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## **The role of servant leadership and work engagement in improving extra-role behaviour and teacher performance**

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**Abstract:** The maximum performance of the teachers is a strategic key for schools to realise the objectives of their organisations. This study aimed to provide empirical evidence regarding several essential factors that affect teacher performance, i.e. servant leadership, work engagement, and extra-role behaviour. Besides, this study also investigated the direct and indirect effects of servant leadership behaviour on improving the performance of permanent teachers in high schools and vocational high schools of the cities in East Java and the eastern part of Central Java. Using the t-test and path analysis with the p-values < 0.050 and all t-values > 2.000, the results obtained was that the practice of servant leadership principals directly and positively affects work engagement, extra-role behaviour, and teacher performance. The results of the tests proved that extra-role behaviour and employee performance could be improved through the practice of servant leadership and increased work engagement.

**Keywords:** servant leadership; work engagement; extra-role behaviour; ERB; teacher performance.

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## **1 Introduction**

Teacher performance is an essential factor in determining the learning quality in schools. It affects the quality of educational output because the teachers are the educational leaders who determine the success of the learning process in the classroom. The leadership roles were reflected in how teachers perform their roles and duties. Performance represents the act of presenting or carrying out an activity. Therefore, performance is often interpreted as work performance or behaviour. Employee performance (EP) in organisations is crucial in their personal development and the organisation's ability to play an optimal role in society. Likewise, teacher performance will determine the quality of the school as an educational organisation. Optimal performance gains in educational organisations require effective performance management and educators who have work engagement (WE) and high extra-role behaviour (ERB). WE is crucial for teachers to improve and maintain the quality of education (Aprilia and Katiara, 2020). Furthermore, teacher engagement may improve interaction and behaviours between teachers and students (Jackson, 2018).

Managing EP is an organisational effort to assist employees in achieving their goals in the context of increasing performance contributions to the organisation. Managing EP requires quality management because quality management practices had a positive impact on quality performance (Sundar and Prabhu, 2019). Singh et al. (2019) revealed that top management support, workforce commitment, people management, and workplace organisation are directly related to organisational (business) performance. One of the aspects of organisational management that plays an essential role in this process is the practice of organisational leadership. Leadership is the key to organisational success because the leader is the entity that directs the performance of subordinates to achieve organisational goals. Leadership style influences the total quality management of an organisation. Soliman (2018) found that charismatic leadership style has a significant impact on total quality management. Leaders have a leading role in several phases of the innovation process to increase productivity (Kiaei et al., 2018).

Positive leader behaviour is fundamental to develop a conducive work environment and shape a motivational climate for subordinates to produce high performance. Servant leadership (SL) is a contemporary leadership behaviour that is considered capable of driving organisational performance in various sectors, including educational organisations. Northouse (2013) focused his studies on leadership from the perspective of leaders and their behaviour and emphasised attention to the problem of subordinates, empathy, and developing subordinates. Several noteworthy pieces of research in the field of organisational studies in the last decades has given special attention to the leader's role

as a servant who put the needs of others first to foster positive organisational outcomes (Lapointe and Vandenberghe, 2018; Liu, 2019; Newman et al., 2017). Leaders may need to enhance their levels of engagement, since it may impact their leadership, as well as subordinate engagement through emotional contagion, role modelling, and social exchange processes (Decuyper and Schaufeli, 2019). Scholars distinguished the difference between in-role and ERBs in the relationship between SL and individual performance (Saleem et al., 2020). A study conducted on 319 permanent teachers from 27 high schools and vocational high schools in Madiun City and Madiun District showed that SL could promote the growth of employee engagement (EE), organisational justice, ERB, and teacher performance (Srimulyani et al., 2016). Likewise, Zehir et al. (2013) in their study of 300 respondents from private educational institutions in Turkey, proved that SL had an indirect impact on ERB and job performance with organisational justice as mediator.

As a leader, the school principal should be able to influence the attitudes and behaviour of the teachers so they can improve their WE and ERB. WE is an essential factor needed by organisations to improve EP and organisational success. WE is a perspective in a positive psychology approach in organisations (Shaleh, 2016). Employees who are fully committed to their work can bring positive influence to the organisational environment. WE is a passionate condition at work characterised by a spirit (vigour), dedication, and absorption in work (Schaufeli and Bakker, 2004). Employees who are fully engaged in their work (work engagement) and organisation (organisation engagement) will be able to contribute to the success of the organisation in the competition and the challenges of the shifting environment. Yongxing et al. (2017) found that WE was positively and significantly related to objective task performance. Furthermore, the relationship between the two was significantly moderated by the perception of organisational support (POS). Various empirical studies have found that WE is very important for organisations for their contributions (Demerouti et al., 2010; Macey and Schneider, 2008). WE has been proved to be positively related to job performance as assessed by supervisors (Bakker and Bal, 2010; Halbesleben and Wheeler, 2008), financial results (Xanthopoulou et al., 2009), and client satisfaction (Salanova et al., 2005).

