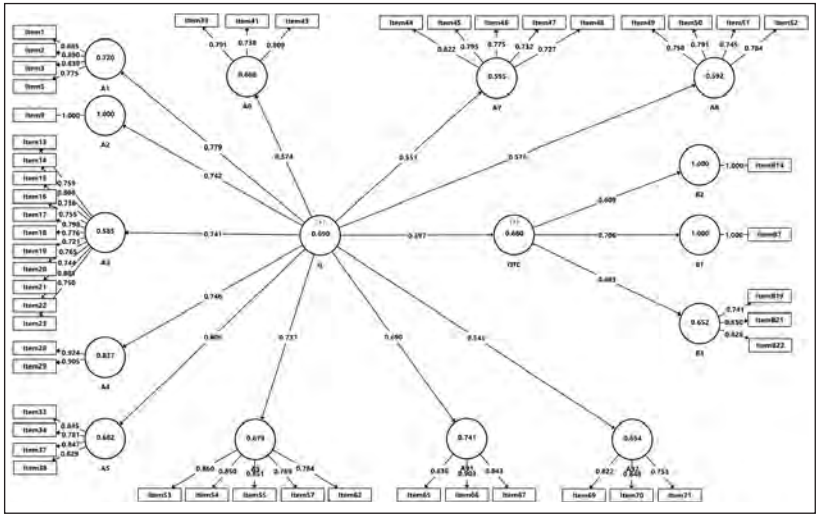
between -0.545 and 1.506, respectively. If the value of the skewness threshold is -2 ≤ skewness ≤ 2 and the kurtosis threshold is -7 ≤ kurtosis ≤ 7, the distribution of data is considered normal (Curran et al., 1996). Based on skewness and kurtosis data, the distribution of the data in this study was considered normal.

Assessment of Measurement and Structural Model

Prior to testing the structural model of the study, this study conducted an assessment of common-method variance (bias) using Harman's one-factor test (Podsakoff et al., 2003). This test was conducted because both independent and dependent data were collected from the same person. The test results of the total variance extracted using principal component analysis in factor analysis was 47.00%. This indicated that the common-method bias issue did not exist. Therefore, data analysis could be continued. Apart from that, this study also conducted an assessment of the measurement model using the SmartPLS 3.0 program developed by Ringle et al. (2015).

Figure 1

Final Reflective-Reflective Measurement and Structural Model of the Study



In testing the validity of the measurement model, this study used indicator loadings, composite reliability (CR), and average variance

extracted (AVE). For indicator loadings the threshold value was .708 or higher, composite reliability (CR) was .70 or higher, and average variance extracted (AVE) had to be .50 or higher (Hair, et al. 2014). To assess discriminant validity, the HTMT criterion was used because according to Henseler (2015), the HTMT criterion is more sensitive to detecting discriminant validity compared to Fornell and Larkers, and the cross-loading criterion. Figure 1 shows the final reflective-reflective measurement and structural model of the study.

Table 2

Convergent Validity of the Final Measurement Model

Variable	Item	Factor Loading	Composite Reliability	Average Variance Extracted (AVE)	Convergent Validity
A1	Item5	0.775	0.911	0.720	Fit
	Item3	0.839			
	Item1	0.885			
	Item2	0.890			
A2	Item9	1.000	1.000	1.000	Fit
A3	Item19	0.721	0.939	0.585	Fit
	Item15	0.736			
	Item21	0.744			
	Item23	0.750			
	Item16	0.755			
	Item13	0.759			
	Item20	0.765			
	Item18	0.776			
	Item17	0.798			
	Item22	0.801			
	Item14	0.808			
A4	Item29	0.905	0.911	0.837	Fit
	Item28	0.924			
A5	Item34	0.781	0.896	0.682	Fit
	Item38	0.829			
	Item33	0.845			
	Item37	0.847			
A6	Item41	0.738	0.823	0.608	Fit
	Item39	0.791			
	Item43	0.809			

(continued)

