

THE EFFECT OF TRANSFORMATIONAL LEADERSHIP, ORGANIZATIONAL LEARNING AND SELF-EFFICACY ON THE INNOVATIVE BEHAVIOR OF ELEMENTARY SCHOOL TEACHERS IN DEPOK.

MUHAMMAD RIZKI DARMAGUNA HASAN¹, IVAN HANAFI² and ELIANA SARI³

School of Education Management, Postgraduate Studies, Universitas Negeri Jakarta, Jakarta, Indonesia.
Email: muhammadrizkidarmagunahasan_9911917004@mhs.unj.ac.id¹, ivan.hanafi@unj.ac.id², elianasari@unj.ac.id³

Abstract

This study aims to analyze the effect of the principal's transformational leadership, school organizational learning, and teacher self-efficacy on the innovative behavior of elementary school teachers in the city of Depok. The research was conducted using quantitative methods. Data was collected using a survey method by filling out the instrument in the form of a questionnaire. The sample in this study amounted to 166 teachers who were obtained using cluster sampling techniques, simple random sampling and proportional sampling. Data processing using Structural Equation Modeling (SEM) approach with SmartPLS software. The results of the study state that: Transformational leadership has a significant effect on innovative behavior, organizational learning, and self-efficacy. Transformational leadership also has a significant effect on innovative behavior through organizational learning and self-efficacy. Based on the results of the study, it can be concluded that innovative behavior can be developed through increased transformational leadership, organizational learning, and self-efficacy.

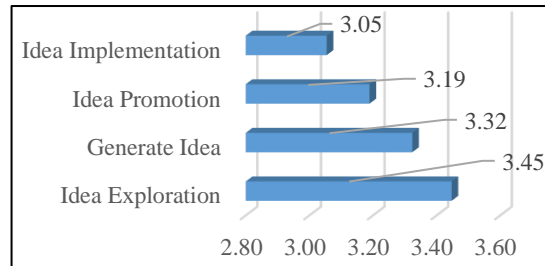
Keywords: Transformational leadership, Organizational learning, Self-efficacy, Innovative behavior.

1. INTRODUCTION

According to the former head of the Depok city office, Hery Pansila, teachers are not innovative in teaching, they are not able to make students active in learning and create a creative learning environment, including elementary school teachers (Rajaguguk, 2015). Based on the results of the teacher competency test in 2019 ranging from 60.14 (Kemendikbud, 2019), this value is still far from the government's average expectation of 80. This condition is very concerning considering the role of teachers in efforts to build the quality of human resources is very strategic. In education, innovation can emerge as a new pedagogic theory, methodological approach, teaching technique, learning device, learning process, or institutional structure that when applied results in significant changes in teaching and learning that lead to better student learning. Innovation in education is intended to increase the productivity and efficiency of learning or improve the quality of learning (Serdyukov, 2017).

Researchers conducted preliminary research in order to determine with certainty the level of innovative behavior of elementary school teachers in the city of Depok. The research was conducted by distributing the instrument to 55 teachers who were randomly selected as the initial research sample.

Fig. 1. 1 Preliminary research of Innovative behavior



In Fig. 1. 1 the average total score of innovative behavior is 3.25. By referring to the assessment carried out using a rating scale of 1-5, the numbers indicate that the innovative behavior of teachers is still low. To support the occurrence of innovative behavior of teachers, it is necessary to have a leadership role of principals who can guide teachers to continue to innovate in solving various problems that exist in schools. The type of leadership that is predicted to increase the innovative behavior of teachers is transformational leadership. In academic environments, transformational leadership can lead to changes in strategy and structure similar to those seen in business organizations (Yu et al., 2002). Innovative work behavior can be encouraged by transformational leaders by engaging employees in different learning activities and enabling them to develop alternative solutions to workplace problems (Li et al., 2019).

The next factor that is predicted to increase the innovative behavior of teachers is organizational learning. The results of research from Lin and Lee (2017), state that management needs to see organizational learning as the core of innovation, utilizing explicit knowledge sharing projects between members in the organization. This is very helpful for potential innovation and improvement of innovative behavior employees will follow the process of idea generation, advocacy, and implementation to realize innovative behavior. Then the factor that is predicted to influence the innovative behavior of teachers is self-efficacy. Self-efficacy has characteristics, namely: the ability to do tasks, complete tasks, face risk challenges, and confidence in improving performance. A person will be considered effective if he is able to solve problems appropriately and continue to explore his potential by continuing to learn. Teachers who have high self-efficacy have a high passion in working/teaching, ready to accept new ideas/curricula, so they can use new methods of learning more effectively (Khayati and Sarjana, 2015).

2. THEORY

a) Innovative Behavior

Innovative behavior cannot be separated from creativity, because innovation is creativity that produces ideas that are useful for individuals and groups (Jennifer and Gareth, 2008: 143). Innovative behavior as an employee's intentional introduction or application of new ideas, products, processes, and procedures to his or her work role, work unit, or organization (Feirong and Richard 2010). Innovative behavior has several processes, namely: 1) opportunity creation, 2) resource acquisition, 3) implementation and promotion, and 4) application process.

