

Strategies For Enhancing Organizational Citizenship Behavior (OCB) Through Transformational Leadership and Job Satisfaction In the Era of the Industrial Revolution 5.0

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Abstract

The purpose of this study is to find strategies to improve the OCB of teachers through strengthening the variables of Transformational leadership and Job satisfaction. This study used a survey method with a quantitative approach on 252 teacher respondents. The data collection technique was carried out by questionnaire, while the data analysis included correlation tests, linear regression, and path coefficient calculation. The results of the study show that (1) there is a direct positive influence between Transformational leadership on teachers' OCB, and (2) there is a direct positive influence between Job satisfaction on teachers' OCB. This study confirms that teachers' OCB is highly determined by personal and professional factors, especially transformational leadership characters who are open to new experiences and strong commitment to their profession.

Keywords: Transformational Leadership, Job Satisfaction, OCB

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INTRODUCTION

Human resource development is a fundamental and inseparable factor in advancing the quality of education. Within educational institutions, teachers represent one of the most strategic human resources because they are not merely implementers of instructional programs but also key actors in translating educational policies into classroom practices, developing students' potential, building school culture, and supporting the achievement of institutional goals. Therefore, the quality of an educational institution is highly dependent on the quality of its teachers as a form of human capital that needs to be managed and continuously developed.

The role of teachers has become increasingly complex along with rapid technological development and the emergence of Industry 5.0. Unlike Industry 4.0, which primarily emphasizes digitalization, automation, connectivity, and smart technologies, Industry 5.0 places human beings at the center of technological development and emphasizes human-centricity, sustainability, and resilience. The European Commission identifies these three dimensions as central priorities of Industry 5.0, with particular emphasis on human well-being, skills development, and human-centered technological development.

In the educational context, Industry 5.0 requires a transformation in the way teachers are perceived and managed. Teachers should not merely be regarded as employees who perform formally prescribed duties but as strategic human capital capable of contributing to organizational development. Teachers are expected to demonstrate initiative, collaborate with colleagues, support organizational changes, share knowledge, participate actively in school programs, solve organizational problems, and voluntarily contribute to the achievement of school goals. Research on education and Industry 5.0

also emphasizes the increasing importance of interpersonal skills and human capabilities alongside technological competencies.

Such behaviors are conceptually associated with Organizational Citizenship Behavior (OCB). OCB refers to discretionary individual behaviors that are not directly or explicitly recognized by the formal reward system but collectively contribute to organizational effectiveness. In schools, teachers' OCB may be reflected in their willingness to help colleagues, support students beyond formal responsibilities, participate in school activities, maintain positive interpersonal relationships, accept organizational changes, provide constructive suggestions, demonstrate civic responsibility, and voluntarily contribute to school improvement.

OCB is particularly important in educational organizations because schools are highly dependent on interpersonal relationships, collaboration, communication, and collective responsibility. The achievement of educational goals cannot rely solely on teachers performing their formal duties. Curriculum development, professional learning communities, student mentoring, school improvement programs, extracurricular activities, innovation, collaboration among teachers, and implementation of educational policies require teachers to demonstrate behaviors that go beyond their prescribed roles. Therefore, OCB can be viewed as an important form of organizational capital that strengthens the capacity of schools to achieve their goals.

Recent international research demonstrates the increasing importance of OCB in educational organizations. Liu, Xiu, and Yao (2025), found that transformational leadership directly affected teacher retention, while communication and organizational citizenship behavior positively mediated the relationship between transformational leadership and teacher retention. The findings suggest that promoting OCB is important not only for organizational effectiveness but also for sustaining teachers within schools.

Similarly, Al Hammadi et al. (2025) examined found that change-oriented organizational citizenship behavior fully mediated the relationship between transformational leadership and instructional practices. This finding is highly relevant to the era of Industry 5.0 because educational transformation requires teachers not merely to comply with organizational policies but also to demonstrate initiative, adaptability, and willingness to participate in organizational change.

These findings indicate that teachers' OCB cannot be understood solely as an individual characteristic. OCB is also shaped by the organizational environment, leadership practices, and teachers' work experiences. Consequently, strengthening teachers' OCB requires educational leaders to create organizational conditions that promote supportive leadership, positive work experiences, professional development, participation, and positive attitudes toward the organization.

One important organizational factor associated with OCB is transformational leadership. Transformational leadership emphasizes the ability of leaders to develop an inspiring vision, provide motivation, serve as role models, stimulate intellectual development, and provide individualized consideration. In schools, transformational principals do not merely instruct teachers to perform their duties; rather, they encourage teachers to internalize the school's vision and organizational goals as shared goals.

Transformational leadership has become increasingly relevant in the Industry 5.0 era because educational organizations require leaders who can manage technological and organizational change while maintaining a strong human-centered orientation. Industry 5.0 requires leadership that integrates technological development with human capabilities, collaboration, innovation, sustainability, and organizational resilience. Therefore,

educational leadership needs to move beyond administrative control toward a leadership approach that inspires, supports, and motivates teachers.

Recent empirical evidence supports the relationship between transformational leadership and teachers' OCB. Liu et al. (2025) found that transformational leadership was associated with teacher retention and that OCB served as one of the mechanisms underlying this relationship. Al Hammadi et al. (2025) further demonstrated that change-oriented OCB was an important mechanism linking transformational leadership to instructional practices.