Variable	Item	Factor Loading	Composite Reliability	Average Variance Extracted (AVE)	Convergent Validity
A7	Item48	0.727	0.880	0.595	Fit
	Item47	0.732			
	Item46	0.775			
	Item45	0.795			
	Item44	0.822			
A8	Item51	0.745	0.853	0.592	Fit
	Item49	0.758			
	Item52	0.784			
	Item50	0.791			
A9	Item57	0.769	0.913	0.679	Fit
	Item62	0.784			
	Item54	0.850			
	Item55	0.851			
	Item53	0.860			
A10	Item65	0.836	0.896	0.741	Fit
	Item67	0.843			
	Item66	0.903			
A11	Item71	0.753	0.850	0.654	Fit
	Item69	0.822			
	Item70	0.848			
IL (HOC)	Item1- Item71 (45 Items)	0.806 - .860	0.918	0.690	Fit
B1	ItemB7	1.000	1.000	1.000	Fit
B2	ItemB14	1.000	1.000	1.000	Fit
B3	ItemB19	0.741	0.849	0.652	Fit
	ItemB22	0.828			
	ItemB21	0.850			
OCQ (HOC)	ItemB7 - ItemB21 (7 items)	0.741 -1.000	0.886	0.660	Fit

Note: All factor loadings for lower-order construct (LOC) >0.708 (Hair et al. 2014). All factor loadings, AVE, and CR are significant at 0.001.

Based on Table 2, outer loadings for A1 (4 items), A2 (1 item), A3 (11 items), A4 (2 items), A5 (4 items), A6 (3 items), A7 (5 items), A8 (4 items), A9 (5 items), A10 (3 items), and A11 (3 items) is between 0.721 to 1.000, while Higher-Order Construct (HOC) namely IL represented by A1, A2, A3, A4, A5, A6, A7, A8, A9, A10, and A11 is between 0.806 and 0.860. All items achieved the threshold point of

.708. The Composite Reliability (CR) of A1, A2, A3, A4, A5, A6, A7, A8, A9, A10, and A11 is between 0.823 and 1.000, and the Average Variance Extracted (AVE) for these dimensions is between 0.585 and 1.000. A total of 29 items were deleted in the final model due to low loadings. The deleted items include Item 4, Item 6, Item 7, Item 8 Item 10, Item 11, Item 12, Item 17, Item 18, Item 20, Item 24, Item 25, Item 26, Item 27, Item 30, Item 31, Item 32, Item 35, Item 36, Item 40, Item 42 Item 56, Item 58, Item 59, Item 60, Item 61, Item 63, Item 64, and Item 68. A total of 42 items of IL were retained. In sum, it can be concluded that the convergent validity of IL and its dimensions were achieved. Regarding the convergent validity of OCQ, all dimensions (B1, B2 & B3) which consisted of five items were with loadings between 0.741 and 1.000, and achieved the threshold point of .708, while the values of CR and AVE for B1, B2 and B3 were 1.000, 0. 849 and 0.652, respectively. However, 16 items were deleted; five items were retained. Therefore, all dimensions and items of OCQ could be considered to fulfill the convergent validity criteria.

Table 3 shows that the HTMT criterion is a a perfect fit. All values of the HTMT criterion are below 0.0891. Gold et al. (2001) proposed that if the value of the HTMT criterion is below 0.90, it can be considered as fulfilling the discriminant validity criteria.

Table 3

Discriminant Validity Using HTMT Criterion

	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	IL	B1	B2	B3	OTC
A1																
A2	0.687															
A3	0.719	0.534														
A4	0.716	0.614	0.767													
A5	0.665	0.479	0.625	0.603												
A6	0.623	0.530	0.749	0.635	0.687											
A7	0.497	0.415	0.800	0.665	0.521	0.804										
A8	0.583	0.547	0.672	0.609	0.503	0.671	0.702									
A9	0.769	0.624	0.720	0.715	0.715	0.757	0.645	0.842								
A10	0.782	0.552	0.761	0.700	0.700	0.746	0.709	0.787	0.891							
A11	0.718	0.531	0.687	0.626	0.626	0.636	0.629	0.753	0.836	0.832						
IL	0.887	0.788	0.807	0.696	0.696	0.737	0.634	0.693	0.832	0.806	0.674					
B1	0.350	0.225	0.272	0.449	0.449	0.348	0.226	0.147	0.375	0.292	0.338	0.367				
B2	0.302	0.211	0.293	0.370	0.370	0.380	0.225	0.224	0.335	0.275	0.236	0.358	0.573			
B3	0.281	0.180	0.283	0.378	0.378	0.416	0.254	0.239	0.339	0.312	0.220	0.361	0.445	0.437		
OCQ	0.436	0.332	0.301	0.471	0.471	0.439	0.280	0.292	0.419	0.396	0.342	0.458	0.772	0.664	0.595	

Note: All the HTMT criterion values <0.90 (Gold et al., 2001).