With the recent increasing demands faced by schools, school administrators need ERB for teachers to achieve school goals amid increasingly fierce competition in education services. High ERB is reflected in the teachers' behaviour, loyalty, and contribution outside their primary role in the workplace. Robbins and Judge (2008) defined ERB as "a chosen behaviour that is not part of an employee's formal work obligations, but supports the functioning of the organisation effectively." Therefore, ERB is essential to create and improve organisational effectiveness through group effectiveness by influencing the organisation's social and psychological commitment. Previous research showed that ERB is a crucial part and predictor of WE. Furthermore, the empirical study by Rizki et al. (2019) found a positive and significant effect of ERB on EP. Other empirical research showed that school effectiveness significantly and positively correlates with all dimensions of teachers' organisational citizenship behaviours (OCBs), as well as significantly and negatively correlated with stress (Karabatak et al., 2018).

Thus, WE and ERB become an interesting problem to study because the organisation today requires employees to perform optimally and loyally to survive and develop their careers, especially organisations in educational services in this digital age. The main

objective of this study was to find out how SL behaviour can increase the WE and ERB of teachers. This study also aimed to find out the direct and indirect impact of SL on improving the performance of permanent teachers in public and private high schools and vocational schools in East and Central Java.

## **2 Materials and methods**

### *2.1 Servant leadership*

All subordinate wants a leader who can protect and lead them to a better direction and. In line with these expectations, Greenleaf introduced the SL, which is a leadership concept that emphasises the role of a leader as a ‘steward’ who encourages others to serve as well as protects the subordinate to achieve the main objective (vision and mission) of the organisation. Laub (1999) defined SL as the leadership knowledge and practice that prioritises the development of the subordinates rather than the personal interests of the leader. The SL approach is a leadership model that focuses on developing the full potential of employees to achieve a productive respective task field, the development of service communities, an increase in self-motivation, and the development of future leadership abilities (Liden et al., 2008). The current study used five dimensions of SL measurement by Barbuto and Wheeler (2006), namely altruistic calling, emotional healing, wisdom, persuasive mapping, and organisational stewardship. We also added three additional dimensions developed by Wong and Page (2003), namely service, humility, and vision. SL strongly predicted affective trust, OCBs, and task performance of subordinates. Meanwhile, affective trust fully mediates SL’s effect on task performance and partially mediates SL’s effect on subordinates’ OCB (Saleem et al., 2020). Santosa et al. (2018) revealed that SL and school organisational culture simultaneously and significantly influence teachers performance. Other studies showed that the SL behaviours of the school administrators have a significant effect on teachers’ organisational commitment (Türkmen and Gül, 2017).

The explanations of the SL dimensions used in this research are as follows.

- a Wisdom describes leaders who can easily identify occurring phenomena in the organisational environment. They are good at understanding the situation and its implications.
- b Humility describes the humility of leaders who place and value others’ achievements more than their own achievements.
- c Altruistic calling describes the strong desire of leaders to make a positive difference in others’ lives, put others’ interests above their interests, and work hard to meet the subordinates’ needs.
- d Emotional healing describes the leaders’ commitment to improve and restore the subordinates’ enthusiasm.
- e Persuasive mapping describes the leaders’ ability to map problems, conceptualise future chances, and persuade others to take action while articulating an opportunity.
- f Organisational stewardship describes the extent to which leaders prepare their organisations to make positive contributions to society.

- g Vision describes the extent to which leaders build the commitment of all members of the organisation to the shared vision by inviting them to participate in determining the future direction of the organisation.
- h Service describes how service is seen as the core of leadership, and leaders show service behaviour to their subordinates.

## 2.2 *Work engagement*

It is not an easy task to make employees feel involved with their organisations. Organisations need to inspire and strengthen the employees' ability, so they are willing to commit their abilities fully. Committed workers are those who are willing and able to fully invest themselves in their work roles, proactive, and committed to meeting high-performance standards (Bakker and Leiter, 2010). Schaufeli and Bakker (2004) defined WE as a passionate condition at work. The main character of WE is the presence of enthusiasm (vigour), dedication, and dissolution (absorption) in work. Engagement to organisations is affected by several factors, such as emotional and rational attitudes, and is related to overall employment and work experience. Aprilia and Katiara (2020) stated that there is a significant positive correlation between workplace devoutness and work engagement of high school teachers. Finally, Schaufeli and Bakker (2004) described the dimensions used to measure WE, namely:

- a Vigour is an intense outpour of energy and mentality during work. Employees strive to complete their work, persevere in facing work difficulties, and have a strong willingness to invest all efforts in work.
- b Dedication is a feeling of being very involved in work. Employees feel meaningful, enthusiastic, pride, inspired and challenged at work.
- c Absorption is an attitude of full concentration. Employees are serious when working, so time passes quickly. It is hard to separate themselves from their work.