Evidence from Indonesia also supports this relationship. A 2024 study of high school teachers in Madiun found significant positive relationships between transformational leadership, quality of work life, organizational commitment, and OCB. The study further found that quality of work life partially mediated the relationship between transformational leadership and OCB, while organizational commitment also partially mediated the relationship. These findings indicate that strengthening teachers' OCB may require improvements not only in leadership practices but also in the quality of teachers' work experiences.

However, transformational leadership may not automatically produce OCB. The influence of leadership may operate through teachers' attitudes toward their work. One important factor is job satisfaction. Teachers who perceive their work as meaningful, receive adequate support from school leaders, maintain positive relationships with colleagues, obtain opportunities for professional development, and feel valued by their organization are more likely to develop positive attitudes toward their work and institution.

Recent research confirms the importance of job satisfaction in understanding teachers' professional behavior. Yong and Zhang (2025), for example, found that transformational leadership was associated with teachers' work conditions and that job satisfaction played an important mediating role in explaining teachers' responses to organizational demands. The study suggests that transformational leadership can contribute to more positive teacher experiences by strengthening affective commitment and job satisfaction.

Research published in 2024 also found a significant relationship between transformational leadership and teachers' job satisfaction. A study involving 425 university teachers in Shandong Province demonstrated that transformational leadership influenced job satisfaction, with organizational justice and psychological capital contributing to the relationship. Although the educational context differs from primary and secondary schools, the finding provides additional evidence that leadership practices can influence teachers' work attitudes.

Job satisfaction is therefore potentially an important mechanism through which transformational leadership influences teachers' organizational behavior. When teachers experience positive attitudes toward their work and organization, they may be more willing to engage in voluntary behaviors that benefit the school. In this sense, job satisfaction can strengthen teachers' willingness to demonstrate OCB and contribute beyond their formal responsibilities.

The importance of strengthening these organizational factors becomes more apparent when viewed against the broader challenges of educational quality in Indonesia. International assessment results indicate that Indonesian students continue to face substantial challenges in literacy, numeracy, science, and creative thinking. According to the OECD's PISA 2022 results, Indonesia obtained average scores of 366 in mathematics, 359 in reading, and 383 in science, substantially below the OECD averages of 472, 476,

and 485, respectively. More specifically, the PISA 2022 Creative Thinking results released in 2024 provide particularly relevant evidence in relation to the demands of Industry 5.0. Indonesia achieved an average score of 19 out of 60, compared with the OECD average of 33. The assessment examined students' ability to generate diverse and creative ideas and to evaluate and improve ideas in order to achieve creative outcomes.

This result is particularly significant because Industry 5.0 emphasizes human capabilities that cannot be reduced to technological competence alone. Creativity, collaboration, critical thinking, problem-solving, adaptability, communication, and human judgment remain essential. Therefore, improving educational quality requires not only technological investment but also the development of teachers and educational organizations capable of creating supportive, collaborative, innovative, and student-centered learning environments.

The PISA findings therefore provide an important context for strengthening educational organizations and their human resources. Low achievement in creative thinking cannot be addressed solely through curriculum reform or technological investment. It also requires teachers who are willing to collaborate, innovate, participate in organizational development, support colleagues, and contribute voluntarily to school improvement. In this context, teachers' OCB becomes strategically important because school improvement depends not only on what teachers are formally required to do but also on their willingness to contribute beyond formal job requirements.

The relationship between human resources and organizational behavior is particularly significant in Indonesia. Educational institutions require teachers who possess professional competence as well as the willingness to collaborate, share knowledge, support colleagues, participate in organizational activities, accept change, and take initiatives to improve school performance. Such behaviors represent important dimensions of OCB and can become a source of organizational strength.

Despite the growing body of research, several research gaps remain. First, previous studies have frequently examined the direct relationship between transformational leadership and OCB, but the mechanisms through which leadership influences teachers' extra-role behavior remain diverse. Second, job satisfaction has often been examined as an outcome of transformational leadership or as a predictor of organizational behavior, but its mediating role in explaining the relationship between transformational leadership and teachers' OCB requires further investigation, particularly in the school context.

Third, although recent studies have demonstrated the importance of transformational leadership, job satisfaction, and OCB, research integrating these three variables into a comprehensive model within the context of Industry 5.0 remains limited. Fourth, there is still a need for a model explaining how transformational leadership can influence teachers' extra-role behavior through positive work attitudes, particularly job satisfaction.

OCB cannot simply be demanded from teachers; it must be developed through organizational conditions that encourage teachers to feel valued, supported, satisfied, motivated, and connected to the goals of their schools. Transformational leadership can create these conditions by providing vision, inspiration, intellectual stimulation, individualized consideration, and meaningful support. Job satisfaction can subsequently strengthen teachers' positive attitudes toward their work and organization, increasing their willingness to contribute beyond formal job requirements.

Based on the above arguments, this study is important for developing a model for strengthening teachers' Organizational Citizenship Behavior (OCB). The proposed model positions transformational leadership as the leadership factor, job satisfaction as the work-

attitude factor, and OCB as the principal behavioral outcome. Ultimately, in the era of Industry 5.0, schools need teachers who are not only competent in performing their formal responsibilities but who are also satisfied, collaborative, adaptive, innovative, and willing to contribute beyond formal job requirements. Strengthening OCB can therefore become an important organizational strategy for building resilient, human-centered, collaborative, and high-performing educational institutions capable of responding to the changing demands of contemporary education. Accordingly, this study aims to develop a model for strengthening teachers' Organizational Citizenship Behavior (OCB) through the constellation of influences among transformational leadership and job satisfaction, thereby contributing to the development of educational human capital in the era of Industry 5.0.