Hypothesis Testing

The hypothesis of this study is that principal instructional leadership is a significant predictor of teacher commitment to the organization. This hypothesis was tested using SmartPLS 3.0 software developed by Ringle et al. (2015). Table 5 shows the results of the hypothesis testing.

Table 4

Results of Hypothesis Testing

Hypothesis	Relationship	Std Beta	Std Dev.	t-value	P	Decision	R^2 Adjusted	f^2	VIF
H_A	IL⩾OCQ	0.397	0.077	5.139	0.000	Supported	0.154	0.187	1.000

Table 4 shows the index of lateral collinearity based on variance inflator factor (VIF), the index for independent variables IL towards OCQ is 1.000 which is below 3, and it can be interpreted as not concerned with collinearity. Hair et al. (2014) stated that if the VIF index is less than 3, there is no collinearity.

Based on the statistics in Table 5, this study found that instructional leadership is a significant predictor of teacher commitment to school ($\beta = 0.397$ Adjusted $R^2 = 0.154$, $t = 5.139$, $p = 0.001$) whereby instructional leadership explains 15.4 percent of variances in teacher commitment to school (OCQ). Although, the value of f^2 is 0.187, which is smaller than the minimum value (0.35) as recommended by Cohen (1988) to be substantial, the relationship between instructional leadership and teacher commitment cannot be ignored.

DISCUSSION

This study found that principal instructional leadership had a significant influence on teacher commitment. This study supports the findings of studies by Al-Mahdy et al. (2018), Cansoy et al. (2020), Harahap et al. (2019), Hosseingholizadeh et al. (2020), Krug (1992),

Sarıkaya and Erdoğan (2016), Sugandi et al. (2021) and Vally et al. (2016) who found that principal instructional leadership had an influence on teacher commitment to the school.

This influence occurs because when the vision and mission of the school are disseminated by the principal to all members of the school, including parents, then the goals to be achieved become clearer. This will encourage teachers to organize and devise strategies to achieve the goals of the school (Wei et al., 2016). Krug (1992) argues that a school that moves with a vision and mission is easy to achieve goals because teachers are certain of the way forward. This will contribute to teachers being more committed when the principal explains on a regular basis what is to be achieved (Firestone & Pennel, 1993). According to commitment theory, one of the reasons for the existence of commitment in a person is when the assigned task is not vague in terms of its goals (Reyes, 1992).

In addition, the influence of instructional leadership on teacher commitment also occurs because according to organizational commitment theory, the actions of school leaders providing a conducive school environment directly affect teachers' commitment to the organization (Reyes, 1992). Firestone and Pennel (1993) suggested that workplace conditions that are conducive to teaching and learning will cause teachers to go the extra mile. Among the actions to provide a conducive school, the environment is to protect instructional time. Protecting instructional time means teachers' teaching time is not interrupted. This makes teachers feel that their autonomy in teaching and learning is guaranteed (Firestone & Pennel, 1993). As a result, teachers are able to focus on their teaching, and in turn, teachers become more committed to continuing teaching effectively. Krug (1992) also stated that school principals who provide a conducive environment for teaching and learning will enable teachers to devote all their energy to teaching. A greater focus on teaching is an important element of commitment to school effectiveness. Mowday et al. (1982) asserted that extra effort is an integral part of organizational commitment. Actions to ensure that the school environment is orderly and structured is a routine act of instructional leadership. According to instructional leadership theory, the routine actions of instructional leaders are to provide a conducive school environment to ensure that teaching and learning run smoothly and are not interrupted by any unwanted elements (Hallinger & Murphy, 1985).

