



## TRANSFORMATIONAL LEADERSHIP OF SCHOOL HEADS AND SELF-REGULATION: THE MEDIATING ROLE OF TEAMWORK SKILLS IN PUBLIC SCHOOLS

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### Abstract:

The purpose of this study was to determine the mediating role of teamwork skills on the relationship between transformational leadership of school heads and self-regulation of teachers. Utilizing quantitative, non-experimental design via correlational technique, data were obtained from 256 respondents of the study who are teachers among public elementary schools in Cateel 1 and 2, province of Davao Oriental. The researcher utilized a stratified random sampling technique and an online survey mode of data collection. The researcher also utilized the statistical tools mean, Pearson  $r$ , and Medgraph using the Sobel  $z$ -test. From the results of the study, it was found that there is a very high level of transformational leadership, self-regulation, and teamwork skills. Also, results revealed that there is a significant relationship between transformational leadership and self-regulation, a significant relationship between transformational leadership and teamwork skills, and a significant relationship between teamwork skills and self-regulation. Further, teamwork skills have a partial mediating effect on the relationship between the

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transformational leadership of school heads and the self-regulation of teachers in public schools.

**Keywords:** education, transformational leadership, self-regulation, teamwork skills mediating effect, school heads, teachers, Philippines

## 1. Introduction

The problem of self-regulation is due to the existing contradiction between the requirements of the modern employer and the actual skills of professionals, which determines the need for self-regulation. A modern person needs to be able to regulate his or her academic activities, monitor, establish, and eliminate the causes of the difficulties that arise. Teachers not only have an inadequate knowledge of effective teaching strategies but also, do not know how to monitor and evaluate these strategies when they are not working properly. There is a need for self-regulation as teachers often face difficulties in choosing and using different teaching strategies (Mohammadi *et al.*, 2020; Odinkaya *et al.*, 2019).

Further, self-regulated teachers develop behavioral, cognitive, and affective responses that will influence future planning and execution processes. Effective teachers are those who achieve self-regulation processes in their teaching, which can stimulate their beliefs to select appropriate actions that lead to the successful execution of their performance. Thus, a self-regulated teacher is aware of how pedagogical knowledge and skills can be learned and applied in the classroom. Self-regulated teachers portray adequate functioning in teaching, and they build knowledge before and after the teaching session through cyclical self-regulatory processes that allow them to improve with each class (Ali *et al.*, 2019; Saez-Delgado *et al.*, 2022).

Transformational leadership illustrates that successful self-regulation is related to constructive leadership, which in turn, is related to job satisfaction. Leadership mediates the relationship between self-regulation and job satisfaction if a group is interpreted as an indicator of emotional contagion (Furchtenicht, 2021). Also, transformational leaders engage their followers in implementing innovative ways of working (team process improvement), having better teamwork skills (quality of group experience), and working together over time (team viability) (Paolucci *et al.*, 2019). Lastly, individuals utilize self-regulation during collaboration. To effectively improve teamwork skills, self-regulation is needed throughout the process of teamwork, from task preparation to execution, and finally, evaluation (Wang *et al.*, 2022).

Further, transformational leadership has a positive impact on motivation, attitude, and behavior. The transformational leadership of school heads and teachers can influence students' attitudes and commitment to both the leader and the organization. It is also the leader's competency to get the work performance of people beyond expectations, and it can be helpful and beneficial in enhancing one's ability to intrinsically motivate others. It can also improve empowerment (Khan *et al.*, 2020; Peng *et al.*, 2020).

Self-regulation techniques are useful for developing transformational leadership, improving teamwork effectiveness, and cultivating academic achievement, especially when accompanied by constructive criticism. Direct observation and macro analytic metrics are two of the self-regulation strategies that have been found to improve individual performance. The main objective of transformational leadership is to strengthen organizational members' commitment to attaining their objectives. Relatedly, the development of respect, trust, alignment with the organization's mission, vision, and values, and effective collaboration with leadership and other teams all contribute to the success of high-performing, self-directed teacher teams. Thus, it allows them to collectively shape their own destiny and accomplish shared goals (Peterson, 2020; Wiyono, 2018).