Innovative behavior is divided into 3 stages, namely: 1) problem recognition, 2) looking for problem solving ideas and seeking support, 3) building an innovation model (Scott and Bruce, 1994). Individual innovative behavior includes five constituent elements which are 1) opportunity exploration, 2) generativity, 3) formative investigation, 4) championing, and 5) application (Kleysen and Street, 2001). Innovative behavior can be triggered by organizational learning processes, changes in the external environment and individual characteristics (Amo and Kolvereid, 2011). Based on the definition of experts, it can be synthesized that innovative behavior is behavior that applies new strategies or methods, techniques, and technologies that are useful in order to solve problems, carry out product development, or improve quality with the dimensions: 1) exploration of ideas, 2) generating ideas, 3) fighting for ideas, and 4) implementing ideas.

b) Self-Efficacy

According to Hellriegel and Slocum (2011: 151), states that "self-efficacy is the individuals estimate of his or his own ability to perform a specific task in a particular situation", an individual's estimate of his own ability to perform certain tasks in certain situations. The greater the perceived ability of the employee to perform the task, the higher the self-efficacy. Employees with high self-efficacy believe that (1) they have the required abilities, (2) they are able to put forth the required effort, and (3) there are no outside events that would prevent them from performing at a high level. Self-efficacy has three dimensions, namely (1) magnitude (or level), (2) strength and (3) general condition (Lenz and Bagget, 2002: 23). According to Bandura in a study conducted by Hsiao et al. (2011), individuals with high self-efficacy beliefs are more likely to have higher levels of performance and higher commitment to tolerate frustration and stay focused on the task when obstacles arise. Self-efficacy is a person's belief in his ability to provide valuable knowledge to others, as stated by (Shaari et al., 2014). According to Jennifer and Gareth (2008: 141), self-efficacy is a person's belief about his ability to successfully perform certain behaviors. Self-efficacy has a strong effect on learning because people try to learn only those behaviors they think can be performed successfully. Self-efficacy refers to the judgments people make about their ability to take the necessary actions to deal with prospective situations, individuals who have self-efficacy believe that they can master certain tasks. Self-efficacy determines how much effort people will expend and how long they will last in the face of obstacles or stressful experiences. Based on the definition of experts, it can be synthesized that self-efficacy is the level of individual confidence in his ability to complete a given task in various conditions based on predetermined targets with dimensions: 1) difficulty level, 2) strength level, and 3) general condition.

c) Organizational Learning

Organizational learning is an important factor for long-term performance of organizations and organizational survival, "organizational learning is an important determinant of long-term performance and survival for organizations" (Yukl, 2009). Organizational learning is a process of continuous activity that sees learning as very basic for an organization by paying attention to learning commitment, sharing vision, open mind, and knowledge transfer with the organization (Lin and Lee, 2017). Calantone et al. (2002), propose that an organization collects

knowledge and information from various sources and ascertains their activities and guides it for application in future operations. They propose four constituent elements for organizational learning as assessment criteria which are described as follows: 1) Commitment to learning: Learning should be viewed as a core-rooted value for the company and should be deeply rooted in the organizational culture. This value also affects how actively members will act with a learning attitude. 2) Shared vision: Management must share the company's vision for future development and further provide learning direction to make commitments to the company and achieve goals. 3) Open mind: It deals with creative thinking beyond the rules and levels of belief and assumptions to actively challenge existing conventions that have been held for the Long term. 4) Knowledge sharing within the organization: The overall confidence of the organization can be increased by learning and diffusion of knowledge across departments. Knowledge and experience of various departments must be accumulated and stored in the memory of the organization to improve organizational performance. Organizational learning is the process of managing information and knowledge to achieve a better fit between the organization and its environment. The process through which the leader instills in all members of the organization a desire to find new ways to increase organizational effectiveness (Jennifer and Gareth, 2008). Organizational learning is expressed as the process of achieving new knowledge and conceptualities with the most general and brief definition (Tippins and Sohi, 2003). Based on expert opinion, it can be synthesized that organizational learning is a process of sharing knowledge and information that aims to increase knowledge and abilities that have an impact on changing the behavior of organizational members to achieve organizational goals with the dimensions: 1) learning commitment, 2) sharing vision, 3) open minded, and 4) share knowledge.

d) Transformational leadership

According to Hellriegel and Slocum (2011: 329), transformational leadership involves anticipating future trends, inspiring followers to understand and embrace a new vision of possibilities, developing others to be leaders or better leaders, and building the organization or group into a community of challenged and rewarded learners. Transformational leadership has the following characteristics: 1) Increase the awareness of subordinates about the importance of their duties and the importance of carrying them out well. 2) Make subordinates aware of their need for personal growth, development and achievement. 3) Motivate their subordinates to work for the good of the organization rather than exclusively for their personal gain or gain. Transformational leadership is leadership that emphasizes the leader's ability to communicate a new vision of an organization to followers (Hollenbeck, 2009). Menurut Miner (2005: 367), transformational leadership has several characteristics, namely: 1) Charisma (ideal influence), has my belief in his ability to overcome any obstacle, 2) Inspirational motivation, uses symbols and images to focus efforts. 3) Intellectual stimulation, allowing me to think about old problems in new ways. 4) Individual consideration, train me if I need it. As shown by Braun et al. (2013), transformational leaders move followers through articulating a stimulating vision and challenging goals, leaders and followers encourage each other to advance to higher levels of quality and deep inspiration. Inspirational motivation, another component of transformational leadership, stimulates and challenges followers to achieve organizational goals whereas

intellectual stimulation, inspires employees to be more creative and innovative to solve problems masalah (Rowold, 2005). Based on the opinion of experts, it can be synthesized that transformational leadership is an effort made by leaders to empower, inspire, and provide stimulation to their followers to be able to achieve organizational goals with dimensions: 1) the influence of idealism, 2) inspirational motivation, 3) intellectual stimulation, and 4) individual considerations.

3. HYPOTHESIS DEVELOPMENT

1) Transformational leadership and Innovative behavior

The results of research conducted by Ahamad and Kasim (2016), explain that transformational leadership style is an effective way and is widely practiced in organizations including schools. Transformational leadership is reported to have a major influence on individual behavior in organizations. This study aims to identify the influence of the principal's transformational leadership on the innovative behavior of teachers in schools. Transformational leaders stimulate employees to see problems in a new way (intellectual stimulation) and motivate employees to solve creatively (inspirational motivation) (Shin and Zhou, 2017). Gumusluolu and Ilsev (2009), found that the transformational role of leaders enhances organizational innovation. A study found that transformational leadership has encouraged creativity among employees in organizations.

Hypothesis 1: There is a direct effect of transformational leadership on innovative behavior.