In addition to a conducive school environment, Reyes (1992) theorized that supervision conducted by school principals also has a positive impact on the increase in teachers' commitment. This is because the supervision of teachers' teaching in the classroom will result in teachers obtaining first-hand feedback from the school leader. This feedback will increase teacher commitment (Firestone & Pennel, 1993; Hackman & Oldham, 1980). Personalized formative feedback is more strongly related to commitment (Elstad et al., 2021). According to the theory of instructional leadership, supervision is a responsibility that must be conducted by the principal to help teachers to be more skillful in teaching and learning. According to Krug (1992, pp. 433), "an effective instructional leader is prospective rather than retrospective regarding staff and is focused on what can be, not what was". Therefore, teachers who are constantly supervised will elevate their teaching efficacy and in turn, contribute to commitment.

In addition to supervision, staff development programs also have an impact on commitment (Bashir & Long, 2015; Bodjrenou et al., 2019; Caldwell et al., 1990; Maiti et al., 2021). This situation occurs because staff development programs are usually conducted to improve knowledge, skills, and attitude. In the aspect of developing a positive attitude, issues of the role of teachers in facing the future of a society that are difficult to predict are highlighted. Etzioni (1961) stated that staff development programs are quite useful because it is a way to enable teachers to be more committed to the school.

In addition, other functions of instructional leadership such as coordinating the school curriculum and co-curricular programs can also have an impact on increasing teacher commitment. One of the functions of curriculum coordination is to provide information and resources needed by teachers to implement smooth and effective teaching (Krug, 1992). Principals need to understand the importance of activity-based teaching in science subjects. Therefore, equipping science laboratories with apparatus and chemicals is a basic requirement to make science teaching more effective. This action will result in the more efficient management of teaching and learning with minimal disruption in its implementation. This in turn will make teachers more committed to conducting effective teaching.

In addition, monitoring and evaluating student progress is also an instructional leadership action that affects teacher commitment.

Krug (1992) argues that monitoring and evaluating student progress is intended to ensure that students upon completion of school will achieve the goals expected by parents. Therefore, to ensure the quality of the product as per the client's charter, the principal must conduct supervision to identify the progress of the students. This important monitoring and evaluation information is used for follow-up action by teachers and parents. The effectiveness of follow-up actions will cause teachers to feel they have contributed something valuable to students and the school. Conducting follow-up action is part of the teacher's obligation to the school that reflects a commitment to the school.

In addition, incentives to students can also enhance the commitment of teachers. This situation occurs because students who receive incentives will become more motivated and in turn improve their performance. This increase in performance causes teachers to become more committed to performing their responsibilities effectively because indirectly the success of students is due to the extra effort that teachers put in (Firestone & Pennel, 1993). Similarly, when teachers are rewarded and recognized, teacher commitment will increase. Bateman and Strasser (1984) found that teacher commitment increased when teachers' work performance was recognized by the leadership.

RECOMMENDATIONS

This study found that principal instructional leadership had a significant influence on teacher commitment. Therefore, if a school intends to increase the commitment of its teachers who are at a moderate level, then the school principal is advised to practice instructional leadership more extensively, without delay. To the ministry of education, it is recommended that school principals be trained in the aspect of instructional leadership because this study has found that instructional leadership can increase teacher commitment to the school, and at the same time improve student academic performance.

LIMITATIONS

Although this study found that the instructional leadership of principals has a significant influence on teacher commitment, the findings of

this study are not conclusive. Therefore, further research should be conducted so that the findings of this study can be generalized to the whole of Indonesia.

In addition, this study only focused on junior high school teachers in Surakarta. Therefore, to confirm the findings of this study, it is recommended that further studies be conducted throughout Indonesia and include primary schools so that the influence of principal instructional leadership on teacher commitment is clearer.
Apart from that, although the issue of common-method bias did not occur in this study, for future studies, this study recommends that researchers use a split-sample technique and a mixed-method approach.

CONCLUSION

The following conclusions can be drawn from this study: (1) Most of the principals displayed good instructional leadership behaviour, except for two indicators – protecting instructional time and maintaining high visibility – for which the teachers gave a moderate response. (2) Overall, the level of teacher commitment to the school is at a moderate level. (3) Principal instructional leadership behaviour has a significant influence on teacher commitment.

REFERENCES

Adebayo, A. O., Chaubey, M. S., & Numbu, L. P. (2019). Industry 4.0: The fourth industrial revolution and how it relates to the application of internet of things (IoT). *Journal of Multidisciplinary Engineering Science Studies, 5*(2), 2477–2482.