There was an urgency to conduct this study because, the existing situation in schools shows that there were still a number of problems and issues involving the teachers despite the implementation of various national and local programs that aimed to provide teachers with a variety of benefits, thereby improving their transformational leadership, self-regulation, and teamwork skills. Furthermore, there are no similar studies that deal with the mediating role of teamwork skills of teachers on the relationship between transformational leadership and self-regulation in Region XI or specifically in one of the areas in Davao Province. Existing studies are only on *The Path Is the Goal: How Transformational Leaders Enhance Followers' Job Attitudes and Proactive Behavior* by Steinmann *et al.* (2018) and *The Impact of Leadership, Teamwork and Employee Engagement on Employee Performances* by Mughal (2020). Also, the outcome of the study will also help become an asset to the world of literature. Thus, making this study a reference for future contributions to the field of education. Furthermore, results can be used to develop or augment the practices of teachers as in their transformational leadership, self-regulation, and teamwork skills. Thus, the need to conduct this study.

## 2. Literature Review

Transformational leaders usually show four main characteristics namely: charisma, inspirational leadership, intellectual stimulation, and consideration. Transformational leaders focus on employees' values and achieve an extensive role in instances of struggle. Such leaders increase workers' values and self-principles and encourage them to exceed their very own self-interest for the sake of the organization. These leaders can influence followers, including the ability to motivate others and develop their moral values to help bring about change in the behaviors, attitudes, values, and expectations of the followers, and then change the behavior of the organization as a whole (Alessa, 2021; Dhanhani & Abdullah, 2022).

Additionally, when staff perceives equality in company processes and decisions, the time given to each individual is enhanced. As a result, leaders' positive attitudes have a significant impact on how people perceive justice along with how well their staff

members perform in their jobs. The concept of transformational leadership relying on social values and benefits as a motivational trigger to pull groups together toward a sense of connectedness and higher purpose supports the need for a sense of belonging, meaning, and social identity (Akar & Ustuner, 2019; Reich, 2022).

Moreover, in terms of transactional, leaders manage followers through rewards and punishment. It is a managerial leadership style in which the leader's responsibility is to focus on task requirements. Transactional and transformational leaders create the potential for employees' expected performance. Such leaders believe in the importance of promises and rewards to employees and they believe in the need for a formal distribution of power. Transformational leadership style has a positive relation with employee performance wherein, whereas transactional has a strong positive correlation with the work performance of employees (Alharbi & Aljounaidi, 2021; Hanafi *et al.*, 2019).

In addition, goal setting is an effective technique, capable of reliably boosting both individual and team performance when implemented correctly. In the context of transformational leadership within education, one crucial element is organizational structuring. This involves reinforcing the school's culture by establishing shared standards, assumptions, beliefs, and values that require collaborative work to meet common goals. Researchers argue that transformational leadership, with input from citizen groups, has a positive impact on employee efficiency. Establishing precise and reasonably challenging goals not only improves an individual's performance but also sharpens their focus, increases effort, strengthens perseverance, and stimulates the application of task-specific knowledge and strategies (Kouni *et al.*, 2018; Locke & Latham, 2019; Steinmann *et al.*, 2018).

Furthermore, adjustment is the ability to adjust to changes in a physical, vocational, and social environment. Teachers are essential to helping schools accomplish their goals in the field of education, especially while striving for transformational leadership. It's worth noting that effective leadership styles among school principals can vary based on the maturity levels of teachers and staff within each institution. Age or mental stability is not the same thing as maturity in this situation. Rather, it emphasizes a desire to achieve, a willingness to take on responsibilities, and the necessary abilities or expertise for the tasks at hand (Ansary, 2023; Tanjung *et al.*, 2020).

The skills most sought after by employers are work ethic, oral and written communication, teamwork, critical thinking, and problem-solving. Employability skills needed by employers are information technology and communication skills, decision-making, time management, and teamwork skills. Effective teamwork skills are important for the success of team-based workplaces. Teamwork skills can be described as the characteristics that a person needs to have in order to be a successful member of a team. Such skills are important to the conception, design, and provision of adequate training that helps participants to acquire teamwork competency (Hebles *et al.*, 2022; Subekti *et al.*, 2019).

In addition, the improvement and effectiveness of the school environment can be realized through teamwork. With most continuing professional development programs

for teachers, teamwork skills are important, especially for head teachers as they advance supervisory responsibilities for the school teams. Teamwork skills are very much prioritized by employers nowadays when selecting their employees. Through this skill, the talents of the members of the organization can be maximized, helping to strengthen the management of the organization (Dugang, 2020; Mohammad & Rashid, 2020).