RESEARCH METHOD

This research uses quantitative methods with a path analysis approach. The independent variables in this study are transformational leadership (X_1) and job satisfaction (X_2), while the population-dependent variable is Organizational Citizenship Behavior (Y).

Population and Sample

This study is on teachers in public elementary schools accredited "A" with the status of civil servants and certified educators at the Depok City Education Office, West Java Province. The sample in the study was calculated using the Taro Yamane formula of 252 people.

Hypothesis:

- H1 : Transformational leadership has a positive and significant effect on teachers' Organizational Citizenship Behavior.
- H2 : Job satisfaction has a positive and significant effect on teachers' Organizational Citizenship Behavior.
- H3 : Job satisfaction mediates the effect of transformational leadership on teachers' Organizational Citizenship Behavior.

Research Instrument

Data were collected using questionnaires designed with a Likert scale. The instrument measured the following variables:

1. Transformational Leadership, which was assessed through four dimensions: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. These dimensions reflect the leader's ability to serve as a role model, communicate an inspiring vision, encourage intellectual development and innovation, and provide individualized support and attention to teachers.
2. Job Satisfaction, which was assessed through indicators reflecting teachers' satisfaction with the work itself, supervision, relationships with colleagues, opportunities for professional development, and working conditions. These indicators represent teachers' positive evaluations and affective responses toward their work and workplace.
3. Organizational Citizenship Behavior (OCB), which was assessed through five dimensions: altruism, conscientiousness, sportsmanship, courtesy, and civic virtue. These dimensions reflect teachers' willingness to help colleagues, demonstrate behavior beyond minimum job requirements, maintain a positive

attitude toward organizational difficulties, prevent interpersonal problems, and actively participate in school activities and organizational affairs.

Validity and Reliability Tests

The validity of the instrument was tested using Pearson's Product-Moment Correlation with the assistance of statistical software. An item was considered valid if the calculated correlation coefficient (r) was greater than the critical value of r table at the 0.05 significance level. The reliability of the instrument was tested using Cronbach's Alpha, with values ≥ 0.70 considered acceptable.

Data Analysis

Quantitative research data were analyzed using descriptive statistics and inferential statistics. Inferential statistics using regression-correlation analysis. Data analysis was carried out using the normality test stage of the estimation error, the variance homogeneity test. Determination of regression equations, significance tests of regression equations, linearity of regression, and hypothesis testing using correlation tests; data processing is carried out using SPSS 22.

RESULTS AND DISCUSSION

Description of Research Variables Data

The description of the data from this research is intended to provide an overview of the dissemination or distribution of data. The data was processed using descriptive statistical techniques consisting of *mean*, median score, frequently appearing score (*mode*), standard *deviation*, frequency distribution (*variance*), lowest and highest scores, range between lowest and highest scores (*range*), data diversity (*sample variance*), total score (*sum*) from the research variable. The presentation of each of these variables in sequence is as follows.

Description of OCB (Y)

The results of the measurement of the data of the OCB variable (Y) through research instruments obtained results, namely the number of data (*sum*) is 31540, the number of data (*count*) is 252, the highest score (*maximum*) is 171, the lowest score (*minimum*) is 56, the average score (*mean*) is 125, the median value is 126, the most frequently appearing score (*mode*) is 115, the highest-lowest score range (*range*) is 114, and the standard *deviation* is 20. The data can be explained through table 1 below.

Table 1. Descriptive Statistics of OCB (Y)

No	Statistical Size	Result
1	Lots of Data	252
2	Average (Mean)	125
3	Median Value	126
4	Modus	133
5	Std. Deviation	20
6	Varians	398
7	Range	115
8	Minimum Score	56
9	Maximum Score	171
10	Lots of Grade	9
11	Class Length	13
12	Total	31606

Transformational leadership Variable Data Description (X1)

The results of the measurement of the data of the Transformational leadership variable (X1) through the research instrument obtained results namely the amount of data (*sum*) is 31540, the amount of data (*count*) is 252, the highest score (*maximum*) is 181, the lowest score (*minimum*) is 92, the average score (*mean*) is 124, the middle value (*median*) is 121, the most frequently appearing score (*mode*) is 115, the highest-lowest score range (*range*) is 89, and the standard *deviation* is 11. The data can be explained through the table below.

Table 2. Descriptive Statistics of Transformational leadership Variables (X1)

No	Statistical Size	Result
1	Lots of Data	252
2	Average (Mean)	125
3	Median Value	124
4	Modus	121
5	Std. Deviation	11
6	Varians	111
7	Range	89
8	Minimum Score	92
9	Maximum Score	181
10	Lots of Grade	9
11	Class Length	10
12	Total	31540

Description of Job satisfaction Variable Data (X2)

The results of the measurement of the variable data of Job satisfaction (X2) through research instruments obtained results, namely the number of data (*sum*) is 33378, the number of data (*count*) is 252, the highest score (*maximum*) is 163, the lowest score (*minimum*) is 98, the average score (*mean*) is 132, the median value is 132, the most frequently appearing score (*mode*) is 129, the range of the highest-lowest score (*range*) is 65, and the standard *deviation* is 12. The data can be explained through table 3 below.