## 2.3 *Extra-role behaviour*

ERB is individual behaviour that reflects fulfilment based on performance. It is not based on a formal request and does not expect material (money) compensation. ERB is also interpreted as voluntary behaviour and unforced action which prioritises the interests and achievement of organisational goals. ERB is influenced by two main factors, namely internal factors (job satisfaction, commitment, personality, employee morale, motivation, etc.) and external factors (leadership style, organisational culture, etc.) (Fatoni et al., 2018). OCB is a behaviour that contributes to organisational goals that underline the social and psychological environment (Rotundo and Sackett, 2002). Barzoki and Rezaei (2017) found a negative relationship between ERB and intention to quit; and a positive relationship between ERB and organisational trust. Other empirical research indicates that OCB or ERB has a positive and significant effect on EP (Dwomoh et al., 2019).

The dimensions used to measure ERB in this study referred to Organ et al. (2005):

- 1 Altruism is the inclination of employees to help co-workers to minimise work and personal problems.
- 2 Courtesy is the polite behaviour and employee's effort to foster good relationships with co-workers to avoid interpersonal problems.
- 3 Conscientiousness is the employee's striving to exceed organisational expectations, voluntary awareness of extra responsibilities, willingness to go beyond the formal tasks, on time, and ensure to the quality of tasks without considering the benefits.
- 4 Sportsmanship is the employee's tolerance for discomfort in the organisation without protests, thereby creating a positive work atmosphere.
- 5 Civic virtue is employees' dedication to organisational roles, such as the willingness to adjust to organisational change and initiative to provide positive input for organisational development.

#### 2.4 *Employee performance*

EP is the result of work accomplished by employees according to the organisations' standards and requirements. Motowidlo and Van Scotter (1994) define task performance as "the officially required outcomes and behaviours that directly serve the goals of the organisation." Performance is the quantity or quality of goods produced or services provided by someone who does work (Luthans, 2011). It is also defined as individual competence based on knowledge, skills, attitude, and motivation to produce outcomes.

This study defines EP as the task performance of the teacher. From now on, it is referred to as 'teacher performance'. Given the fact that teacher appraisal can be the key to improve the quality of teaching, then understanding the various aspects of successful performance appraisal is essential (Elliott, 2015). According to the OECD, there are four critical elements in developing an effective performance appraisal system (Isoré, 2009):

- 1 teachers are involved in the process
- 2 stakeholders understand the process and develop a common language of quality
- 3 teachers have the opportunities to express their thoughts and concerns throughout the process
- 4 teachers have confidence in the evaluation.

Teacher performance is the result of a teacher's work in a school in one semester. It is measured from the teacher's perception of work planning, implementation, evaluation, and development. The quality of work can also be seen from the teachers' professionalism and other humanitarian tasks. Teacher performance measurement is done empirically using teaching performance appraisal instrument (TPAI), which includes five elements, namely:

- a management of instructional time
- b management of student behaviour
- c instructional presentation

- d instructional monitoring
- e instructional feedback (Swartz et al., 1990).

### *2.5 The direct influence of SL on work engagement*

Some longitudinal studies have shown that different positive leadership styles act as antecedents of work engagement, for example, ethical leadership (Adnan et al., 2020) and authentic leadership (Mehmood et al., 2016). Liden et al. (2008) noted that servant leaders are humble in nature and more focused on their subordinates rather than themselves. Therefore, this leadership style can promote a positive relationship between leaders and their subordinates. An empirical study by Sousa and van Dierendonck (2017) suggested that servant leaders gave a significant influence on their subordinates' involvement. Other empirical research which found SL to have a positive influence in WE include Srimulyani et al. (2016) and Zheng et al. (2020). This is an indication that increasing WE can be done through SL practice.

H1 SL directly affect work engagement.

### *2.6 The direct and indirect influence of SL on ERB*

SL focuses on meeting the needs of subordinates and helping them achieve their full potential. Therefore, through SL, subordinates perform their optimal effort to achieve the goals and objectives of the organisation. Servant leaders tend to be the role models and influence for the people they lead (Barbuto and Wheeler, 2006). The exemplary servant leaders can promote their subordinates' ERB directly or indirectly. It has been empirically proven that SL is positively related to ERB (Saleem et al., 2020) as well as having a positive and significant effect on ERB (Zhao et al., 2016; Walumbwa et al., 2010). According to Lavy (2019), daily processes such as leaders supervision and relationships with co-workers underlie more prolonged-term effects of OCB from teachers.

H2 SL directly influence ERB.

Saks (2006) synthesised various research and stated that EE is the primary antecedent that influences the success of initiating change in the organisation. An empirical study by Babcock-Roberson and Strickland (2010) proved a significant positive relationship between charismatic leadership and WE, between WE and OCB, and between charismatic leadership and OCB. Furthermore, work engagement also mediated the full influence of charismatic leadership on OCB. Srimulyani and Hermanto (2019) stated that ERB is directly influenced by EE and indirectly influenced by SL through EE.

H3 Work engagement directly affects ERB.

H4 SL indirectly affect ERB through work engagement.