2) Organizational learning and Innovative behavior

The results of the research conducted by Hsiao and Chang (2011), aimed to investigate the effect of transformational leadership on organizational innovation and to test whether organizational learning is a mediator between their relationship. The findings of this study provide evidence that transformational leadership and organizational learning have a significant positive relationship on organizational innovation. Based on the knowledge spiral theory proposed by Nonaka and Takeuchi (1995), each individual's knowledge can be extended to a higher level at the ontology level between teams and organizations through four models of knowledge transformation such as socialization, externalization, combination, and internalization. Therefore, learning-oriented employees can seek innovative thinking and approaches to solving problems through the process of interacting with groups so as to improve and achieve the realization of personal achievement goals. Organizational learning has a significant positive effect on knowledge sharing and new product development. Organizational learning is a vital component of competitiveness in small and medium enterprises, which are considered a source of new strategies and innovations (Saru, 2007).

Hypothesis 2: There is a direct effect of organizational learning on innovative behavior.

3) Self-Efficacy and Innovative behavior

The study conducted in Kumar's paper (2010), found that self-efficacy affects innovative behavior, it means that the higher the self-efficacy by employees, the higher the innovative

behavior that will be generated. Research conducted by Zulkifli et al. (2019), which explains that competence, self-efficacy, motivation and organizational commitment affect innovative behavior. The results of research conducted by Ibus and Ismail (2018), which states that there is substantial empirical evidence about the effect of self-efficacy on organizational performance. However, the mediating effect of self-efficacy in the relationship of self-leadership and knowledge sharing with innovative work behavior, particularly in the educational context, has not been adequately explored.

Hypothesis 3: There is a direct effect of self-efficacy on innovative behavior.

4) Transformational leadership and Organizational learning

Transformational leaders will become catalytic agents, advisors, organizers and trainers in organizational learning. Such a leadership style also allows the leader to force learning, to be his main driving force, and to offer whatever is necessary to overcome inner suspicions and outer problems and obstacles to institutionalizing learning within the organization (Bratianu, 2018). The impact of transformational leadership on organizational communication and the effect of communication on organizational learning produces an indirect effect of transformational leadership style on organizational learning through communication within the organization. Therefore, transformational leadership capacity is considered as one of the most important factors in the development of organizational learning in companies (García-Morales et al., 2012).

Hypothesis 4: There is a direct effect of transformational leadership on organizational learning.

5) Transformational leadership and Self-Efficacy

The results of research by Pillai and Williams (2004), show that leader behavior aimed at increasing follower self-efficacy results in higher levels of subordinate creativity in problem solving situations. Eden (1992), argues that leadership is a mechanism by which managers increase performance expectations and increase self-efficacy, which in turn improves performance. Therefore, it is important for transformational leaders to increase the confidence of followers, who together they can find solutions to existing problems. Once self-efficacy is established, followers will begin to trust the leader which will increase their commitment to the leader and the organization.

Hypothesis 5: There is a direct effect of transformational leadership on self-efficacy.

6) Organizational learning and Self-Efficacy

Research conducted by Jaafari et al. (2012), which aims to investigate the relationship between organizational climate and organizational learning and teacher self-efficacy. The findings reveal that there is a significant correlation between organizational learning and self-efficacy. On the other hand, the correlation between organizational climate and self-efficacy shows that there is no relationship between these two variables. However, organizational climate can affect self-efficacy through the influence of organizational learning, while organizational learning itself directly increases self-efficacy. Research conducted by Tobin et al. (2006), who expand on organizational contextual considerations by examining organizational learning,

participation in organizational learning activities and organizational climate as possible predictors of self-efficacy. Shows that organizational climate and organizational learning are significant predictors of teacher self-efficacy, controlling for several individual-level variables (participation in organizational learning, personal self-efficacy, and teaching efficacy).

Hypothesis 6: There is a direct effect of organizational learning on self-efficacy.

7) Transformational leadership and Innovative behavior through Organizational learning

Transformational leadership using motivational tools can bring effective learning orientation in organizations that have the ability to achieve organizational learning prosperity in organizations. Furthermore, well-known names from Fortune 500 and blue-chip organizations will adopt transformational leadership and knowledge management mechanisms for organizational learning and innovative performance outcomes through organizational learning, namely Microsoft, IBM, Samsung and Apple (Imran et al., 2016). Organizational learning has a positive and significant influence on organizational innovation. This study supports and confirms the mediator role of organizational learning. In other words, organizational learning triggers the relationship between transformational leadership and organizational innovation. Organizational learning leads to organizational innovation (Hsiao and Chang, 2011).

Hypothesis 7: There is an effect of transformational leadership on innovative behavior through organizational learning.

8) Transformational leadership and Innovative behavior through Self-efficacy

The results of research conducted by Afsar and Masood (2017), show that an employee displays innovation in his behavior due to differences in feelings of empowerment, respect, autonomy, meaning, self-determination and competence while working with their leaders. By providing organizational members with a compelling vision, transformational leaders help build their followers' confidence by giving them a sense of self-efficacy that they are capable of creative work. Employees who are inspired by transformational leaders feel psychologically empowered because they understand the organization's expectations of them and are better equipped to adapt their skills and behavior to these demands, performance outcomes, and expectations. They have a higher sense of mastery, and self-efficacy over their tasks and work environment. Giving employees greater autonomy and control over decision-making results in employees who are more likely to reciprocate with higher levels of creative process involvement (Volmer et al., 2012).

Hypothesis 8: There is an effect of transformational leadership on innovative behavior through self-efficacy.

9) Organizational learning and Innovative behavior through Self-efficacy

Research conducted by Jaafari et al. (2012), which aims to investigate the relationship between organizational climate and organizational learning and teacher self-efficacy. The findings reveal that there is a significant correlation between organizational learning and self-efficacy. On the other hand, the correlation between organizational climate and self-efficacy shows that

there is no relationship between these two variables. However, organizational climate can affect self-efficacy through the influence of organizational learning, while organizational learning itself directly increases self-efficacy. Research conducted by Zulkifli et al. (2019), found that competence, self-efficacy, motivation and organizational commitment are individual factors that influence innovative work behavior. Based on these two studies which state that organizational learning has an influence on innovation behavior, and the second study which states that self-efficacy has an influence on innovation behavior, it is possible that self-efficacy can be a mediating variable between organizational learning and innovative behavior.