Stakeholders must create policies and programs that emphasize the self-efficacy and transformational leadership of school administrators. This emphasis is crucial for creating creative teacher behavior since self-regulation is an essential mediator in the relationship between mindful or empathic leadership and turnover resilience. Moreover, effective self-regulation techniques for improving online learning include direct observation and macro-analytic measures. Teachers with high self-efficacy achieve positive outcomes through increased problem-solving, innovative idea generation, and practical implementation (Wibowo & Paramita, 2022; Wijayanti *et al.*, 2020).

Moreover, the purpose of transformational leadership is to increase the dedication of the organization's members to achieving their objectives. The need to simultaneously enhance transformational leadership and teamwork skills is highlighted to promote teacher innovation and thereby enhance teacher services. Distributed leadership, wherein all school members share responsibility, communicate the mission and objectives, allocate resources, and recognize teachers as essential professionals for school improvement, can also be promoted by teamwork that emphasizes shared goals, active participation, unity, effective communication, and knowledge sharing (Martinez & Acosta, 2020; Rais *et al.*, 2022).

Self-regulation techniques are useful for developing transformational leadership, improving teamwork effectiveness, and cultivating academic achievement, especially when accompanied by constructive criticism. Direct observation and macro analytic metrics are two of the self-regulation strategies that have been found to improve individual performance. The main objective of transformational leadership is to strengthen organizational members' commitment to attaining their objectives. Relatedly, the development of respect, trust, alignment with the organization's mission, vision, and values, and effective collaboration with leadership and other teams all contribute to the success of high-performing, self-directed teacher teams. Thus, it allows them to collectively shape their own destiny and accomplish shared goals (Peterson, 2020; Wiyono, 2018).

Transformational leadership illustrates that successful self-regulation is related to constructive leadership, which in turn, is related to job satisfaction. Leadership mediates the relationship between self-regulation and job satisfaction if a group is interpreted as an indicator of emotional contagion (Furchtenicht, 2021).

### 3. Material and Methods

There was a total of 256 out of 369 total population who became respondents of the study, using Slovin's formula ( $n=N/(1+Ne^2)$ ) for the computation of the sample size (Stephanie,

2003). The respondents were public elementary school teachers in Cateel 1 and Cateel 2, Davao Oriental. The stratified random sampling method was the method to be used in determining the respondents of the study. Stratified random sampling is a method for sampling from a population whereby the population is divided into subgroups and units are randomly selected from the subgroups (Salkind, 2007). Stratification of target populations is extremely common in survey sampling. Following stratification, a sample was selected from each stratum, often through simple random sampling.

The respondents were chosen accordingly to answer the questionnaire with confidentiality. In this case, the public elementary school teachers in Cateel 1 and 2, Davao Oriental were the groups to be included in the study. They were the teachers who are currently employed under a permanent status for a period of not less than 2 years and whose plantilla numbers are in the Department of Education, as they are the ones who were in the position to provide useful information upon testing the hypothesis of the study. Excluded from the study were those teachers in the junior and senior high schools in Cateel 1 and 2, Davao Oriental, even if teaching in the identified areas of the study for they were in different work environments and supervision. Also, those teachers in private schools and those teachers who hold managerial or supervisory positions were also excluded from the study.

The respondents were chosen accordingly to answer the questionnaire with confidentiality. The target respondents were free to decline from participating in the survey. They were not forced to answer the research questionnaire and were encouraged to return the same to the researcher for its automatic disposal. Moreover, they can withdraw anytime their participation in the research process if they feel uncomfortable about the study since they were given the free will to participate without any form of consequence or penalty.

This study was conducted in public elementary schools in Cateel 1 and 2, Davao Oriental, which is part of Region XI in the Philippines. Region XI is located in the southeastern portion of Mindanao, and Mindanao consists of five provinces, namely: Compostela Valley, Davao del Norte, Davao del Sur, Davao Oriental, and Davao Occidental. The region encloses the Davao Gulf and its regional center is Davao City.

The researcher believed that this was the appropriate locale of the study because it had a good number of respondents who ensured concrete results of the study and that the researcher had not come across a study using the variables on transformational leadership, self-regulation, and teamwork skills in public schools in the local setting. The researcher, who is presently teaching in Cateel, Davao Oriental is interested to know the existing level of transformational leadership of school heads, the levels of self-regulation and teamwork skills in public schools after the challenges brought about by the COVID-19 pandemic with the strict observance of the health and safety protocols and most especially the implementation of their teaching and learning strategies. Moreover, to know the experiences on how they were able to cope up and adjust to the abrupt shift from the face-to-face mode to the online method of teaching and learning. With the new normal, schools are going back to face-to-face classes and again this needs another

adjustment from the teachers on the smooth and effective delivery of their class activities. As a result, the shift from an online setting to face-to-face classes or the new normal entails another challenge in terms of class preparation and conduct of class activities which in effect has affected their self-regulation and teamwork skills.