### *2.7 The direct and indirect influence of SL and work engagement on teacher performance*

Organisational performance is strongly influenced by the performance of members and the role of organisational leaders. SL practice in various empirical studies has been

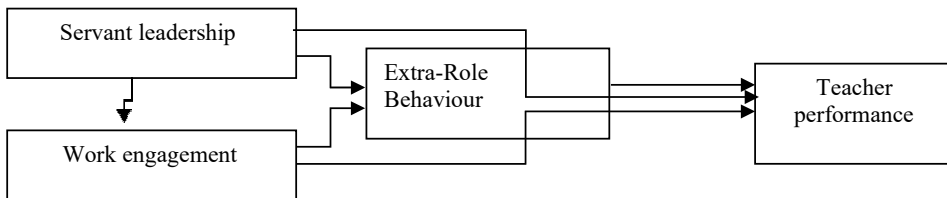
shown to have direct and indirect positive impacts on the performance of organisational members. SL is a leadership concept that emphasises ‘being oriented to others’. It prioritises the needs and interests of individual subordinates and is oriented towards caring for others, including society at large (Eva et al., 2019). Tomigolung (2015) found that SL had a significant and positive impact on EP. Saleem et al. (2020) revealed that SL directly and significantly becomes a predictor of subordinates’ task performance, and affective trust as a full mediator between SL and task performance. Zheng et al. (2020) specifically found indirect effects of SL on service performance through work engagement.

A high level of work involvement protects against burnout. Furthermore, high teacher involvement leads to diligence in teaching (Berg et al., 2018). WE can influence productivity (performance) directly or indirectly. So, organisational managers need to focus on how to increase work engagement. Priyono et al. (2019), in their empirical study, proved that SL and EE directly influence ERB; SL, EE, and ERB directly affect EP; and ERB becomes an intervening variable in the effect of SL and EE on EP. Zehir et al. (2013) found an indirect effect of SL on EP with ERB as a mediator. Meanwhile, Fatoni et al. (2018) found a significant effect, both directly and indirectly, of EE to the EP via the ERB, a significant direct effect on EE on ERB; and ERB has a significant direct impact on EP.

Thus, EP can be well achieved if employees are engaged in the organisation, have an outstanding organisational commitment, and show ERB.

- H5 SL directly affect teacher performance.
- H6 Work engagement directly affect teacher performance.
- H7 SL indirectly affect teacher performance through work engagement.
- H8 ERB directly affect teacher performance.
- H9 SL indirectly affect teacher performance through ERB.
- H10 Work engagement indirectly affect teacher performance through ERB.

**Figure 1** Theoretical model



This study used a quantitative approach. Data collection was done through a survey, defined as research that takes samples from a population. Furthermore, this study used a questionnaire as the primary data collection tool. The sample was determined using the convenience sampling method. The survey was carried out in several schools in East Java, namely Surabaya, Blitar, Kediri, Nganjuk, Kertosono, Madiun, Ponorogo, Magetan, and Ngawi, as well as the eastern area of Central Java, namely Cepu, Blora, and Rembang. The object of the research was permanent teachers of public and private high



schools and vocational schools. The measurement of variables and operational definitions of variables are described in Table 1.

This research used descriptive analysis and verification methods to analyse and interpret data. Verification tests in this study included: testing classic assumptions, testing simple and multiple linear regression performed for hypothesis testing, and analysis of model suitability (goodness of fit test).

**Table 1** Operational definition and measurement

<i>Variable</i>	<i>Operational definition</i>	<i>Measurement</i>	<i>Literature</i>
Servant leadership	The style of leadership concerned with the growth and dynamics of subordinates as well as community-oriented character, people, tasks, and processes.	1 Wisdom	Barbuto and Wheeler (2006), Wong and Page (2003)  Measurement sScale: Likert from 1 to 5 points.
		2 Humility	
		3 Altruistic calling	
		4 Emotional healing	
		5 Persuasive mapping	
		6 Organisational stewardship	
		7 Vision	
		8 Service	
Work engagement	Passionate employees at work, characterised by vigour, dedication, and absorption at the work	Vigour dedication absorption	Schaufeli and Bakker (2004)  Scale: a Likert scale of 1 to 5 points.
ERB (extra-role behaviour)	Employee exceeding their job description voluntarily, not expecting any reward, and overall improving the effectiveness of organisational functions.	1 Altruism	Organ et al. (2005)
		2 Courtesy	
		3 Conscientiousness	
		4 Sportsmanship	
		5 Civic virtue	
Teacher performance	Teacher competencies in learning time management, student behaviour management, instructional presentations, learning to monitor, and learning feedback.	1 Management of instructional time	Swartz et al. (1990)
		2 Management of student behaviour	
		3 Instructional presentation	
		4 Instructional monitoring	
		5 Instructional feedback	

### 3 Results

#### 3.1 Variable description

Researchers distributed 825 questionnaires to permanent teachers in 25 public schools and 31 private schools in Surabaya, Blitar, Kediri, Nganjuk, Kertosono, Madiun, Ponorogo, Magetan, and Ngawi, as well as Cepu, Blora and Rembang. The response rate was 98.54% (813 returned questionnaires). The descriptive analysis of research variables is presented in Table 2.