Table 3. Descriptive Statistics of Job Satisfaction Variables (X₂)

No	Statistical Size	Result
1	Lots of Data	252
2	Average (<i>Mean</i>)	132
3	Median Value	132
4	<i>Modus</i>	129
5	<i>Std. Deviation</i>	12
6	<i>Varians</i>	152
7	<i>Range</i>	65
8	Minimum Score	98
9	Maximum Score	163
10	Lots of Grade	9
11	Class Length	7
12	Total	33378

Prerequisite Test

Normality Test

Normality testing of standard error estimation using the Liliefors test. The Ltable value for N=252 with $\alpha=0.05$ is 0.0789 at a significance level of 0.05. The requirement that the standard error of the estimate comes from a normally distributed population is $L_{cal} < L_{table}$. The calculation using the Liliefors test was obtained $L_{cal} = 0.0723$ while from the Liliefors table for $\alpha = 0.05$ and $n = 252$ the value $L_{table} = 0.0789$ was obtained. Because the value of $L_{cal} < L_{table}$, H_0 is accepted, which means that it gives a conclusion that the standard error of the estimation of the Transformational leadership variable X1 over OCB Y comes from a normally distributed population, more details can be found in the following Table 4:

Table 4. Normality Test Estimation of Transformational Leadership Variables (X_1) OCB Y

Nomor	L hitung	L tabel $\alpha = 0,05$	Simpulan
1	0,997	1,969	Normal
The normal distribution requirement is $L_{count} < L_{table}$			

The calculation of the normality of the variable of Job satisfaction X2 using the Liliefors test was obtained $L_{cal} = 0.0422$ while from the Liliefors table for $\alpha = 0.05$ and $n = 252$ the value $L_{table} = 0.0789$ was obtained. Because the value of $L_{cal} < L_{table}$ is accepted, H_0 is accepted, which means that the standard error of the estimate of the Job satisfaction Variable (X2) for OCB Y comes from a normally distributed population, for more details can be seen in the following Table 5:

Table 5. Normality Test of Estimation of Variable Job Satisfaction (X_2) OCB (Y)

Nomor	L hitung	L tabel $\alpha = 0,05$	Simpulan
1	0,993	1,969	Normal
The normal distribution requirement is $L_{count} < L_{table}$			

Homogeneity Test

The results of the homogeneity test of the Transformational leadership variable (X_1) using the Bartlett test were obtained as in the following table:

Table 6. Homogeneity test of the data variant of the above OCB variable (Y) Transformational leadership variable (X_1)

Box's M		4,720
F	Approx.	1,553
	df1	3
	df2	28767,599
	Sig.	,199
Tests null hypothesis of equal population covariance matrices		

Based on the results of the Bartlett test calculations, the value of sig. 0.199 while the significance level used is 0.05. The data requirement is homogeneous if the sig value $>$ significance level of 0.05, thus the OCB variable (Y) over the Transformational leadership variable (X_1) comes from a population that has the same variance (homogeneous).

Furthermore, the results of the homogeneity test of the Job satisfaction variable (X2) using the Bartlett test obtained the results as shown in the following table:

Table 7. Homogeneity test of the data variant of the above OCB variable (Y) Job satisfaction variable (X₂)

	Box's M	7,653
F	Approx.	2,307
	df1	3
	df2	355,619
	Sig.	,076
Tests null hypothesis of equal population covariance matrices		

Based on the results of the Bartlett test calculations, the value of sig. 0.076 while the significance level used is 0.05. The data requirement is homogeneous if the sig value > a significance level of 0.05, thus the OCB variable (Y) over the Job satisfaction variable (X₂) comes from a population that has the same variance (homogeneous).

Linearity Test

In the analysis of the Linearity test, it can be done using the Anova table, namely by looking at the significance value of the *Deviation from Linearity*. The provisions of the Linearity test are that if the significant value is > 0.05, then there is a significant linear relationship between the Transformational leadership variable (X₁) and the OCB variable (Y). After the Linearity test is met, it can be brought to the linear regression test. Using the ANOVA (*analysis of variance*) table at a significance level of 0.05, the results of the analysis of linear test data of the regression model between the data of the Transformational leadership variable (X₁) and the OCB variable (Y) were obtained as follows:

Table 8. ANOVA Test Transformational Leadership Variables (X₁) against the OCB variable (Y)

		Sum of Squares	df	Mean Square	F	Sig.
1	Between Groups	(Combined)	44050,932	71	620,436	2,449 ,000
		Linearity	27073,440	1	27073,440	106,866 ,000
		Deviation from Linearity	16977,492	70	242,536	,957 ,572
	Within Groups		17733,800	70	253,340	
	Total		61784,732	141		

Based on table 4.30 above, *Deviation from Linearity* is obtained with a sig value of 0.572. If the value of sig (0.572) > 0.05 then Ho is accepted. It was concluded that the regression between the data of the Transformational leadership variable (X₁) and the OCB variable (Y) was linear. Thus, it can be proven that there is a significant linear relationship between the Transformational leadership variable (X₁) and the OCB variable (Y). With the proof of the linearity relationship, it can be brought to the linear regression test.

Furthermore, the results of the analysis of linear test data of the regression model between the data of the Profession Commitment (X₂) variable and the OCB variable (Y) were obtained as follows:

Table 9. ANOVA test of the variable of Job Satisfaction (X₂) against the variable of OCB (Y)

		Sum of Squares	df	Mean Square	F	Sig.
I	Between (Combined) Groups	45055,516	76	592,836	2,303	,000
	Linearity	28418,337	1	28418,337	110,417	,000
	Deviation from Linearity	16637,179	75	221,829	,862	,734
	Within Groups	16729,217	65	257,373		
	Total	61784,732	141			

Based on table 9 above, the *Deviation from Linearity* is obtained with a sig value of 0.734. If the value of sig (0.734) > 0.05, then Ho is accepted. It was concluded that the regression between the data of the Job satisfaction variable (X₂) and the OCB variable (Y). is linear. Thus, it can be proven that there is a significant linear relationship between the variable of Job satisfaction (X₂) and the variable of OCB (Y). With the proof of the linearity relationship, it can be brought to the linear regression test.