The study utilized a quantitative, descriptive, non-experimental design using a correlation technique. This aided in determining the levels of transformational leadership, self-regulation, and teamwork skills among public school teachers. Quantitative research narrows itself to statistical analyses of collected data via survey questionnaires employing computational approaches (Trefry, 2017). The researcher obtained the numerical data from the population to establish accuracy. Descriptive research depicts the precise selection of respondents through the survey (Kowalczyk, 2018). The design described transformational leadership and self-regulation as mediated by teamwork skills among public school teachers.

The correlational technique is a non-experimental approach in which it analyzes the relationship between two or more variables without reserve. It also looks into the degree of association by relating it with other variables. Correlational studies have independent and dependent variables with the effects of the independent variable observed on the dependent value (Patidar, 2013). The researcher chose this design to align the variables based on the discussion of the aforementioned related literature. This technique was appropriate since the study aimed to determine whether teamwork skills will provide a relationship to transformational leadership and self-regulation among public school teachers (Creswell, 2014). The mediation process was used to determine whether the relationship between transformational leadership as the independent variable and self-regulation as the dependent variable is significantly reduced after the inclusion of the mediator variable- teamwork skills. In other words, mediating relationships occur when a third variable plays an important role in governing the relationship between the other two variables (MacKinnon, 2008).

In the conduct of the study, a systematic procedure was followed. The researcher sent a letter to the Schools Division Superintendent of the Department of Education, Division of Davao Oriental asking for permission to conduct the study and once approved was furnished to the School Heads of the respondents. The researcher immediately visited the concerned school heads of the identified schools in District 1 and 2, Cateel, Davao Oriental, as part of the courtesy call and discussed the plan for the conduct of an online survey to all concerned respondents using Google Forms. Also, before the actual data collection, the researcher will secure Certificate of Compliance from UMERC (UMERC Protocol Number 2023-522) to ensure compliance with some ethical considerations in research. The data of the retrieved questionnaires were analyzed and interpreted in line with the objectives of the study with the assistance of the designated Statistician and based on the findings of the study, conclusions and recommendations were formulated.

In the conduct of this study and before the data were gathered some ethical issues and considerations were considered. The researcher underwent evaluation by the

members of the ethics review committee. After several review processes, this study was marked as passed and approved by the UM Ethics Review Committee (UMERC).

The participation of the respondents was completely voluntary and anonymous to protect their privacy. All public elementary school teachers in Cateel 1 and 2, Davao Oriental who were involved in the study were given the free will to participate without any form of consequence or penalty. All data gathered were kept confidential and such information was utilized only for the purpose of the research. No names were required from the respondents so that their identities become anonymous in adherence to the Data Privacy Act of 2012 which protects the respondents from unauthorized processing of their private or identifiable information or guarantees them that their response cannot be traced back to its real sources to protect their identity. Informed consent was secured from all the respondents involved in the study. The respondent signed the ICF to prove his/her willingness to participate. It was in a form asking for their voluntary consent in giving their ideas for the said study.

The study did not involve high risks of situations that the respondents experienced in the area of physical, psychological, or socio-economic concerns. The researcher protected and secured the rights of the respondents who are public elementary school teachers and this was conducted in accordance with due process. The participants were carefully selected based on the criteria provided in the research. The study did not involve in high risks of situations that the respondents experience since the respondents are teachers who are currently employed under a permanent status for a period of not less than 2 years and whose plantilla numbers are in the Department of Education. This study was conducted in accordance with due process. All the public elementary school teachers were the primary beneficiaries of the study and they were able to gain an understanding of the dynamic of transformational leadership of school heads, their self-regulation, and teamwork skills in the workplace. The results of this study can help the teachers in their profession since the findings of this study will give them new information about transformational leadership, self-regulation, and teamwork skills. In addition, this study will be used as a practical reference for future research in the field of Education. Further, in the conduct of this research, the respondents will receive tangible benefits such as a simple token from the researcher.