Ahmad Supendi & Nurjanah. (2020). Society 5.0: Is it high-order thinking? *Proceedings of the 2nd International Conference on Elementary Education, 2*(1), pp. 1054-1059.

Alazmi, A. A., & Alenezi, A. S. (2020). Exploring the mediating role of trust in principal on the relationship between organizational justice and teacher commitment in Kuwait. *International Journal of Leadership in Education*. https://doi.org/10.1080/13603124.2020.1832705

Allen, N. J. & Meyer, J. P. (1990). The measurement and antecedents of affective, continuance, and normative commitment to the organization. *Journal of Occupational Psychology, 63*(1), 1–8.

Al-Mahdy, Y. F. H., Emam, M. M., & Hallinger, P. (2018). Assessing the contribution of principal instructional leadership and collective teacher efficacy to teacher commitment in Oman. *Teaching and Teacher Education*, *69*, 191–201. https://doi.org/10.1016/j.tate.2017.10.007

Altun, M. (2017). The effects of teacher commitment on student achievement: A case study in Iraq. *International Journal of Academic Research in Business and Social Sciences, 7*(11), 417–426.

Andrews, R., & Soder, R. (1987). Principal instructional leadership and school achievement. *Educational Leadership, 44*, 9–11.

Babaoglan, E. (2016). The predictive power of organizational trust to organizational commitment in elementary and high school teachers. *The Anthropologist*, *24*(1), 83–89. https://doi.org/10.1080/09720073.2016.11891992

Barth, R. S. (1990). *Improving schools from within: Teachers, parents, and principals can make the difference*. Jossey-Bass.

Bashir, N., & Long, C. S. (2015). The relationship between training and organizational commitment among academicians in Malaysia. *Journal of Management Development, 34*(10), 1227–1245. https://doi.org/10.1108/JMD-01-2015-0008

Basri, R., Bakar, N. A., & Fooi, F. S. (2017). Hubungan kepimpinan pengajaran pengetua dengan pencapaian akademik pelajar. *International Research Journal of Education and Sciences, 1*(1), 60–70.

Bateman, T. S., & Strasser, S. (1984). A longitudinal analysis of the antecedents of organizational commitment. *Academy of Management Journal, 27*(1), 95–112. https://doi.org/10.5465/255959

Billingsley, B. S., & Cross, L. H. (1992). Predictors of commitment, job satisfaction, and intent to stay in teaching: A comparison of general and special educators. *The Journal of Special Education, 25*(4), 453–471.

Blase, J., & Blase, J. (2000). Effective instructional leadership: Teachers' perspectives on how principals promote teaching and learning in schools. *Journal of Educational Administration, 38*(2), 130–141.

Bodjrenou, K., Xu, M., & Bomboma, K. (2019). Antecedents of organizational commitment: A review of personal and

organizational factors. *Open Journal of Social Sciences, 7(5)*, 276–289. https://doi.org/10.4236/jss.2019.75024

Brislin, R. W. (1970). Back-translation for cross-cultural research. *Journal of Cross-Cultural Psychology, 1*(3), 185–216. https://doi.org/10.1177/135910457000100301

Caldwell, D. F., Chatman, J. A., & O'Reilly, C. A. (1990). Building organizational commitment: A multi-firm study. *Journal of Occupational Psychology*, *63*(3), 245–261.

Cansoy, R., Parlar, H., & Polatcan, M. (2020). Collective teacher efficacy as a mediator in the relationship between instructional leadership and teacher commitment. *International Journal of Leadership in Education*, 1–19. https://doi.org/10.1080/13603124.2019.1708470

Cilek, A. (2019). The effect of leadership on organizational commitment: A meta-analysis. *Cypriot Journal of Educational Sciences, 14*(4), 554–564. https://doi.org/https://doi org/10.18844/cjes.v11i4.4244

Cohen, J. (1988). *Statistical power analysis for the behavioral science* (2nd ed.). Lawrence Erlbaum Associates.

Curran, P. J., West, S. G., & Finch, J. F. (1996). The robustness of test statistics to nonmorality and specification error in confirmatory factor analysis. *Psychological Methods*, *1*(1), 16–29.