Hypothesis 9: There is an effect of organizational learning on innovative behavior through self-efficacy.

10) Transformational leadership and Self-efficacy through Organizational learning

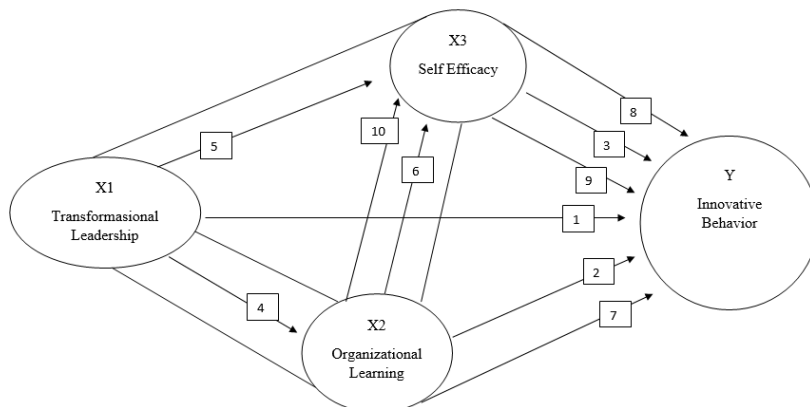
Transformational leaders will become catalytic agents, advisors, organizers and trainers in organizational learning. Such a leadership style also allows the leader to force learning, to be his main driving force, and to offer whatever is necessary to overcome inner suspicions and outer problems and obstacles to institutionalizing learning within the organization (Bratianu, 2018). Research conducted by Tobin et al. (2006), who expand on organizational contextual considerations by examining organizational learning, participation in organizational learning activities and organizational climate as possible predictors of self-efficacy. Based on these two studies which state that transformational leadership has an influence on organizational learning, and the second study which states that organizational learning has an influence on self-efficacy, it is possible that organizational learning can be a mediating variable between transformational leadership and self-efficacy.

Hypothesis 10: There is an effect of transformational leadership on self-efficacy through organizational learning.

4. METHOD

This research was conducted at a public elementary school in the city of Depok, West Java Province, Indonesia. The research method used is a quantitative-causal approach using SEM (Structural Equation Modeling) applications. In this study, there are 3 exogenous variables, namely X1: transformational leadership, X2: organizational learning, X3: self-efficacy, and one endogenous variable Y: innovative behavior. This study aims to determine the effect of exogenous variables on endogenous variables and the mediating effect of exogenous variables on endogenous variables through other exogenous variables as intermediary variables.

Fig. 4. 1 Research Model



a) Sample

Public elementary schools in the city of Depok reach 207 schools with a total of 7303 teachers, because the population is very large, researchers use the cluster sampling technique (Darmanah, 2019). Depok has 11 sub-districts as clusters, so the researchers chose 11 public elementary schools with a total of 285 teachers. Then the sampling was carried out using the simple random sampling technique of the Slovin formula (Fauzy, 2019).

$$n = \frac{N}{1 + N e^2}$$

$$n = \frac{285}{1 + (285 \cdot 0.05^2)}$$

$$n = \frac{285}{1.71}, n = 166$$

Information:

n = Number of Samples

N = Total Population

e = the specified level of precision 5% at the 95% confidence level

Based on the calculation results, it is known that the sample in this study amounted to 166 teachers. Calculation of the number of samples taken in each school is carried out using the proportional sampling technique (Endang, 2011). In this study, the number of samples of 166 teachers was divided by the total population of 285 teachers, resulting in a figure of 0.6 which means the number of samples taken from each school reached 60% of the population of teachers in each school.

b) Technique

Data collection techniques were carried out using the distribution of instruments with a rating scale. The instrument is a description of the dimensions of each variable. Each dimension is then translated back into the form of indicators. After that, instruments are made based on

existing indicators. The instrument was tested first before being used in the study. The instrument testing includes validity and reliability tests, from the test results obtained valid and invalid instrument items. Invalid instruments will be discarded or not used in the research, while valid instrument items will be used in the research process. The study used a Likert scale of 1 = never / strongly disagree to 5 = always / strongly agree.

- a) Innovative behavior, from 41 statement items that were tested, there were 5 statement items that failed, namely items number 3, 4, 5, 6, and 8, leaving 36 statements that were valid and used in the study. The innovative behavior variable is declared reliable because it has a reliability coefficient value of 0.96.
- b) Self efficacy, from 36 statement items that were tested, there were 9 statement items that were rejected, namely items numbered 3, 6, 8, 10, 13, 15, 21, 24, and 25, leaving 27 statements that were valid and used in the study. The self-efficacy variable is declared reliable because it has a reliability coefficient value of 0.92.
- c) Organizational learning, from 40 statement items that were tested for validity, there were no invalid statements. The organizational learning variable is declared reliable because it has a reliability coefficient value of 0.98.
- d) Innovative behavior, from 40 statements tested, there were no invalid statements. The transformational leadership variable is declared reliable because it has a reliability coefficient value of 0.98.

5. RESULTS

a) Model Fit

The model feasibility test is carried out by looking at the value of R square which is the goodness-fit test of the model, above 0.67 are said to be good, while values above 0.33 are said to be moderate and below 0.19 are said to be weak (Ghozali, 2021: 75). The R square value of innovative behavior is 0.550, it means that the variables of transformational leadership, organizational learning, and self-efficacy have an influence of 55% on the innovative behavior variable and explains that the effect is moderate. Next, the R square value of organizational learning is 0.059, it means that the transformational leadership variable has an influence of 5.9% on the organizational learning variable and explains that the effect is weak. The three R square values of self-efficacy are 0.276, it means that the transformational leadership variable has an influence of 27.6% on the self-efficacy variable and explains that the effect is weak.

b) Calculation result in Fig. 5. 1

- 1) Hypothesis 1: There is an effect of transformational leadership on innovative behavior. The results of the calculation of the influence of transformational leadership on the innovative behavior of teachers shows that t count (9.050) > t table (1.96) and p value (0.00) < (α 0.05), while the direction of the influence is positive (0.502). Thus, it can be concluded that transformational leadership (X1) has a significant effect on innovative behavior (Y).