Uji Hypothesis

Test of the Influence of Transformational leadership Variables (X₁) on OCB (Y)

The results of the analysis of the linear test data of the regression model of the Transformational leadership variable (X₁) against the variable OCB (Y) were obtained as follows:

Table 10. Linear regression test (t-test) of the Transformational leadership variable (X₁) against the variable of OCB (Y)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant)	42,016		6,275	,000
	BO_x1	,603	,054	,688	,000

Based on table 10, it is known that the slope constant (a) is 42.016 with a coefficient (b) X₁ of 0.603 so that the regression equation formed between the Transformational leadership variable (X₁) and the OCB variable (Y) is $\hat{y} = 42.016 + 0.603 X$. The significance value (sig) of the above output, obtained a sig value is 0.000 < from α (0.05). Therefore, it can be concluded that the influence between the Transformational leadership variable (X₁) and the OCB variable (Y) is significant. To determine the amount of Transformational leadership contribution (X₁) to the OCB variable (Y) can be seen from the value of the determination coefficient (ry²), as seen from the following SPSS test results:

Table 11. Coefficient of Determination of Transformational leadership variable (X₁) to OCB variable (Y)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,688 ^a	,473	,469	15,48147

a. Predictors: (Constant), BO_x1

Based on Table 11, the contribution of Transformational leadership (X1) to the variable of OCB (Y) $(r_{x1y})^2$ is 0.473 which can be interpreted that 47.3% of OCB (Y) can be explained by Transformational leadership (X1). The remaining 52.7% is a contribution from other factors outside of Transformational leadership. Based on the interpretation of the correlation coefficient, the relationship between Transformational leadership and OCB is a strong correlation (R value = 0.688).

Test of the Influence of Job satisfaction Variable (X₂) on OCB Variable (Y)

The results of the analysis of linear test data of the regression model of the Job satisfaction variable (X₂) to the OCB variable (Y) were obtained as follows:

Table 12. Linear regression test (t-test) variable Job satisfaction (X₂) against the OCB variable (Y)

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
1	(Constant)	43,076			6,773	,000
	VL_x2	,544	,702		11,648	,000

Based on Table 12 above, it is known that the slope constant (a) is 43.076 with a coefficient (b) of X1 of 0.544 so that the regression equation formed between the Job satisfaction variable (X2) and the OCB variable (Y) is $\hat{y} = 43.076 + 0.544 X$. The significance value (sig) of the above output is obtained as $0.000 < \alpha (0.05)$. Therefore, it can be concluded that the influence between the Job satisfaction variable (X₂) and the OCB (Y) variable is significant. To determine the amount of contribution of Job satisfaction (X₂) to OCB (Y), it can be seen from the value of the determination coefficient $(r_{y21})^2$, as seen from the following SPSS test results:

Table 13. Coefficient of Determination of Job satisfaction variable (X₂) against the OCB variable (Y)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,702 ^a	,492	,489	15,19814

The contribution of Job satisfaction (X₂) to OCB (Y) $(r_{x2y})^2$ is 0.492 which can be interpreted as 49.2% of OCB (Y) can be explained by Job satisfaction (X₂). The remaining 50.8% is contributed by other factors outside of Job satisfaction. Based on the interpretation of the correlation coefficient, the relationship between Job satisfaction (X₂) and OCB (Y) is a strong correlation (R value = 0.702).

DISCUSSION

The findings of this study confirm that both Transformational leadership and Job satisfaction significantly contribute to teachers' OCB. These results are consistent with previous empirical studies that highlight personal and professional factors as key predictors of innovation in education.

1. The Effect of Transformational Leadership and Organizational Citizenship Behavior (OCB)

The findings of this study indicate that transformational leadership is an important factor in strengthening teachers' Organizational Citizenship Behavior (OCB). This relationship can be understood through the characteristics of transformational leadership, which encourage teachers to move beyond the minimum requirements of

their formal roles and contribute voluntarily to the achievement of organizational goals.

Transformational leadership is characterized by four fundamental dimensions: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. Through idealized influence, school principals act as role models who demonstrate integrity, commitment, responsibility, and consistency in pursuing school goals. Such leadership can encourage teachers to develop trust in the principal and identify themselves with the values and objectives of the school. As teachers perceive their leaders as credible and committed role models, they may become more willing to contribute beyond their formal responsibilities.

The second dimension, inspirational motivation, involves the ability of school leaders to communicate a meaningful vision, generate enthusiasm, and encourage teachers to work collectively toward shared organizational goals. In the school context, a principal who communicates a clear vision and provides meaningful motivation can encourage teachers to participate in school activities, assist colleagues, support organizational programs, and contribute constructively to school improvement. These behaviors correspond closely with the discretionary nature of OCB.

The third dimension, intellectual stimulation, encourages teachers to think critically, examine existing practices, develop new solutions, and respond constructively to organizational challenges. This dimension is particularly relevant in contemporary education, where teachers are required to respond to curriculum changes, technological developments, diverse student needs, and organizational transformation. When principals create an environment in which teachers are encouraged to think and contribute ideas, teachers may become more willing to participate in problem solving and organizational improvement.