Elstad, E., Juuti, K., Christophersen, K-A., Solhaug, T., & Turmo, A. (2021). Antecedents of student teachers' commitment to the teaching profession in Finland and Norway. *Nordic Studies in Education, 41*(3), 261–278. https://doi.org/10.23865/nse.v41.3073

Etzioni, A. (1961). *A comparative analysis of complex organizations: On power, involvement, and their correlates*. Free Press of Glencoe.

Findley, B., & Findley, D. (1992). Effective schools: The role of the principal. *Contemporary Education*, *63*(2), 102–104.

Firestone, W. A. (1990). The commitments of teachers: Implications for policy, administration, and research. In S. B. Bacharach (Ed.), *Advances in research and theories of school management and educational policy* (1, pp. 151–183). JAI Press Inc.

Firestone, W. A., & Pennel, J. R. (1993). Teacher commitment, working conditions, and differential incentive policies. *Review of Educational Research, 63*(4), 489–525.

Flath, B. (1989). The principal as instructional leader. *ATA Magazines, 69*(3), 19–22, 47–49.

Fukuyama, M. (2018). Society 5.0: Aiming for a new human-centered society. *Japan SPOTLIGHT • July / August 2018*, 47–50

Garrison, J., & Liston, D. (2004). *Teaching, learning, and loving*. Teachers College Press.

Geijsel, F., Sleegers, P., Leithwood, K., & Jantzi, D. (2003). Transformational leadership effects on teachers' commitment and effort toward school reform. *Journal of Educational Administration, 41*(3), 228–256.

Gold, A. H., Malhotra, A., & Segars, A. H. (2001). Knowledge management: An organizational capabilities perspective. *Journal of Management Information Systems*, *18*(1), 85–214.

Greenfield, W. (1987). Moral imagination and interpersonal competence. In W. Greenfield (Ed.), *Instructional leadership: Concepts, issues, and controversies* (pp. 56–73). Allyn & Bacon.

Hackman, J. R., & Oldham, G. R. (1980). *Work redesign*. Addison-Wesley.

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2014). *A primer partial least squares structural equation modeling (PLS-SEM)*. SAGE.

Hallinger, P., & Heck, R. H. (1998). Exploring the principal's contribution to school effectiveness: 1980-1995. School effectiveness and school improvement. *An International Journal of Research, Policy and Practice*, *9*, 157-191. http://dx.doi.org/10.1080/0924345980090203

Hallinger, P., & Murphy, J. (1985). Assessing the instructional leadership behavior of principals. *Elementary School Journal, 86*(2), 217–248.

Hallinger, P., Bickman, L., & Davis, K. (1996). School context, principal leadership, and student reading achievement. *Elementary School Journal, 96*(5), 527–550.

Harahap, M. E., Suriansyah, A., & Suhaimi. (2019). Relationship of instructional leadership, organizational climate and teacher's commitment to job satisfaction. *Journal of K6, Education, and Management, 2*(4), 260–270. https://doi.org/10.11594/jk6em.02.04.01

Hassan, R., Ahmad, J., & Boon, Y. (2019). Instructional leadership in Malaysia. *International Journal of Engineering and Advanced Technology*, *8*(6 Special Issue 3), 537–547. https://doi.org/10.35940/ijeat.F1096.0986S319

Hattie, J. A. C. (2003). *Teachers make a difference: What is the research evidence?* Paper presented at 2003 Building

teacher quality: What does the research tell us? Australian Council for Educational Research Conference, Melbourne, Australia. Retrieved from http://research.acer.edu.au/research_conference_2003/4/

Heck, R. H. (1992). Principals' instructional leadership and school performance: Implications for policy development. *Educational Evaluation and Policy Analysis*, *14*(1), 21–34.

Heck, R. H., Larsen, T. J., & Marcoulides, G. A. (1990). Instructional leadership and school achievement: Validation of a causal model. *Educational Administration Quarterly, 26*(2), 94–125.