- 2) Hypothesis 2: There is an effect of organizational learning on innovative behavior. The result of calculating the effect of organizational learning on innovative behavior shows that t count (3.148) $>$ t table (1.96) and p value (0.002) $<$ (a 0.05), while the direction of the influence is positive (0.181). Thus it can be concluded that organizational learning (X2) has a significant effect on innovative behavior (Y).
- 3) Hypothesis 3: There is an effect of self-efficacy on innovative behavior. The result of self-efficacy calculation on innovative behavior shows that t count (4.036) $>$ t table (1.96) and p value (0.00) $<$ (a 0.05), while the direction of the influence is positive (0.267). Thus, it can be concluded that self-efficacy (X3) has a significant effect on innovative behavior (Y).
- 4) Hypothesis 4: There is an effect of transformational leadership on organizational learning. The results of the calculation of transformational leadership on organizational learning show that t count (2.976) $>$ t table (1.96) and p value (0.003) $<$ (a 0.05), while the direction of the influence is positive (0.243). Thus, it can be concluded that transformational leadership (X1) has a significant effect on organizational learning (X2).
- 5) Hypothesis 5: There is an effect of transformational leadership on self-efficacy. The results of the calculation of transformational leadership on self-efficacy show that t count (4.269) $>$ t table (1.96) and p value (0.00) $<$ (a 0.05), while the direction of the influence is positive (0.322). It can be concluded that transformational leadership (X1) has a significant effect on self-efficacy (X3).
- 6) Hypothesis 6: There is an effect of organizational learning on self-efficacy. The results of the calculation of organizational learning on self-efficacy show that t count (4,780) $>$ t table (1,96) and p value (0.00) $<$ (a 0.05), while the direction of the influence is positive (0.344). Thus it can be concluded that organizational learning (X2) has a significant effect on self-efficacy (X3).
- 7) Hypothesis 7: There is an effect of transformational leadership on innovative behavior through organizational learning. The results of the calculation of transformational leadership on innovative behavior through organizational learning show that t count (2.384) $>$ t able (1.96) and p value (0.018) $<$ (a 0.05), while the direction of the influence is positive (0.044). Thus it can be concluded that transformational leadership (X1) has a significant influence on innovative behavior (Y) through organizational learning (X2).
- 8) Hypothesis 8: There is an effect of transformational leadership on innovative behavior through self-efficacy. The results of the calculation of transformational leadership on innovative behavior through self-efficacy show that t count (2.714) $>$ t able (1.96) and p value (0.007) $<$ (a 0.05), while the direction of the influence is positive (0.086). Thus, it can be concluded that transformational leadership (X1) has a significant effect on innovative behavior (Y) through self-efficacy (X3).
- 9) Hypothesis 9: There is an effect of organizational learning on innovative behavior through self-efficacy. The results of the calculation of organizational learning on innovative behavior through self-efficacy show that t count (3.805) $>$ t table (1.96) and p value (0.00)

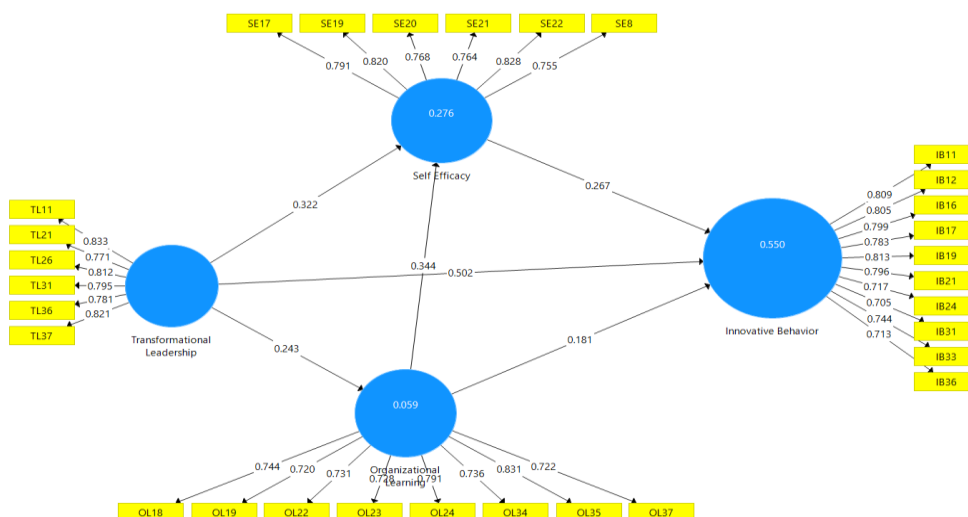
< (a 0.05), while the direction of the influence is positive (0.092). Thus, it can be concluded that organizational learning (X2) has a significant influence on innovative behavior (Y) through self-efficacy (X3).

10) Hypothesis 10: There is an effect of transformational leadership on self-efficacy through organizational learning. The results of the calculation of transformational leadership on self-efficacy through organizational learning show that t count (2.314) > t table (1.96) and p value (0.021) < (a 0.05), while the direction of the influence is positive (0.083). Thus, it can be concluded that transformational leadership (X1) has a significant effect on self-efficacy (X3) through organizational learning (X2).