**Table 2** Mean SL value

<i>Variable</i>	<i>Mean</i>	<i>Remark</i>
Servant leadership	4.04	High
Wisdom	4.25	Very high
Humility	4.00	High
Altruistic calling	3.84	High
Emotional healing	3.83	High
Persuasive mapping	4.28	Very high
Organisational stewardship	4.05	High
Vision	4.09	High
Service	4.05	High

Table 2 shows that teachers gave the practice of SL in school principals the high category. In essence, the teachers agreed that the school principal exhibited 8 SL characters: altruistic calling, emotional healing, wisdom, persuasive mapping, organisational stewardship, vision, and service. The most prominent value was the aspect of persuasive mapping (4.28). It means that the headmaster can easily comprehend situations and their impact. Another dominant aspect was wisdom (4.25) because the principal can influence others by not relying on formal authority and power, but rather by persuasion.

**Table 3** Average value of work engagement (WE)

<i>Variable</i>	<i>Mean</i>	<i>Remark</i>
Work engagement (WE)	3.64	High
Vigour	3.66	High
Dedication	3.96	High
Absorption	3.35	High

Measurements of WE in teachers include aspects of vigour, dedication, and absorption in work. Vigour refers to energy, effort, and endurance; dedication refers to the involvement, a sense of meaning, enthusiasm, inspiration, pride, and challenge; and absorption is characterised by concentration and feeling that time passes by quickly. Table 3 shows that WE teachers, on average, are in the high category (3.64) with the dedication aspect as the most prominent than the other two aspects.

**Table 4** Average ERB

<i>Variable</i>	<i>Mean</i>	<i>Remark</i>
Extra-role behaviour (ERB)	3.98	High
Altruism	4.05	High
Courtesy	3.80	High
Conscientiousness	4.24	Very high
Sportsmanship	3.89	High
Civic Virtue	3.91	High

**Table 5** Average score of teacher performance (EP)

<i>No.</i>	<i>Indicator measurement</i>	<i>Mean</i>	<i>Remarks</i>
1	Teachers always prepare themselves before carrying out teaching activities.	4.24	Very high
2	Teachers always make teaching plans before teaching.	4.27	Very high
3	The teacher always adjusts the teaching method to the classroom situation.	4.20	High
4	Teachers always prepare appropriate teaching methods according to the teaching material.	4.19	High
5	Teachers are always motivating for students to learn.	4.38	Very high
6	The teacher always makes a teaching conclusion at the end of each lesson.	4.19	High
7	Teachers always give exercises to students after each teaching ends.	4.21	Very high
8	Teachers always use the tools available at school for teaching.	4.02	High
9	Teachers always take advantage of teaching facilities in schools.	4.13	High
10	The teacher always assesses the work carried out by students.	4.25	Very high
11	Teachers give examinations to students regularly.	4.24	Very high
12	Teachers always assess the exams given to students.	4.33	Very high
13	The teacher always checks the work done by students.	4.29	Very high
14	Teachers always provide feedback on assignments given to students.	4.22	Very high
15	The teacher always returns the results of the work given to students.	4.11	High
	Average value of teacher performance	4.22	Very high

Table 4 shows the average value of the teachers' answers to the ERB measurement. It was found to be in the high category (3.98). Furthermore, a more in-depth examination of the value of each dimension found that the value was very high in the dimension of conscientiousness. It means that teachers are willing to put more effort, that their task exceeds their formal assignment, that they take full responsibility for their work, are on time, and they pay attention to detail and quality of their tasks. In the second place was the dimension of altruism (4:05), which signifies that the teachers volunteer to help co-workers who face difficulty both at work and personally.

Table 5 shows the average value of teacher performance, which was recorded at 4.22 (very high). The examined dimensions include management of instructional time, management of student behaviour, instructional presentation, instructional monitoring, and instructional feedback described in 15 statement items (Table 5). The analysis showed that the 5th item (teachers always give motivation to students to learn) received the highest mark (4.38). Meanwhile, the second-highest mark went to the 12th item (4.33) (teachers always assess the examination given to students).

### 3.2 The goodness of fit test

The accuracy of a sample regression to estimate the actual value can be measured through the goodness of fit test. In this study, the goodness of fit test was performed by analysing the statistical value of F and t. Overall testing of the model was done with the F test, i.e., by comparing the F count with the F table at a 5% confidence level ( $\alpha = 0.05$ ). Table 6 assert the value of F calculated from multiple regression analysis in this study.

**Table 6** Test F results

<i>Regression equations</i>	<i>F count</i>	<i>F table</i>	<i>Sig.</i>	<i>Remark</i>
$ERB = a_0 + b_1SL + b_2WE + e_1$	101,089	3.00	0.000	Significant
$EP = a_0 + b_1SL + b_2WE + e_1$	85,737	3.00	0.000	Significant
$EP = a_0 + b_1SL + b_2WE + b_3ERB + e_1$	124,870	2.61	0.000	Significant

From Table 6, it can be concluded that the calculated F value > F table and the p-value (sig.) (0.000) < of the significance level (0.05) which means that three multiple regression equations are developed. Simultaneously, all independent variables have a significant effect on the dependent variable.