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science, 43*(1), 115–135. http://doi.org/10.1007/s11747-014-0403-8

Hosseingholizadeh, R., Amrahi, A., & El-Farr, H. (2020). Instructional leadership, and teacher's collective efficacy, commitment, and professional learning in primary schools: A mediation model. *Professional Development in Education (Online),* 1–18 https://doi.org/10.1080/19415257.2020.1850510

Jahanian, R., & Bagherpour, T. (2017). The effects of different types of educational evaluation on preschoolers' creativity in Karaj. *International Journal of Learning*, *3*(1), 69–72. https://doi.org/doi:10.18178/IJLT.3.1.69-72

Kalai, I. E., Kirmi, B., & Lhassan, I. A. (2021). Investigating the effect of teacher commitment on student academic achievement: The case of Moroccan high schools in Tangier. *International Journal of Research in Business and Social Science, 10*(8), 350–363.

Khan, A. A., Asimiran, S., Kadir, S. A., & Noormi, S. (2020). Instructional leadership and students academic performance: Mediating effects of teacher's organizational commitment. *International Journal of Learning, Teaching and Educational Research*, *19*(10), 233–247. https://doi.org/10.26803/ijlter.19.10.13

Kiral, E., & Suçiçeği, A. (2017). The relationship between teachers' perception of school principals' instructional leadership and organisational commitment level. *International Journal of Psycho-Educational Sciences, 6*(1), 95–109.

Krug, S. E. (1992). Instructional leadership: A constructivist perspective. *Educational Administration Quarterly, 28,* 430–443. https://doi.org/10.1177/0013161X92028003012

Kushman, J. W. (1992). The organizational dynamics of teacher workplace commitment: A study of urban elementary and middle schools. *Educational Administration Quarterly, 28,* 5–42. https://doi.org/10.1177/0013161X92028001002

Kusjainah. (2004). Pengaruh iklim organisasi terhadap komitmen karyawan. *KOMPAK*. Nomor 12, September-Desember, 454–476.

Lee, M., Walker, A., & Chui, Y. K. (2012). Contrasting effects of instructional leadership practices on student learning in a high accountability context. *Journal of Educational Administration, 50*(5), 586–611. https://doi.org/10.1108/09578231211249835

Lynn, P. (2019). The advantage and disadvantage of implicitly stratified sampling. Methods, data, analyses: A journal for quantitative methods and survey methodology (mda), *13*(2), 253-266. https://doi.org/10.12758/mda.2018.02

Loehlin, J. C. (1998). *Latent variable models: An introduction to factor, path, and structural analysis*. Lawrence Erlbaum Associates.

Luthans, F. (2008). *Organizational behavior.* McGraw Hill.

Maiti, R. B., Sanyal, S. N., & Mazumber, R. (2021). Antecedents and consequences of organizational commitment in school education sector. *International Journal of Organizational Analysis*, *29*(3), 716–735. https://doi.org/10.1108/IJOA-02-2020-2041

Maman Abdurachman Djauhari. (2019). *Higher education in small world era: Challenges and opportunities*. International Seminar and Workshop on Education, Harmony Hotel, Cipanas, Garut, Indonesia, 23 February 2019.

Meyer, J. P., & Allen, N. J. (1997). *Commitment in the workplace: Theory, research and applications*. Sage.

Morris, J. H., & Sherman, J. D. (1981). Generalizability of an organizational commitment model. *Academy of Management Journal, 24*(3), 512–526.

Morris, J. H., & Steers, R. M. (1980). Structural influence on organizational commitment. *Journal of Vocational Behavior, 17*(1), 50–57.

Mowday, R. T., Porter, L. W., & Steers, R. M. (1982). *Employee-organization linkages: The psychology of commitment, absenteeism and turnover*. Academic Press.

Park, I. (2005). Teacher commitment and its effects on student achievement in American high schools. *Educational Research and Evaluation, 11*(5), 461–485. https://doi.org/10.1080/13803610500146269

Petrillo, A., De Felice, F., Cioffi, R., & Zomparelli, F. (February 28th 2018). Fourth Industrial Revolution: Current practices, challenges, and opportunities. Digital Transformation in Smart Manufacturing, IntechOpen. https://doi.org/10.5772/intechopen.72304. Available from: https://www.intechopen.com/books/digital-transformation-in-smart-manufacturing/fourth-industrial-revolution-current-practices-challenges-and-opportunities

Pietsch, M., Tulowitzki, P., & Koch, T. (2018). On the differential and shared effects of leadership for learning on teachers' organizational commitment and job satisfaction: A multi-level perspective. *Educational Administration Quarterly, 0013161X1880634.* https://doi.org/10.1177/0013161X18806346

Podsakoff, P. M., MacKenzie, S. B., Lee, J-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879–903.