The study used the Grammarly or Turnitin software and/ or Plagiarism Detector to ensure that there was no plagiarism to happen in the whole duration of the study. The study underwent the standard procedure of research established by the Professional Schools of the University of Mindanao and all the information presented was carefully written and cited. All sources used in this study came from reliable journals and other scholarly works. There was no trace or indication of deliberate distortion of what was done. The study had no conflict of interest since the researcher had no relationship to the respondents of the study, but it was a requirement for the completion of the master's degree in education at the University of Mindanao Professional Schools. In this study, there was no deceit as everything that was written and reflected is true and underwent validation and thorough checking from different experts in the field of research. The



researcher secured proper permission from the targeted agencies where the respondents are teaching/working. The researcher sent a letter to the Schools Division Superintendent of the Department of Education, Division of Davao Oriental asking for permission to conduct the study and once approved was furnished to the School Heads of the respondents. After the approval of the UM Ethics Committee, there was an online mode of data gathering through the use of Google Forms. No person was authorized to publish nor present this paper except the researcher or the adviser without the consent of the researcher. For purposes of publication of this study, the adviser becomes the co-author of the study.

#### 4. Results and Discussion

**Table 1: Level of Transformational Leadership**

Indicators	Mean	SD	Descriptive Level
Charisma	4.58	0.56	Very High
Social	4.58	0.53	Very High
Vision	4.55	0.54	Very High
Transactional	4.59	0.52	Very High
Delegation	4.52	0.54	Very High
Execution	4.56	0.52	Very High
<b>Overall</b>	<b>4.56</b>	<b>0.46</b>	<b>Very High</b>

The level of transformational leadership is very high, resulting from the very high levels of responses. The indicators transactional, charisma, social, execution, vision, and delegation have very high ratings. These indicators are arranged from highest to lowest level. The very high-level rating of transactional is indicative of the very high extent to which the school heads manage the teachers through rewards and punishment. This is aligned with various authors (Alharbi & Aljounaidi, 2021; Hanafi *et al.*, 2019) who stated that such leaders believe in the importance of promises and rewards to employees and they believe in the need for a formal distribution of power. Transformational leadership style has a positive relation with employee performance wherein, whereas transactional has a strong positive correlation with the work performance of employees.

The very high level of charisma is suggestive of school heads' focus on employees' values and achieving an extensive role in instances of struggling. This claim is in line with various authors (Alessa, 2021; Dhanhani & Abdullah, 2022) wherein such leaders increase workers' values and self-principles, and encourage them to exceed their very own self-interest for the sake of the organization. These leaders can influence followers, including the ability to motivate others and develop their moral values to help bring about change in the behaviors, attitudes, values, and expectations of the followers, and then change the behavior of the organization as a whole.

The very high level of social suggests a very high extent of equality in company processes and decisions. This is also in line with various authors (Akar & Ustuner, 2019; Reich, 2022) who mentioned that leaders' positive attitudes have a significant impact on

how people perceive justice along with how well their staff members perform in their jobs. The concept of transformational leadership relying on social values and benefits as a motivational trigger to pull groups together toward a sense of connectedness and higher purpose supports the need for a sense of belonging, meaning, and social identity.

**Table 2:** Level of Self-Regulation

<b>Indicators</b>	<b>Mean</b>	<b>SD</b>	<b>Descriptive Level</b>
Goal attainment	4.59	0.42	Very High
Mindfulness	4.59	0.42	Very High
Adjustment	4.64	0.41	Very High
Proactiveness	4.58	0.47	Very High
Goal setting	4.68	0.46	Very High
<b>Overall</b>	<b>4.62</b>	<b>0.36</b>	<b>Very High</b>

The very high level of self-regulation resulted from the very high levels of responses. The indicators of goal setting, adjustment, goal attainment, mindfulness, and proactiveness were arranged from highest to lowest. The very high level of goal setting suggests the very high capability of the teachers in reliably boost both individual and team performance. This is in line with various authors (Kouni *et al.*, 2018; Locke & Latham, 2019; Steinmann *et al.*, 2018) stating that setting precise and reasonably challenging goals not only improves an individual's performance but also sharpens their focus, increased effort, strengthens perseverance, and stimulates the application of task-specific knowledge and strategies.

Moreover, the very high level of adjustment is suggestive of the teachers' very high ability to adjust to changes in a physical, vocational, and social environment. This is aligned with various authors (Ansary, 2023; Tanjung *et al.*, 2020) wherein teachers are essential to helping schools accomplish their goals in the field of education, especially while striving for transformational leadership. Effective leadership styles among school principals can vary based on the maturity levels of teachers and staff within each institution. It emphasizes a desire to achieve, a willingness to take on responsibilities, and the necessary abilities or expertise for the tasks at hand.