**Table 7** Summary of regression analysis results

	<i>Estimate</i>	<i>SE</i>	<i>Standardised coefficients beta</i>	<i>t-hit</i>	<i>Critical value</i>	<i>p-value</i>	<i>Remark</i>
$WE = a_0 + b_1SL + e_1$ .....model 1)							
SL → WE	0.220	0.020	0.366	11.190	2.000	0.000	Significant
$ERB = a_0 + b_1SL + e_1$ .....model 2)							
SL → ERB	0.184	0.029	0.214	6.243	2.000	0.000	Significant
$ERB = a_0 + b_1SL + b_2WE + e_1$ .....model 3)							
SL → ERB	0.113	0.028	0.131	4.081	2.000	0.000	Significant
WE → ERB	0.227	0.018	0.401	12.481	2.000	0.000	Significant
$EP = a_0 + b_1SL + b_2WE + e_1$ .....model 4)							
SL → EP	0.194	0.020	0.323	9.896	2.000	0.000	Significant
WE → EP	0.189	0.030	0.207	6.340	2.000	0.000	Significant
$EP = a_0 + b_1SL + b_2WE + b_3ERB + e_1$ .....model 5)							
SL → EP	0.138	0.027	0.152	5.053	2.000	0.000	Significant
WE → EP	0.112	0.027	0.181	4.214	2.000	0.000	Significant
ERB → EP	0.447	0.034	0.421	12.955	2.000	0.000	Significant

### 3.3 Partial influence test (t-test)

This research used a t-test to examine whether the coefficient values obtained are significantly different between t-count and critical value at a 5% confidence level ( $\alpha = 0.05$ ). The values of coefficient regression and t-count are presented in Table 7.

From Table 7, it can be seen that the ten proposed hypotheses are accepted. It is proven by all p-values  $< 0.050$  with all t-values  $> 2.000$ .

## 4 Discussion

### 4.1 The direct influence of SL on work engagement

In Table 7, the regression coefficient of SL model 1 is 0.366 with p-value  $0.000 < 0.050$  and t-count is  $11.190 > 2.000$ . It signifies that H1 (SL directly influences work engagement) is accepted. The results of this study corroborated the statement of Tomigolung (2015), Srimulyani et al. (2016), Zhao et al. (2016), and Zheng et al. (2020). School administrators have to ensure that employees are more involved with schools. Therefore, school performance and effectiveness can be improved. Increased WE can be pursued through SL practices, which include altruistic calling, emotional healing, wisdom, persuasive mapping, organisational stewardship, vision, and service. With SL practices, teachers are encouraged to have full involvement and enthusiasm in work as well as in matters related to long-term school activities.

### 4.2 The direct influence of SL on ERB

Results of direct testing in model 2 (Table 7), found a regression coefficient of 0.214 with a p-value of  $0.000 < 0.050$  and t-count of  $6.243 > 2.000$ . It means that H2, which states that 'servant leadership directly affects extra-role behaviour', is accepted. ERB that provides benefits for organisations (including civic virtue, conscientiousness, and sportsmanship) and personal benefits (including courtesy and altruism) can be increased through SL. This is in line with the findings of Saleem et al. (2020), Srimulyani et al. (2016), Zhao et al. (2016) and Walumbwa et al. (2010).

SL is a service behaviour for organisational effectiveness, which give considerable attention to the needs of subordinates in the organisation. Leaders must perform actions that show voluntary service, such as assisting and contributing to subordinates. It can significantly affect the ERB of the subordinates. When the leaders serve the subordinate with sincerity and give a good example, they will foster their subordinates' ERB. Principals who reflect the SL behaviours greatly influence teachers' ERB because subordinate tend to imitate what their leaders do.

### 4.3 The direct influence of work engagement on ERB

In Table 7, it is evident that the direct effect of WE on ERB (model 3) has a regression coefficient of 0.227 with a p-value of  $0.000 < 0.050$  and t-count of  $12.481 > 2.000$ . It means that H3, which states 'work engagement directly affects extra-role behaviour', is received. The results of this study support the statement of Babcock-Roberson and Strickland (2010) and Saks (2006), who found a significant positive relationship between

WE and OCB; and Srimulyani and Hermanto (2019) who found a positive and significant effect on WE on ERB.

The driving force behind the popularity of WE's is the positive impact it has on the organisation (Saks, 2006). Engagement is a feeling that includes an attachment, a sense of belonging, commitment, loyalty, involvement, or desire to contribute both to work and the organisation voluntarily without pressure. The results showed that a good relationship between teachers and

- 1 the work they are responsible for
- 2 the organisation where the teacher works, the principal who provides support and advice, or colleagues who support each other makes teachers willing to give their best efforts outside their job requirements for task success and organisational progress.

#### *4.4 The indirect influence of SL on ERB through work engagement*

Based on model testing (see Table 7), several WE requirements as mediating are fulfilled. First, the independent variable (SL) significantly influences the mediator variable (WE) in model 1 with coefficient  $a \neq 0$  (0.366). Second, the independent variable (SL) significantly influences the dependent variable (ERB) in model 2 with a coefficient  $c \neq 0$  (0.214). Third, the mediator variable (WE) significantly influences the dependent variable (ERB) on model 3 with the coefficient  $b \neq 0$  (0.401) and the effect of the independent variable (SL) on the dependent variable (ERB) is lower on model 3 ( $c' = 0.131$ ) than with model 4 ( $c = 0.214$ ) but the effect remains significant. Thus, it can be concluded that WE is a partial mediating effect of SL on ERB. That is, H4, which states, 'servant leadership indirectly affect extra-role behaviour through work engagement' is accepted.