Potocan, V., Mulej, M., & Nedelko, Z. (2020). *Society 5.0: Balancing of Industry 4.0, economic advancement and social problems*. Kybernetes Emerald Publishing Limited 0368-492X. https://doi.org/10.1108/K-12-2019-0858

Reyes, P. (1992). *Preliminary models of teacher organizational commitment: Implications for restructuring the workplace*. Office of Educational Research and Improvement (ED), Washington, DC. ERIC Document no: ED 349 680

Ringle, C. M., Wende, S., & Becker, J.-M. (2015). *SmartPLS 3*. Boenningstedt: SmartPLS GmbH. http://www.smartpls.com.

Robinson, V., Lloyd, C., & Rowe, K. (2008). The Impact of leadership on student outcomes: An analysis of the differential effects of leadership types. *Educational Administration Quarterly, 44*(5), 635–674.

Sarıkaya, N., & Erdoğan, C. (2016). Relationship between the instructional leadership behaviors of high school principals and teachers' organizational commitment. *Journal of Education and Practice, 7*(3), 72–82.

Skelton, M. T. (2019). *The relationship between instructional leadership and organizational commitment of teachers*. College of Education Louisiana Tech University. Dissertation. 43. https://digitalcommons.latech.edu/dissertations/43.

Southworth, G. (2002). Instructional leadership in schools: Reflections and empirical evidence. *School Leadership and Management, 22*(1), 73–92.

Steers, R. M. (1977). Antecedents and outcomes of organizational commitment. *Administrative Science Quarterly, 22*(1), 46–56.

Sugandi, B., Tadesse, E., & Ghassani, N. (2021). A correlation study between principals' instructional leadership practice and teachers' organizational commitment in Yogyakarta province, Indonesia. *International Journal of Scientific & Technology Research*, *10*(06), 77–93.

Taber, K. S. (2018). The use of Cronbach's alpha when developing and reporting research instruments in Science education. *Research in Science Education, 48*(6), 1273–1296. https://doi.org/10.1007/s11165-016-9602-2

Tsui, K. T., & Cheng, Y. C. (1999). School organizational health and teacher commitment: A contingency study with multi-level analysis. *Educational Research and Evaluation, 5,* 249–268.

Vally, G. V. S., Khadijah Daud., & Subramanian, S. (2016). Reality on instructional leadership and commitment of teachers: A preliminary study. *Journal of Education and Social Sciences, 3*(Feb.), 123–127.

Wahab, J. A., Mansor, A. Z., Hussin, M., & Kumarasamy, S. (2020). Headmasters' instructional leadership and its relationship with teachers' performance. *Universal Journal of Educational Research*, *8*(11A), 97–102. https://doi.org/10.13189/ujer.2020.082112

Wei, F., Lee, J., & Kwan, H. K. (2016). Impact of active constructive leadership and passive corrective leadership on collective organizational commitment. *Leadership & Organization Development Journal, 37*(7), 822–842. https://doi.org/10.1108/LODJ-08-2014-0150

Witziers, B., Bosker, R. J., & Krüger, M. L. (2003). Educational leadership and student achievement: The elusive search for an association. *Educational Administration Quarterly, 39*(3), 398–425.

Wright, T. A., & Bonnet, D. G. (2002). The moderating effects of employee tenure on the relation between organizational commitment and job performance: A meta-analysis. *Journal of Applied Psychology, 87*(6), 1183–1190.

Wu, H., Shen, J., Zhang, Y., & Zheng, Y. (2020). Examining the effect of principal leadership on student science achievement. *International Journal of Science Education, 42*(6), 1017–1039. https://doi.org/10.1080/09500693.2020.1747664

Zahed-Babelan, A., Koulaei, G., Moeinikia, M., & Sharif, A. R. (2019). Instructional leadership effects on teachers' work engagement: Roles of school culture, empowerment, and job characteristics. *Center for Educational Policy Studies Journal, 9*(3), 137–156. https://doi.org/10.26529/cepsj.181