The results are in line with various authors (Hebles *et al.*, 2022; Subekti *et al.*, 2019) who stated that effective teamwork skills are important for the success of team-based workplaces. Such skills are important to the design and provision of adequate training that helps participants to acquire teamwork competency.

Furthermore, this is in line with various authors (Dugang, 2020; Mohammad & Rashid, 2020) wherein the improvement and effectiveness of the school environment can be realized through teamwork. Through this skill, the talents of the members of the organization can be maximized, helping to strengthen the organization.

**Table 3: Level of Teamwork Skills**

<b>Items</b>	<b>SD</b>	<b>Mean</b>	<b>Descriptive Level</b>
Participate in defining the major goals for the team.	0.47	4.72	Very High
Assist in articulating the team tasks and in planning task achievement.	0.52	4.67	Very High
Understand what my role in team-goal accomplishment is.	0.54	4.61	Very High
Participate in identifying key roadblocks to achieving the team's goals and in finding solutions to these obstacles.	0.55	4.59	Very High
Assist in discussing alternative courses of action to achieve the team's goals.	0.55	4.60	Very High
Consider alternative actions toward mission accomplishment.	0.56	4.60	Very High
Track where the team stands concerning its goals.	0.55	4.56	Very High
Monitor the contributions of each team member towards goal accomplishment.	0.54	4.63	Very High
Am aware of what it takes to achieve the team goal.	0.52	4.64	Very High
Provide verbal feedback to teammates and, if necessary, coach them.	0.52	4.61	Very High
Assist teammates in carrying out their actions.	0.50	4.64	Very High
Am willing to assume a task for a teammate.	0.55	4.65	Very High
Collaborate in orchestrating teammates' interdependent actions.	0.54	4.61	Very High
Am flexible in accommodating the team's requirements.	0.56	4.60	Very High
Get involved in coordinating team members' contributions.	0.54	4.64	Very High
Emphasize common goals rather than dwelling on differences.	0.51	4.64	Very High
Find ways to work through interpersonal disagreements among team members.	0.52	4.63	Very High
Get involved when conflicts might represent a threat to the team's goals.	0.58	4.58	Very High
Encourage team members to do their best and boost their confidence level.	0.52	4.64	Very High
Publicly praise the achievement of teammates.	0.53	4.64	Very High
Energize other teammates towards achieving their tasks.	0.57	4.63	Very High
Control my temper and handle situations rationally.	0.58	4.57	Very High
Control my emotions, so that the team can move toward achieving goals.	0.55	4.62	Very High
Contain any emotion that might be detrimental to the team.	0.57	4.64	Very High
<b>Overall</b>	<b>0.36</b>	<b>4.62</b>	<b>Very High</b>

**Table 4.1:** Significance of the Relationship between Transformational Leadership and Self-Regulation

	GA	MIN	ADJ PRO		GS Overall	
CHA	0.490	0.500	0.350	0.497	0.354	<b>0.535</b>
	<.001	<.001	<.001	<.001	<.001	<.001
SOC	0.488	0.507	0.339	0.485	0.333	<b>0.525</b>
	<.001	<.001	<.001	<.001	<.001	<.001
VIS	0.515	0.529	0.325	0.491	0.411	<b>0.554</b>
	<.001	<.001	<.001	<.001	<.001	<.001
TRA	0.500	0.491	0.388	0.512	0.449	<b>0.572</b>
	<.001	<.001	<.001	<.001	<.001	<.001
DEL	0.503	0.546	0.402	0.538	0.407	<b>0.585</b>
	<.001	<.001	<.001	<.001	<.001	<.001
EXE	0.512	0.485	0.384	0.482	0.364	<b>0.543</b>
	<.001	<.001	<.001	<.001	<.001	<.001
Overall	<b>0.579</b>	<b>0.589</b>	<b>0.421</b>	<b>0.578</b>	<b>0.445</b>	<b>0.637</b>
	<.001	<.001	<.001 <.001		<.001	<.001

The correlation between the measures of transformational leadership and self-regulation revealed a significant relationship. This implies that transformational leadership is significantly correlated with self-regulation. The result of the study confirms with various authors (Wibowo & Paramita, 2022; Wijayanti *et al.*, 2020) who stated that stakeholders must create policies and programs that emphasize the self-efficacy and transformational leadership of school administrators. This is crucial for creating creative teacher behavior since self-regulation is an essential mediator in the relationship between mindful or empathic leadership and turnover resilience. Teachers with high self-efficacy achieve positive outcomes through increased problem-solving, innovative idea generation, and practical implementation.