The fourth dimension, individualized consideration, emphasizes the leader's attention to the individual needs, capabilities, and professional development of teachers. Principals who recognize teachers' individual contributions, provide appropriate support, and understand their professional needs can establish positive leader-teacher relationships. Such relationships may encourage teachers to reciprocate through positive discretionary behaviors that benefit the school.

The findings are also supported by recent research in educational settings. Liu, Xiu, and Yao (2025), found that transformational leadership was significantly associated with teacher-related organizational outcomes and that OCB played an important mediating role in the relationship between transformational leadership and teacher retention. Their findings emphasize that transformational leadership can create organizational conditions in which teachers are more willing to demonstrate behaviors that extend beyond their formal responsibilities.

Similarly, Al Hammadi et al. (2025) found that change-oriented OCB mediated the relationship between transformational leadership and teachers' instructional practices. This finding is particularly relevant to the current study because it demonstrates that transformational leadership does not only influence teachers through formal instructional directives. Instead, leadership can stimulate voluntary and change-oriented behaviors that subsequently contribute to better educational practices.

Evidence from the educational context in Indonesia also supports the relationship. Hermanto, Srimulyani, and Pitoyo (2024), in a study involving 165 permanent high school teachers in Madiun City, found a significant positive relationship between

transformational leadership and OCB. Their findings indicate that increasing transformational leadership practices can contribute to strengthening teachers' OCB.

The relationship can also be explained through Social Exchange Theory. Transformational leadership provides teachers with psychological and organizational resources through vision, support, recognition, intellectual stimulation, and meaningful interpersonal relationships. When teachers perceive these leadership behaviors positively, they may develop an obligation to reciprocate through positive behaviors toward the organization. OCB can therefore emerge as a form of voluntary reciprocity in which teachers contribute to colleagues and the school beyond the minimum requirements of their formal jobs. In the context of schools, such reciprocal behavior may take various forms. Teachers may voluntarily assist colleagues who experience difficulties, provide support to new teachers, participate in school activities beyond their assigned duties, maintain positive relationships with other members of the school community, avoid unnecessary complaints, and actively participate in organizational decision-making and school improvement activities. These behaviors correspond to the five commonly recognized dimensions of OCB: altruism, conscientiousness, sportsmanship, courtesy, and civic virtue.

Altruism is reflected in teachers' willingness to voluntarily assist colleagues and other members of the school community. Conscientiousness involves teachers' willingness to perform their responsibilities beyond the minimum organizational requirements. Sportsmanship refers to maintaining a positive attitude and avoiding excessive complaints when facing difficulties. Courtesy involves maintaining constructive interpersonal relationships and preventing conflicts. Civic virtue refers to teachers' active and responsible participation in the life and development of the school organization.

The connection between transformational leadership and these dimensions of OCB is particularly important because school effectiveness depends substantially on collective rather than purely individual performance. A principal may establish policies and formal procedures, but their implementation often depends on teachers' willingness to cooperate, communicate, help one another, and voluntarily participate in organizational activities. Consequently, transformational leadership can function as an important organizational mechanism for developing a culture in which extra-role behavior becomes more likely to emerge.

The relationship is also relevant to the demands of Industry 5.0, which emphasizes human-centeredness, collaboration, adaptability, sustainability, and resilience. In such an environment, educational organizations require leaders who can combine organizational transformation with attention to human relationships and professional well-being. Transformational leadership provides a suitable leadership perspective because it focuses not only on task achievement but also on developing followers' motivation, values, capabilities, and commitment to shared goals.

Overall, the theoretical and empirical evidence supports the proposition that stronger transformational leadership is associated with stronger teachers' OCB. The principal's ability to become a role model, communicate an inspiring vision, stimulate teachers intellectually, and provide individualized support can create conditions that encourage teachers to demonstrate altruism, conscientiousness, sportsmanship, courtesy, and civic virtue. Thus, transformational leadership can be considered an important antecedent of teachers' OCB and a strategic leadership approach for strengthening human-centered and collaborative educational organizations.

2. The Effect of Job Satisfaction on Organizational Citizenship Behavior

Job satisfaction is an important attitudinal factor that can influence employees' willingness to demonstrate behaviors that extend beyond their formal job responsibilities. In educational organizations, teachers who experience satisfaction with their work are more likely to develop positive attitudes toward their schools, colleagues, and professional responsibilities. Such positive attitudes may encourage teachers to voluntarily assist colleagues, comply with organizational procedures, maintain harmonious relationships, and actively participate in school activities, all of which represent important forms of Organizational Citizenship Behavior (OCB). Recent empirical evidence continues to demonstrate that job satisfaction is closely associated with OCB across different organizational and educational contexts.

Recent research provides direct evidence of the relationship between job satisfaction and OCB. Hakim et al. (2024), for example, found that job satisfaction played a mediating role in the relationship between servant leadership and OCB, indicating that employees who experience greater satisfaction with their work are more likely to exhibit discretionary behaviors that support organizational functioning. Their findings also suggest that job satisfaction represents an important psychological mechanism through which positive workplace experiences are translated into citizenship behavior.

This relationship is particularly relevant in the educational context. Wahyuningsih and Nurlaeli (2024), in a study of Indonesian teachers, examined job satisfaction alongside perceived organizational support and emotional intelligence in explaining teachers' citizenship behavior. Their findings demonstrate the relevance of job satisfaction and positive workplace attitudes in encouraging teachers to engage in extra-role behaviors.