The results of this study support the statement of Srimulyani and Hermanto (2019) that ERB is directly and indirectly affected by EE and SL with EE as mediating. These results indicate that SL can, directly and indirectly, have a positive and significant impact on ERB with work engagement as a mediator. Brown in Robbins and Judge (2008) states that employees are said to have a work engagement if they can identify themselves psychologically with their work and consider that their performance is essential for themselves and the organisation so that they devote physically and psychologically to their work. This condition can be promoted through SL practice, and the impact of ERB can be increased.

#### *4.5 The direct influence of SL on EP*

From the direct effect test on model 4 (see Table 7), the SL regression coefficient is 0.323, with a p-value of  $0.000 < 0.050$ , and t-count is  $9.896 > 2.000$ . That is, H5, which states that 'servant leadership directly affects teacher performance' is accepted. The results of this study support previous research, namely Hernández-Perlines and Araya-Castillo (2020), Saleem et al. (2020), Priyono et al. (2019) and Santosa et al. (2018) which found that SL affected EP positively and significantly. The impact of servant leaders in schools is to improve teacher performance. The more school principals can demonstrate the behaviour of servant leaders, the higher the teacher's performance is indicated by the increasing ability of teachers to prepare lesson plans, implement

increasingly innovative learning strategies, evaluate effective learning, improve the learning climate, and develop the profession and communication better.

#### *4.6 The direct influence of work engagement on EP*

From the results of direct testing in model 4 (see Table 7), we obtain the regression coefficient value WE of 0.207 with a p-value of  $0.000 < 0.050$  and t-count of  $6.340 > 2.000$ . That is, H6, which states that ‘work engagement directly affects teacher performance’ is accepted. The results of this study support the findings of Halbesleben and Wheeler (2008), Bakker and Bal (2010), Yongxing et al. (2017), Fatoni et al. (2018) and Priyono et al. (2019) which shows that WE has a significant positive effect on EP. WE is the level of attention and attachment to role performance. Employees with high WE will empower themselves to achieve performance in their work. In educational organisations, WE is shown by how teachers empower themselves in performance so they can achieve high performance. With the increase in EP, the organisational performance also increases.

#### *4.7 The indirect influence of SL on EP through work engagement*

Based on model testing, several WE requirements as mediating are fulfilled (Table 7). First, the independent variable (SL) significantly influences the mediator variable (WE) in model 1 with coefficient  $a \neq 0$  (0.366). Second, the independent variable (SL) significantly influences the dependent variable (EP) on model 4 with a coefficient  $c \neq 0$  (0.323). The three variables mediators (WE) significantly affect the dependent variable (EP) on the model 5 with coefficient  $b \neq 0$  (0.181) and the influence of the independent variable (SL) to the dependent variable (EP) was lower in model 5 ( $c' = 0.152$ ) compared to model 4 ( $c = 0.303$ ), but the effect remained significant. Thus, it can be concluded that WE has a partial mediating effect of SL on EP. That means, H7, which states, ‘servant leadership indirectly or directly affects teacher performance through work engagement’ is accepted. The results of this study support (Zheng et al., 2020), who found direct and indirect effects of SL on service performance through WE.

The success of the individual, group, and organisational performance depends on the involvement of the leader. According to Robbins and Judge (2008), a leader is a dominant figure in the development of EP related to their capacity, role, behaviour, and character. SL is a leadership practice that focuses on

- 1 character development
- 2 human resource development
- 3 achieving productivity and success
- 4 organisational efficiency.

SL practice can improve WE and EP. On the other hand, high WE also affects the success of employees in carrying out work roles because employees with high WE is equipped with high energy and enthusiasm. Therefore, WE can have a direct impact on EP.

#### 4.8 *The direct influence of ERB on EP*

Table 7 shows the results of testing model 5, where the ERB regression coefficient value is 0.421 with a p-value of  $0.000 < 0.050$  and t-count of  $12.955 > 2.000$ . That is, H8, which states that 'extra-role behaviour directly affects teacher performance' is accepted. These results support Priyono et al. (2019), Rizki et al. (2019), Fatoni et al. (2018) and Dwomoh et al. (2019) who found a significant positive effect on ERB on EP. These results indicate that behavioural enhancements help positive behaviour, efforts to perform outside the minimum standards, voluntary and participate in supporting organisational functions, being responsible, patient, responsive, and proactive in schools can have an impact on improving the performance of teachers, workers, groups, and organisation.