**Table 4.2:** Significance of the Relationship between Transformational Leadership and Teamwork Skills

	Teamwork Skills
CHA	0.548
	<.001
SOC	0.488
	<.001
VIS	0.478
	<.001
TRA	0.529
	<.001
DEL	0.537
	<.001
EXE	0.498
	<.001
Overall	<b>0.592</b>
	<.001

The correlation between measures revealed that there is a significant relationship between transformational leadership and teamwork skills. This implies that transformational leadership is positively correlated with teamwork skills. This claim is in line with various authors (Martinez & Acosta, 2020; Rais *et al.*, 2022) wherein the purpose of transformational leadership is to increase the dedication of the organization's members to achieving their objectives. There is a need to simultaneously enhance transformational leadership and teamwork skills to promote teacher innovation and thereby enhance teacher services.

**Table 4.3:** Significance of the Relationship between Teamwork Skills and Self-Regulation

	GA	MIN	ADJ	PRO	GS	Overall
Teamwork Skills	0.704	0.697	0.631	0.636	0.581	0.791
	<.001	<.001	<.001	<.001	<.001	<.001

The correlation between the measures of teamwork skills and self-regulation revealed a significant relationship. This implies that teamwork skills are positively associated with self-regulation. The findings of this study are in line with the studies of various authors (Peterson, 2020; Wiyono, 2018) stating that self-regulation techniques are useful for improving teamwork effectiveness and cultivating academic achievement, especially when accompanied by constructive criticism. Direct observation and macro analytic metrics are two of the self-regulation strategies that have been found to improve individual performance. The development of respect, trust, alignment with the organization's mission, vision, and values, and effective collaboration with leadership and other teams all contribute to the success of high-performing, self-directed teacher teams.

**Table 5:** Regression results of the variables in the criteria of the presence of mediating effect

				95% C.I. (a)				
Type	Effect	Estimate	SE	Lower	Upper	$\beta$	z	p
Indirect	TransL $\Rightarrow$ TWS $\Rightarrow$ SelfR	0.291	0.0321	0.228	0.354	0.377	9.08	<.001
Component	TransL $\Rightarrow$ TWS	0.454	0.0386	0.379	0.530	0.592	11.76	<.001
	TWS $\Rightarrow$ SelfR	0.641	0.0449	0.553	0.729	0.637	14.27	<.001
Direct	TransL $\Rightarrow$ SelfR	0.201	0.0344	0.134	0.269	0.260	5.84	<.001
Total	TransL $\Rightarrow$ SelfR	0.492	0.0373	0.419	0.565	0.637	13.21	<.001

This study aims to contribute to the literature regarding the possible mediating variable for the relationship between transformational leadership and self-regulation. Specifically, teamwork skills were investigated as a possible mediating variable that could explain the effect of transformational leadership on self-regulation. Partial mediation is found in the study, and important and significant direct effects were presented that may help in the enhancement of the existing researches on transformational leadership and self-regulation. Significantly, the present study on the relationship between transformational leadership and self-regulation has found relevance to the study of Furchtenicht (2021) who stated that transformational leadership illustrates that successful self-regulation is

related to constructive leadership, which in turn, is related to job satisfaction. Leadership mediates the relationship between self-regulation and job satisfaction if a group is interpreted as an indicator of emotional contagion. Specifically, the current study has found that teamwork skills are a positive and significant partial mediator of transformational leadership and self-regulation and met Baron and Kenny's (1986) mediation guidelines.

In this connection, the mediation analysis involved the path between transformational leadership and self-regulation, and the path between teamwork skills and self-regulation. The findings confirmed the significant relationship between transformational leadership and self-regulation leading to support various authors of this study (Wibowo & Paramita, 2022; Wijayanti *et al.*, 2020) who mentioned that stakeholders must create policies and programs that emphasize self-efficacy and transformational leadership of school administrators. This emphasis is crucial for creating creative teacher behavior since self-regulation is an essential mediator in the relationship between mindful or empathic leadership and turnover resilience.