The importance of teachers' organizational citizenship behavior is also supported by Hermanto et al. (2024). Their study of 165 permanent high school teachers found a significant positive relationship between transformational leadership and OCB, while quality of work life and organizational commitment contributed to the mechanism underlying this relationship. Although the study did not position job satisfaction as its primary mediator, its findings reinforce the broader argument that positive work experiences and favorable organizational conditions are important in strengthening teachers' willingness to contribute beyond their prescribed roles.

Further evidence from educational research shows that OCB is strongly connected with the organizational conditions experienced by teachers. Jiang and Lv (2024) examined teachers' OCB in relation to school organizational climate and found that organizational conditions were significantly related to teachers' citizenship behavior. Their findings highlight the importance of the school environment in shaping voluntary and discretionary teacher behaviors. From this perspective, job satisfaction can be understood as an important attitudinal outcome of favorable organizational conditions that subsequently facilitates teachers' willingness to contribute to school effectiveness beyond their formal responsibilities.

The relationship between job satisfaction and OCB becomes even more apparent when leadership is considered as an antecedent. Yusron and Asro (2025) specifically examined transformational leadership, job satisfaction, and OCB within an integrated model. Their findings showed that transformational leadership had a positive and significant effect on both job satisfaction and OCB, while job satisfaction was positively associated with OCB and significantly mediated the relationship between transformational leadership and OCB. These findings provide direct

empirical support for the proposition that satisfied employees are more likely to demonstrate extra-role behaviors and that job satisfaction can function as a mechanism through which organizational leadership contributes to OCB.

Evidence from the educational leadership literature further supports the importance of positive leadership experiences in shaping teachers' attitudes. Liu et al. (2025), found that transformational leadership was associated with teachers' organizational citizenship behavior and that OCB played an important role in the relationship between transformational leadership and teacher retention.

Similarly, Al Hammadi et al. (2025) demonstrated that teachers' change-oriented OCB served as a mechanism linking transformational leadership with instructional practices. This finding is particularly important because it illustrates that citizenship behavior among teachers is not limited to helping colleagues or complying with organizational expectations but can also involve voluntarily contributing to organizational improvement. A positive work experience, including satisfaction with leadership and working conditions, may therefore provide an important foundation for teachers' willingness to engage in such discretionary behaviors.

The relationship between leadership, job satisfaction, and teachers' workplace experiences is also supported by Yong and Zhang (2025). Their study of 433 primary and secondary school teachers found that transformational leadership significantly increased teachers' job satisfaction and that job satisfaction mediated the relationship between transformational leadership and role stress. More recent evidence in 2026 further strengthens the argument. Maulana et al. (2026) found that job satisfaction had a positive and significant partial effect on OCB among healthcare employees. Their findings demonstrate that satisfied employees are more likely to engage in discretionary behaviors that support organizational effectiveness, even in demanding professional environments.

The most recent evidence also suggests that job satisfaction should not be viewed in isolation from broader work experiences. A 2026 study examining quality of work life and OCB found that job satisfaction and organizational commitment helped explain citizenship behavior, while organizational commitment emerged as the strongest correlate of OCB. The findings indicate that employees' discretionary organizational behaviors are shaped by a combination of their perceptions and attitudes toward their work and organization. Thus, improving job satisfaction remains an important component of creating conditions that encourage OCB.

3. Organizational Citizenship Behavior as the Dependent Variable

Organizational Citizenship Behavior (OCB) is an important behavioral construct for understanding how teachers contribute to school effectiveness beyond the formal requirements of their jobs. In educational organizations, OCB refers to voluntary and discretionary behaviors that support colleagues, facilitate organizational functioning, and contribute to the achievement of school goals. Such behaviors may include helping colleagues, demonstrating conscientiousness, maintaining positive interpersonal relationships, showing tolerance toward difficult situations, and participating actively in school affairs. Therefore, OCB should be distinguished from innovative work behavior. Although teachers' voluntary contributions may sometimes facilitate innovation, idea generation, idea promotion, and idea implementation are more appropriately conceptualized as innovative work behavior rather than as the core dimensions of OCB.

Recent studies have continued to demonstrate the importance of OCB in educational organizations. Hsieh et al. (2024), Their findings demonstrate that

teachers' citizenship behavior is influenced by the quality of interpersonal and organizational relationships within schools. When teachers perceive their leaders as emotionally competent and trustworthy, they are more likely to demonstrate voluntary behaviors that contribute to organizational functioning.

Similarly, Choong and Ng (2024), based on data from teachers, demonstrated that trust in colleagues was associated with teachers' OCB and that individual and collective psychological resources helped explain this relationship. The findings suggest that OCB develops within a relational environment in which teachers feel confident in their colleagues and perceive sufficient support to engage in behaviors beyond their formal responsibilities.

Jiang and Lv (2024) further emphasized the importance of the school organizational environment. Their study examined the relationship between school organizational climate and teachers' OCB and found that organizational climate was significantly associated with teachers' citizenship behavior. The study also demonstrated the relevance of teaching efficacy in explaining this relationship. These findings indicate that OCB should not be understood solely as an individual characteristic but also as a behavioral response to the organizational conditions experienced by teachers.

The role of leadership is particularly important in explaining teachers' OCB. Liu et al. (2025), This finding indicates that teachers' willingness to contribute beyond their formal responsibilities may constitute an important mechanism through which effective leadership strengthens organizational outcomes.