Fig. 5. 1 T Statistic

No.	Korelasi Kausal	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
1	X1 -> Y	0.502	0.504	0.056	9.050	0.000
2	X2 -> Y	0.181	0.186	0.058	3.148	0.002
3	X3 -> Y	0.267	0.267	0.066	4.036	0.000
4	X1 -> X2	0.243	0.251	0.082	2.976	0.003
5	X1 -> X3	0.322	0.324	0.075	4.269	0.000
6	X2 -> X3	0.344	0.355	0.072	4.780	0.000
7	X1 -> X2 -> Y	0.044	0.045	0.018	2.384	0.018
8	X1 -> X3 -> Y	0.086	0.087	0.032	2.714	0.007
9	X2 -> X3 -> Y	0.092	0.093	0.024	3.805	0.000
10	X1 -> X2 -> X3	0.083	0.090	0.036	2.314	0.021

Fig. 5. 2 Loading factor



6. DISCUSSION

- a) In the results of this study, on the loading factor value there are 6 behaviors that manifest transformational leadership, namely: TL11, TL21, TL 26, TL31, TL36, TL37.
- b) There are 6 behaviors that manifest self-efficacy, namely: SE8, SE17, SE19, SE20, SE21, SE22.
- c) There are 8 behaviors that manifest organizational learning, namely: OL18, OL19, OL22, OL23, OL24, OL34, OL35, OL37.
- d) There are 10 behaviors that manifest innovative behavior, namely: IB11, IB12, IB16, IB17, IB19, IB21, IB24, IB31, IB33, IB36.

7. CONCLUSION

This study examines the effect of the principal's transformational leadership, school organizational learning, and teacher self-efficacy on the innovative behavior of elementary school teachers in the city of Depok. Based on the analysis and discussion of researchers, it can be concluded that:

- 1) Transformational leadership has a significant effect on the innovative behavior of teachers. Principals who remind of the school's vision, supervise, direct teachers to work with technology, are willing to listen to teacher complaints, reward teachers, and act as mentors will produce teachers who find and fight for innovative opportunities, create, promote, and apply new techniques, promoting and implementing new methods, championing and implementing solutions to problems. Transformational leadership behavior is very important to be applied by school principals in order to create respect for leaders who can influence their idealism, inspirational motivation, can provide intellectual stimulation, and give individual considerations to teachers.
- 2) Organizational learning has a significant effect on innovative behavior. When schools provide a good organizational or team forum for learning with peers, a team that is hungry for learning and individuals who are highly committed to learning will be formed. In a team there is also an exchange of visions by teachers with open minds, how they should deal with various changes such as curriculum changes or changes in teaching methods through online as happened during the pandemic era. With the formation of a good knowledge sharing atmosphere among teachers, it will have an impact on increasing the innovative behavior of teachers.
- 3) Self-efficacy has a significant effect on innovative behavior. When the teacher has the strength and is resistant to all obstacles, it will spur the teacher to work and increase the teacher's confidence in facing all changes. Teachers who complete tasks according to targets, are diligent in work, are able to work under pressure are characteristics of teachers who have high self-efficacy. Teachers must have confidence in their own abilities in dealing with various problems at work, adapting to all forms of change so that they can improve teacher innovative behavior.

- 4) Transformational leadership has a significant effect on organizational learning. The implication of this finding is a referral for school principals to increase their influence, motivation, stimulation and individual considerations to support teacher organizational learning. With this learning platform, it can help principals in delivering information about lesson plans or about changes that occur in the world of education, so that teachers can get provisions in learning about the difficulties they face or can adapt to the changes that occur.
- 5) Transformational leadership has a significant effect on self-efficacy. Principals must use their influence to move teachers, be able to motivate teachers to increase teacher confidence. The greater the ability of the principal in motivating teachers, the greater the strength of the teacher in dealing with problems or workloads. With intellectual stimulation, the principal can also provide good opinions or input when teachers face difficulties or changes in work.
- 6) Organizational learning has a significant effect on self-efficacy. It can be concluded that when teachers often do learning, school organization will greatly affect the teacher's confidence in dealing with work. The teacher's commitment to learning will be the teacher's provision in dealing with difficulties at work and increasing the teacher's strength in dealing with various changes. With the existence of a learning forum, teacher organizations can also be enthusiastic and increase teacher confidence because they feel they are facing problems together with knowledge sharing discussions with teachers.
- 7) Transformational leadership has a significant effect on innovative behavior through organizational learning. The principal's transformational leadership on the innovative behavior of teachers through school organizational learning has a significant influence. This means that the principal must further increase his influence, motivation, stimulation and individual considerations to support the learning of teacher organizations. With this learning forum, it can help principals in delivering information about lesson plans or about changes that occur in the world of education, so that teachers can learn about the difficulties they face or can adapt to changes that occur so that they can improve teacher innovative behavior.
- 8) Transformational leadership has a significant effect on innovative behavior through self-efficacy. Principals who carry out their leadership with a transformational leadership style will increase teacher self-efficacy which has an impact on increasing teacher innovative behavior. In addition to having a direct effect, transformational leadership can improve teacher innovative behavior through increasing teacher self-efficacy, so it is hoped that school principals in addition to improving their transformational leadership, also improve teacher self-efficacy.
- 9) Organizational learning has a significant effect on innovative behavior through self-efficacy. School organizational learning on teacher innovative behavior through teacher self-efficacy has a significant influence. With good organizational learning in schools, it will have an impact on increasing teacher self-efficacy, when teacher self-efficacy

increases it will affect innovative behavior which will also increase. This further strengthens that principals must further improve school organizational learning in order to create high teacher self-efficacy and good innovative behavior.

- 10) Transformational leadership has a significant effect on self-efficacy through organizational learning. The principal as a leader must improve transformational leadership behavior and make improvements to the school organization's learning forum so that teachers are formed who are confident in facing challenges and have a tenacious attitude in facing difficulties.

8. LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

a) Limitations

- 1) This research was conducted using quantitative techniques, so the researcher could not dig deeper into the answers given by the respondents.
- 2) This study only contains 4 variables that are directly related to one another so as to produce 10 hypotheses.
- 3) In this study, there are only 2 intermediate variables which at the same time become fixed variables, recommendations in future studies can be given other intermediate variables to increase the dependent variable.

b) Suggestion

- 1) It is better for further research to carry out further qualitative research or with a mix method so that the objectivity of the answers can be better.
- 2) For research development, it can be done by breaking down the variables into influential dimensions in this research to make it more focused.
- 3) Further research should pay attention to a better research model

References

- ❖ Afsar, B., & Masood, M. (2017). Transformational Leadership, Creative Self-Efficacy, Trust in Supervisor, Uncertainty Avoidance, and Innovative Work Behavior of Nurses: <https://doi.org/10.1177/0021886317711891>, 54(1), 36–61. <https://doi.org/10.1177/0021886317711891>
- ❖ Ahamad, Z. bin, & Kasim, A. L. bin. (2016). The Effects of Transformational Leadership towards Teachers Innovative Behavior in Schools. www.ijsrp.org
- ❖ Amo, B. W., & Kolvereid, L. (2011, November 21). Organizational Strategy, Individual Personality and Innovation Behavior. World Scientific; World Scientific Publishing Company. <https://doi.org/10.1142/S0218495805000033>
- ❖ Bratianu, C. (2018). Organizational Learning and the Learning Organization. Organizational Knowledge Dynamics: Managing Knowledge Creation, Acquisition, Sharing, and Transformation., 286–312. <https://doi.org/10.4018/978-1-4666-8318-1.CH012>
- ❖ Braun, S., Peus, C., Weisweiler, S., & Frey, D. (2013). Transformational leadership, job satisfaction, and team performance: A multilevel mediation model of trust. *The Leadership Quarterly*, 24(1), 270–283.

- <https://doi.org/10.1016/J.LEAQUA.2012.11.006>
- ❖ Calantone, R. J., Cavusgil, S. T., & Zhao, Y. (2002). Learning orientation, firm innovation capability, and firm performance. *Industrial Marketing Management*, 31(6), 515–524. [https://doi.org/10.1016/S0019-8501\(01\)00203-6](https://doi.org/10.1016/S0019-8501(01)00203-6)
 - ❖ Darmanah, G. (2019). *METODOLOGI PENELITIAN*. Hira Tech. www.hira-tech.com
 - ❖ Eden, D. (1992, December 1). Leadership and expectations: Pygmalion effects and other self-fulfilling prophecies in organizations. *The Leadership Quarterly*; JAI. [https://doi.org/10.1016/1048-9843\(92\)90018-B](https://doi.org/10.1016/1048-9843(92)90018-B)
 - ❖ Endang, M. (2011). *Riset Terapan Bidang Pendidikan dan teknik* (1st ed., Vol. 1). UNY Press. <http://staffnew.uny.ac.id/upload/132296045/lainlain/buku-riset-terapan-apri.pdf>
 - ❖ Fauzy, A. (2019). *Metode Sampling* (2nd ed., Vol. 1). Universitas Terbuka. https://pak.uui.ac.id/wp-content/uploads/2021/01/B1-Buku-1-ok_Metode-Sampling.pdf
 - ❖ Feirong, Y., & Richard, W. W. (2010). Innovative behavior in the workplace: the role of performance and image outcome expectations. In *Academy of Management Journal*. <https://www.jstor.org/stable/25684323>
 - ❖ García-Morales, V. J., Jiménez-Barrionuevo, M., & Gutiérrez-Gutiérrez, L. (2012). Transformational leadership influence on organizational performance through organizational learning and innovation. *Journal of Business Research*, 65(7), 1040–1050. <https://doi.org/10.1016/j.jbusres.2011.03.005>
 - ❖ Gumusluoğlu, L., & Ilsev, A. (2009). Transformational Leadership and Organizational Innovation: The Roles of Internal and External Support for Innovation*. *Journal of Product Innovation Management*, 26(3), 264–277. <https://doi.org/10.1111/J.1540-5885.2009.00657.X>
 - ❖ Hellriegel, D., & Slocum, J. W. (2011). *Organizational behavior*. South-Western Cengage Learning.
 - ❖ Hollenbeck, J. R., & W. I. J. A. (2009). *Organizational Behavior*. https://www.google.co.id/books/edition/Organizational_Behavior/Hs2NAgAAQBAJ?hl=id&gbpv=1&dq=Organizational+Behavior:+Securing+Competitive+Advantage&printsec=frontcover
 - ❖ Hsiao, & Chang. (2011). The role of organizational learning in transformational leadership and organizational innovation. *Asia Pacific Education Review*, 12(4), 621–631. <https://doi.org/10.1007/S12564-011-9165-X/TABLES/6>
 - ❖ Hsiao, H.-C., Chang, J.-C., Tu, Y.-L., & Chen, S.-C. (2011). The Impact of Self-efficacy on Innovative Work Behavior for Teachers. *International Journal of Social Science and Humanity*, 31–36. <https://doi.org/10.7763/IJSSH.2011.V1.6>
 - ❖ Ibus, S. binti, & Ismail, F. binti. (2018). Conceptual Framework: The Mediating Effect of Self-Efficacy in the Relationships of Self-Leadership, Knowledge Sharing, and Innovative Work Behaviour. *International Journal of Academic Research in Business and Social Sciences*, 8(11). <https://doi.org/10.6007/IJARBS/V8-I11/5378>
 - ❖ Imran, M. K., Ilyas, M., Aslam, U., & Ubaid-Ur-Rahman. (2016). Organizational learning through transformational leadership. *Learning Organization*, 23(4), 232–248. <https://doi.org/10.1108/TLO-09-2015-0053/FULL/XML>
 - ❖ Jaafari, P., Karami, S., & Soleimani, N. (2012). The Relationship Among Organizational Climate, Organizational Learning and Teachers' Self Efficacy. *Procedia - Social and Behavioral Sciences*, 47, 2212–2218. <https://doi.org/10.1016/J.SBSPRO.2012.06.974>
 - ❖ Jennifer, M. G., & Gareth, R. J. (2008). *Understanding and Managing Organizational Behavior* (5th ed.). Pearson International.
 - ❖ Khayati, N., & Sarjana, S. (2015). Efikasi Diri dan Kreativitas Menciptakan Inovasi Guru. *Jurnal Pendidikan Dan Kebudayaan*, 21(3), 243–262. <https://doi.org/10.24832/JPNK.V21I3.189>