## 5. Recommendations

The researcher came up with recommendations based on the results of the study. On the very high results of transformational leadership, the researcher recommends that all stakeholders involved in the operation of the school must continue their efforts to maintain and sustain the existing practices, policies, and prevailing atmosphere surrounding the workplace. Existing school activities such as the conduct of orientation and re-orientation on the updates of school policies may be regularly done to all teachers and staff, one-on-one dialogue or focus group discussions may be a good venue for counselling and distressing of teachers and staff, a yearly outing activity cum team building may be recommended or spiritual recollection and retreats may be availed of by all.

In order to sustain transformational leadership, a school administrator may continue and consistently play the role of a moderator. As an effective moderator, the principal may religiously exhibit creativity in their leadership by forging the direction of the school, providing challenges to build the minds of the teachers, as well as a motivator to nurture the inspiration of the teachers, so that the teachers' satisfaction and commitment, and departmental performance would be improved to the highest level. As an effective transformational leader, the principal may continually exhibit the values, attitudes, and behaviors that enable the members of the organization to experience a sense of belonging, and meaning and make a difference in their work life.

On the very high level of self-regulation, it is recommended that in order to sustain public service motivation by all teachers, opportunities for new recruits to learn about organizational values and expectations of employee behavior that reflect public service values, and utilize performance appraisals that are not just task-related but also reflect on competencies specifically relevant to public service work. They may also establish

clear linkages between each employee's job and the overall mission of the organization, and create work structures that enhance self-regulation and empower employees. Lastly, they may design compensation systems that emphasize long-term attractiveness to employees and do not crowd out intrinsic motivations such as pay increases on promotion, grant of rewards and incentives to good performances of teachers or job well done, either in a monetary or non-monetary way, opportunities to join benchmarking or study tour to improve teaching strategies, attendance to continuing professional development activities in order to gain more competence in the delivery of their duties, opportunities to enroll in further studies to be able to grow and apply the knowledge for the betterment of the job.

On the very high level of teamwork skills, the researcher recommends that activities in classes and in the school which allowed every teacher and school staff to become productive in the area of responsibilities may be sustained and from time to time evaluated as to its purpose and direction. These activities may include the conduct of regular meetings (monthly) either by department or by work assignment. Being able to work as a team allows its members to stay in touch with all the changes that the school may have and being able also to address any concerns or existing problems that the teachers may experience. The conduct of year-end semester seminars or symposia about team building, stress management, and anger management may be done as part of a refresher program for all teachers. This will provide teachers with a good avenue to address whatever negative emotions they have at work. Another recommendation that can be adopted by school management is to allow the teachers the full use of communication tools available such as email, web-conferencing, or the school's own website for teachers or team members to share whatever insights or knowledge for the good of the team/school. This is open to all school staff and teachers to be able to have better and continuous communication with all members. The different skills (support skills, problem-solving skills, listening and feedback skills, conflict management skills) from the members may be enhanced by allowing each member to share them across all departments in the school and may come up with shared recommendations or make a decision together, as a team.

On the partial mediation result, the researcher recommends that school management should always give full importance to their workforce, the teachers who are members of the team as this is the best way that the school will continue to run smoothly and be able to provide the best education to the students as their teachers are dedicated and committed to serve the students to the best of their abilities. The teachers should be able to embrace fully the school's vision, missions, and goals as part of their system and as such they become part of the whole team in school.

As to future researchers, it is also recommended that further studies on a larger scale may be done to have a better understanding of the factors influencing teachers' perceptions on this issue. Also, designing a qualitative study would be informative about this issue. This will ultimately contribute to filling the gap in the literature.

## 6. Conclusion

With consideration of the findings of the study, conclusions are drawn in this section. There is a very high level of transformational leadership, self-regulation, and teamwork skills. There is a significant relationship between transformational leadership and self-regulation. There is also a significant relationship between transformational leadership and teamwork skills and a significant relationship between teamwork skills and self-regulation. Moreover, there is a partial mediation on the effect of teamwork skills on the relationship between transformational leadership and self-regulation.

The findings of the study clearly confirm the notion about the mediating effect of teamwork skills on the relationship between transformational leadership and self-regulation. The findings are supported by the anchor theory, the Ecological Systems Theory by Bronfenbrenner (1979) wherein it develops a deep understanding of the teachers' perspectives and practices in supporting students' self-regulation by not only integrating different teachers' beliefs and practices but also by focusing on the contextual forces operating within and outside the system. Also, the findings of the study were substantiated by the Leadership–Membership Exchange (LMX) Theory by Dansereau *et al.* (1975), and the Theory of Teams by Marschak (1955).

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## Conflict of Interest Statement

The authors declare no conflicts of interest.

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