Consistent with these findings, Gedifew and Taye (2025) examined 647 respondents from public universities in Ethiopia and found a significant direct effect of transformational leadership on teachers' OCB. Among the dimensions of transformational leadership, idealized influence and inspirational motivation demonstrated particularly important effects. The findings reinforce the argument that leaders who provide vision, inspiration, and positive role modeling can encourage teachers to engage in behaviors that support the wider organization beyond their prescribed duties.

Al Hammadi et al. (2025) provide further evidence concerning the behavioral consequences of transformational leadership. Their study of 297 teachers in government schools in the United Arab Emirates found that change-oriented OCB fully mediated the relationship between transformational leadership and instructional practices. This finding demonstrates that teachers' discretionary behavior can serve as an important mechanism through which leadership contributes to improvements in teaching practice. However, change-oriented OCB represents a specific form of citizenship behavior directed toward organizational change and should not be equated with the broader construct of OCB.

The importance of OCB in schools is also demonstrated by research focusing on school learning environments. A 2025 study published in *Studies in Educational Evaluation* found that school learning culture was associated with teachers' organizational citizenship behavior, particularly organizationally directed citizenship behavior. The study highlights the importance of a learning-oriented school environment in encouraging teachers to contribute beyond their prescribed roles. Such findings reinforce the view that teachers' OCB is shaped by the interaction between individual attitudes and organizational conditions.

Recent evidence also provides direct support for the role of job satisfaction in developing teachers' OCB. Wahyuningsih and Nurlaeli (2024) examined Indonesian

teachers' citizenship behavior and included job satisfaction as an important explanatory variable. Their findings demonstrate the relevance of positive job attitudes in understanding teachers' willingness to perform extra-role behaviors. This finding is particularly important for the present study because job satisfaction represents a direct psychological response to teachers' experiences of their work, supervision, colleagues, and organizational environment.

More recent evidence from educational settings provides even stronger support for this relationship. A 2026 study published in the *International Journal of Special Education* examined public vocational high school teachers in Jakarta and found that job satisfaction was the strongest influence on OCB among the organizational and employment factors investigated. The study suggests that teachers who feel respected, supported, and fairly valued are more willing to contribute beyond formal job requirements.

Likewise, Aini et al. (2026) specifically investigated job satisfaction as a predictor of OCB among private Islamic senior high school teachers. The study directly positions job satisfaction as an important determinant of teachers' voluntary organizational behavior, strengthening the argument that positive work experiences can encourage teachers to contribute to school effectiveness beyond their formal responsibilities.

The most recent evidence also supports the relationship between job satisfaction and OCB through leadership and organizational mechanisms. A 2026 study published in the *International Journal of Educational Management* examined teachers in public schools in Kazakhstan and found that servant leadership was positively associated with OCB, while organizational identification and job satisfaction functioned as important mechanisms in this relationship. These findings demonstrate that teachers' citizenship behavior is closely connected with how they identify with and experience their organization, including their level of satisfaction with their work.

Taken together, the evidence from 2024–2026 demonstrates that teachers' OCB is a multidimensional behavioral construct influenced by leadership, organizational climate, interpersonal trust, job satisfaction, and other positive organizational experiences. Importantly, these recent studies indicate that OCB should be conceptualized as voluntary behavior that supports the functioning and effectiveness of the organization rather than being equated with innovative work behavior. Teachers may demonstrate OCB by helping colleagues, maintaining conscientious work practices, participating in school activities, showing courtesy and consideration toward others, and supporting the organization even when such behaviors are not explicitly required by their formal job descriptions.

In the context of contemporary education, OCB becomes increasingly important because schools require teachers who are willing to collaborate, support colleagues, participate in organizational activities, and respond constructively to changing educational demands. Transformational leadership can create an environment that encourages such behaviors by providing vision, inspiration, intellectual stimulation, and individualized support. At the same time, job satisfaction can strengthen teachers' positive attitudes toward their work and organization, increasing their willingness to reciprocate through voluntary contributions.

In the context of Society 5.0, where educational organizations are expected to be adaptive, collaborative, human-centered, and responsive to social and technological changes, teachers' OCB becomes increasingly important. Schools require not only

teachers who fulfill their formal instructional responsibilities but also teachers who are willing to support colleagues, participate in school activities, maintain constructive relationships, and contribute voluntarily to organizational improvement. Therefore, strengthening transformational leadership and job satisfaction may provide an important foundation for developing a school culture characterized by cooperation, commitment, and positive citizenship behavior.

CONCLUSION

Based on the results of the study and the discussion, several conclusions can be drawn:

1. Transformational leadership has a positive and significant effect on teachers' Organizational Citizenship Behavior (OCB). This finding indicates that transformational leadership practices characterized by idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration can encourage teachers to demonstrate voluntary behaviors beyond their formal job responsibilities. Effective transformational leaders provide vision, motivation, intellectual stimulation, and individual support that encourage teachers to help colleagues, demonstrate conscientiousness, maintain positive interpersonal relationships, and actively participate in school activities.
2. Job satisfaction has a positive and significant effect on teachers' Organizational Citizenship Behavior (OCB). Teachers who experience satisfaction with their work, supervision, relationships with colleagues, professional development opportunities, and working conditions are more likely to demonstrate positive discretionary behaviors toward their schools. Job satisfaction strengthens teachers' willingness to contribute beyond their formal duties, including helping colleagues, maintaining harmonious relationships, demonstrating responsibility, and participating actively in organizational activities.
3. Transformational leadership and job satisfaction jointly contribute significantly to teachers' Organizational Citizenship Behavior. These findings indicate that teachers' OCB is influenced by both organizational leadership and teachers' positive attitudes toward their work.

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