- ❖ Kleysen, R. F., & Street, C. T. (2001). Toward a multi-dimensional measure of individual innovative behavior. *Journal of Intellectual Capital*, 2(3), 284–296. <https://doi.org/10.1108/EUM0000000005660>
- ❖ Kumar, R. (2010). Investigating the effects of self efficacy on innovativeness and the moderating impact of cultural dimensions. <https://www.researchgate.net/publication/260318731>
- ❖ Lenz, E. R., & Bagget, L. M. (2002). *Self-Efficacy In Nursing: Research and Measurement Perspectives*. Springer Publishing Company. https://books.google.co.id/books?hl=id&lr=&id=6bKAQG-KXuMC&oi=fnd&pg=PA9&dq=magnitude+strength+generality+of+self-+efficacy+bandura+1977&ots=_c7cA3SLTR&sig=yQP54VLfvRCqVqdaS3xhy_9rfe8&redir_esc=y#v=onepage&q=magnitude+strength+generality+of+self-+efficacy
- ❖ Li, H., Sajjad, N., & Wang, Q. (2019). Influence of Transformational Leadership on Employees' Innovative Work Behavior in Sustainable Organizations: Test of Mediation and Moderation Processes. *Sustainability* 2019, Vol. 11, Page 1594, 11(6), 1594. <https://doi.org/10.3390/SU11061594>
- ❖ Lin, H. C., & Lee, Y. D. (2017). A Study of The Influence of Organizational Learning on Employees' Innovative Behavior and Work Engagement by A Cross-Level Examination. *Eurasia Journal of Mathematics, Science and Technology Education*, 13(7), 3463–3478. <https://doi.org/10.12973/EURASIA.2017.00738A>
- ❖ Miner, J. B. (2005). *Organizational behavior 1: Essential Theories of Motivation and Leadership*. M.E. Sharpe.
- ❖ Nonaka, I., & Takeuchi, H. (1995). *The Knowledge-creating Company: How Japanese Companies Create the Dynamics of Innovation*. Oxford University Press. https://books.google.co.id/books?hl=id&lr=&id=B-qxrPaU1-MC&oi=fnd&pg=PA3&dq=The+knowledge+creating+company&ots=XjTQrzqmf0&sig=A_W6YilBxTrNZogHdyxIKGm4l8&redir_esc=y#v=onepage&q=The+knowledge+creating+company&f=false
- ❖ Pillai, R., & Williams, E. A. (2004). Transformational leadership, self-efficacy, group cohesiveness, commitment, and performance. *Journal of Organizational Change Management*, 17(2), 144–159. <https://doi.org/10.1108/09534810410530584/FULL/XML>
- ❖ Rowold, J. (2005). Multifactor Leadership Questionnaire Psychometric properties of the German translation by Jens Rowold. www.mindgarden.com
- ❖ Saru, E. (2007). Organisational learning and HRD: How appropriate are they for small firms? *Journal of European Industrial Training*, 31(1), 36–51. <https://doi.org/10.1108/03090590710721727/FULL/XML>
- ❖ Scott, S., & Bruce, R. (1994). Determinants of Innovative Behavior: A Path Model of Individual Innovation in the Workplace. *Academy of Management Journal*, 37(3), 580–607. <https://doi.org/10.2307/256701>
- ❖ Serdyukov, P. (2017). Innovation in education: what works, what doesn't, and what to do about it? 8. <https://doi.org/10.1108/JRIT-10-2016-0007>
- ❖ Shaari, R., Rahman, S. A. A., & Rajab, A. (2014). Self-Efficacy as a Determined Factor for Knowledge Sharing Awareness. *International Journal of Trade, Economics and Finance*, 39–42. <https://doi.org/10.7763/ijtef.2014.v5.337>
- ❖ Shin, S. J., & Zhou, J. (2017). Transformational Leadership, Conservation, and Creativity: Evidence From Korea. <https://doi.org/10.5465/30040662>, 46(6), 703–714. <https://doi.org/10.5465/30040662>
- ❖ Tippins, M. J., & Sohi, R. S. (2003). IT competency and firm performance: is organizational learning a missing link? *Strategic Management Journal*, 24(8), 745–761. <https://doi.org/10.1002/SMJ.337>
- ❖ Tobin, T. J., Muller, R. O., & Turner, L. M. (2006). Organizational learning and climate as predictors of self-efficacy. *Social Psychology of Education* 2006 9:3, 9(3), 301–319. <https://doi.org/10.1007/S11218-005-4790-Z>
- ❖ Volmer, J., Spurk, D., & Niessen, C. (2012). Leader–member exchange (LMX), job autonomy, and creative

work involvement. *The Leadership Quarterly*, 23(3), 456–465.
<https://doi.org/10.1016/J.LEAQUA.2011.10.005>

- ❖ Yu, H., Leithwood, K., & Jantzi, D. (2002). The effects of transformational leadership on teachers' commitment to change in Hong Kong. *Journal of Educational Administration*, 40(4), 368–389. <https://doi.org/10.1108/09578230210433436>
- ❖ Yukl, G. (2009). Leading organizational learning: Reflections on theory and research. *The Leadership Quarterly*, 20(1), 49–53. <https://doi.org/10.1016/J.LEAQUA.2008.11.006>
- ❖ Zulkifli, M. E. S., Hadi Senen, S., & Ahman, E. (2019). Factors Influencing Innovative Work Behavior: An Individual Factors Perspective Article in. *International Journal of Scientific & Technology Research*. www.ijstr.org