#### 4.9 *The indirect influence of SL on EP through ERB*

Table 7 shows that some ERB requirements as mediating are met. First, the independent variable (SL) significantly influences the mediator variable (ERB) in model 3 with coefficient  $a \neq 0$  (0.131). Second, the independent variable (SL) significantly influences the dependent variable (EP) on model 4 with a coefficient  $c \neq 0$  (0.323). Third, variable mediators (ERB) significantly affect the dependent variable (EP) on the model 5 with coefficient  $b \neq 0$  (0.421) and the influence of the independent variable (SL) to the dependent variable (EP) was lower in model 5 ( $c' = 0.152$ ) compared to model 4 ( $c = 0.303$ ) but the effect remained significant. Thus, it can be concluded that ERB is a partial mediating effect of SL on EP. That is, H9, which states, 'servant leadership indirectly affects teacher performance through extra-role behaviour', is accepted.

The results showed that teacher performance was influenced directly or indirectly by the practice of SL and ERB in teachers. These results support Priyono et al. (2019), who found significant direct and indirect effects of SL on EP through ERB. SL values such as belongingness, participation, volunteerism, proactivity, and teamwork (synergy), emphasising attention to subordinate issues and developing empathy and subordinates that can drive ERB, EP, and organisational performance in various sectors, including educational organisations, directly or indirectly with ERB as an intermediary. ERB is the voluntary behaviour of employees to perform tasks or work outside their responsibilities or obligations to advance their organisation. Employees also tend to take action outside their primary responsibilities when employees are satisfied with their work, have a positive mood. In addition, employees who have direct responsibility can improve their performance.

#### 4.10 *The indirect influence of work engagement on EP through ERB*

Based on testing the regression model developed (see Table 7), some of the requirements of the ERB as mediation are met. First, the independent variable (WE) significantly influences the mediator variable (ERB) in model 3 with coefficient  $aa \neq 0$  (0.227). Second, the independent variable (WE) significantly affects the dependent variable (EP) in 4 models with coefficients  $c \neq 0$  (0.207). Third, the mediator variable (ERB) significantly influences the dependent variable (EP) on model 5 with the coefficient  $b \neq 0$  (0.421) and the effect of the independent variable (WE) on the dependent variable (EP) is lower on model 5 ( $c' = 0.112$ ) compared to model 4 ( $c = 0.207$ ) but the effect remained significant. So, it can be concluded that ERB is a partial mediating of WE's relation to



EP. Thus, H10, which states, 'work engagement indirectly affects teacher performance through extra-role behaviour', is accepted. This means that teacher performance can be directly or indirectly influenced by WE through the ERB of teachers.

These results support Fatoni et al. (2018) and Priyono et al. (2019), who found significant direct and indirect effects of EE on EP through ERB. These results indicate that teachers who have a high WE can go further in the interests of the workplace organisation so that it can foster ERB in the workplace. In the end, the ERB will have an impact on better EP. The results of this study also indicate that WE can also have a significant direct impact on EP.

## **5 Conclusions**

The success of the work of individuals, groups and organisations is very dependent on the involvement of leaders. The results prove that the principal's SL practice directly has a positive impact on work engagement, extra-role behaviour, and teacher performance. Teacher performance is also influenced positively and significantly by work involvement and extra-role behaviour. Likewise, in examining indirect effects, it is evident that work involvement and extra roles play a role in mediating the partial influence of SL on teacher performance. The study also found that work engagement acts as a partial mediating influence of SL on extra-role behaviour and extra-role behaviour, partly mediating the effect of work engagement on teacher performance.

The most prominent aspects of SL are persuasive mapping and wisdom; namely, the ability of leaders to understand the situation and its impact, as well as the accuracy of taking action and the ability of leaders to influence others by convincing and motivating subordinates, is a character that has a significant impact on the formation of work engagement, extra-role behaviour, and EP.

The most prominent aspect of work involvement is dedication. This aspect is indeed a significant demand for employees who work in services such as educational organisations. Work involvement is formed because of the role models serving. The emergence of job involvement also encourages employees' voluntary behaviour in carrying out tasks even though it is outside their primary task (extra-role behaviour) because it actually helps employees improve their performance, even group performance, and organisational performance.

The extra dominant role behavioural dimension that influences teacher performance is awareness, namely the willingness of employees to work hard, be responsible, be trusted, and be willing to carry out extra roles and roles beyond what is expected by the organisation. The second-order dimension that influences teacher performance is altruism, which is the behaviour of mutual help among teachers who need help to solve problems both related to assignments and personal problems.

## **6 Limitation and recommendation for further research**

This research is limited in several ways that can be developed by future studies. First, this is a cross-sectional study. That is, this study was designed to capture teacher attitudes at one point in time. Based on studies that show teacher attitudes can change, future research that includes longitudinal data will benefit schools in antecedent studies and the

consequences of teacher involvement and extra-role behaviour. For example affective trust (Saleem et al., 2020); workplace spirituality (Aprilia and Katiara, 2020); job crafting in teaching (Berg et al., 2018); school organisational culture (Santosa et al., 2018); burnout (Berg et al., 2018); stress (Karabatak et al., 2018); organisational trust (Barzoki and Rezaei, 2017); organisational commitment (Türkmen and Gül, 2017). Second, future research must use a much larger sample size that can be generalised to teachers in one geographical area and must include teachers in primary and secondary schools.

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