THE MEDIATING EFFECT OF WORK ENGAGEMENT ON THE RELATIONSHIP BETWEEN THE LEADERSHIP BEHAVIORS AND TEAM EFFECTIVENESS AMONG PUBLIC ELEMENTARY TEACHERS

Charlene A. Lanaban[1],
Raymunda L. Apostol[2i]
[1]Master of Arts in Education Major
in Educational Management,
University of Mindanao,
Davao City, Philippines
Teacher II,
Campawan Elementary School,
Campawan Baganga,
Davao Oriental, Philippines
[2]Professor, Baganga Offsite,
Davao Oriental,
Philippines
Public Schools Supervisor,
Baganga North, District,
Sto Nino, Lambajon, Baganga,
Davao Oriental, Philippines

Abstract:

The purpose of this study was to determine the mediating effect of work engagement on the relationship between the leadership behaviors of school heads and the team effectiveness of teachers. Utilizing quantitative, non-experimental design via correlational technique, data were obtained from 300 respondents of the study who are teachers among public elementary schools in Baganga North and South Districts, 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 leadership behaviors of school heads, team effectiveness, and work engagement of teachers. Also, results revealed that there is a significant relationship between leadership behaviors of school heads and team effectiveness of teachers, a significant relationship between leadership behaviors and work engagement of teachers, and a significant relationship between work engagement and team effectiveness of teachers. Further, work engagement has a partial mediating

---

[i] Correspondence: email charlene.lanaban@deped.gov.ph, charlenelanaban@gmail.com

effect on the relationship between the leadership behaviors of school heads and the team effectiveness of teachers among public elementary schools.

Keywords: education, leadership behaviors, team effectiveness, work engagement, mediating effect, school heads, teachers, Philippines

1. Introduction

Poor team effectiveness of teachers brings detrimental effects to schools in general. Poor teachers' team effectiveness is associated with a negative impact on students. The inability of teachers to collaborate in teams may decrease their readiness to teach and negatively affect their commitment and behavior (Amorim *et al.*, 2018; Polega *et al.*, 2019). Further, in the school context, the culture of teamwork does not happen automatically. It takes effective leaders to shape the team culture of the school organizations. The failure of the school leader is also the failure of the teachers' team. In most cases, teachers expect principals to foster teamwork. However, school leaders and teachers do not have enough ideas on how to improve the involvement of every team member in increasing team effectiveness at school (Groysberg *et al.*, 2018). A dysfunctional team can lead to falling short of performance goals, so building effective teams is the primary aim of any company (Arora *et al.*, 2023).

Relative to this, the benefits of achieving team effectiveness are being increasingly documented. Various studies revealed the importance of team effectiveness in school. Primarily, school leaders are tasked with the development of a culture of teamwork among teachers. Principals must pull teachers away from the comfort of their closed classroom doors and instructional routines and allow them to take the risks of learning and doubting with colleagues to ensure school success. Hence, team collaboration is the key to school effectiveness (Benoliel & Schechter, 2018; O'Neill & Salas, 2018). In addition, the success of the school's vision, mission, strategies, and reforms depends much on the effectiveness of the teachers' team. These teams rely on the creativity and skills of teachers who willingly contribute their energy and loyalty through collective efforts and teamwork processes. Thus, in schools, teacher teams may play the function of strengthening the schools. There is a direct positive significance of the components of team effectiveness and their impact on organizational performance and also a positive relationship between organizational support and a team leader's readiness in making teams effective and eventually improving the organizational performance in an institution (Askari *et al.*, 2020).

Various factors influence team effectiveness. Leadership within these highly dynamic teams is expected to establish, define, and communicate team goals and outline the structure by which these goals will be accomplished. Leadership behaviors are important factors in achieving the team's desired results. Leaders can act as role models among team members by sharing creative ideas and knowledge to facilitate working cooperatively and efficiently (Gadirajurrett *et al.*, 2018). Leadership behaviors and team

effectiveness are important paths for work engagement. Leadership behaviors are types of supervisory support resources, and team effectiveness is a collegial resource in which both form social support as it involves the supervisor and colleagues the employee works with (Koekemoer *et al.*, 2021).

Further, leadership behaviors facilitate, strengthen, connect, and inspire employees in order to increase their work engagement. By doing such, the employees' basic psychological needs for autonomy, growth, connectedness, and meaning are satisfied, which in turn, increases their work engagement (Schaufeli, 2021). Also, fulfilling supporting factors, such as work environment, leadership behavior, team and co-worker, training and career development, compensation, organizational policies, and workplace well-being, will increase work engagement and have a positive effect on employee performance (Ariussanto *et al.*, 2019).

Also, the work engagement of employees could improve team effectiveness in organizational contexts. Employee work engagement could be one of the antecedents of effective teamwork. Besides, engaged employees are key human resources that help organizations sustain their competition. Engaged employees are more likely to contribute to co-workers which in turn predicts enhanced teamwork performance or effectiveness. Also, the work engagement of team members positively impacts team satisfaction. Work-life balance, job content, monetary benefits, and team effectiveness are important drivers of work engagement for both executives and non-executives (Uddin *et al.*, 2019; Wood *et al.*, 2020).

Furthermore, the researcher has not come across a study that dealt with the mediating influence of work engagement on the relationship between leadership behaviors and team effectiveness among public elementary teachers in the local setting. It is in this context that the researcher is interested in determining whether the work engagement on the relationship between leadership behaviors and team effectiveness among public elementary teachers in Baganga North and South Districts can raise concern for the intended beneficiaries of this study and possibly develop action plans to augment leadership behaviors of school heads, work engagement and team effectiveness of teachers among schools, thus, the need to conduct this study.

2. Literature Review

There are review of related literature which is discussed in support of the study. The leadership behavior, as the independent variable of the study, is an essential phenomenon in the organization because the leaders themselves are the ones shaping the behaviors of their followers (Bani-Melhem *et al.*, 2018; Caballero & Guhao, 2020). Also, leadership is defined as a process of influence leading to the achievement of desired purposes. Still, the elements generally accepted as requirements for this phenomenon to emerge are a leader, followers, the situational conditions determining the existence, the exercise, and the effects of leadership; and also, the value orientations, which serve as a bond between leader and followers steering them in a common direction to achieve these

values. Leadership is considered in modern, relevant theories as a mixture of personality characteristics or traits, as specific behaviors or leadership skills, or as a relationship or process (Stravakou & Lozgka, 2018; Stronge & Xu, 2021).

In academic institutions, teachers' leadership is an important factor in administering changes within the organizations (Guerrero *et al.*, 2018). Modeling the way is one of the leadership behaviors that emphasizes leaders who can walk their talk established on personal principles. It is done by setting examples to their followers who share the same ideals. By means of this, leaders can gain respect from the people (Costillas *et al.*, 2018; Vidal & Ginuba, 2022).

Further, leaders who want to encourage the heart must model the behaviors described within the first six essentials. Setting the example for encouraging the heart begins with giving oneself permission to do so. This included seven essential components in describing encourage the heart: set clear standards, expect the best, pay attention, personalize recognition, tell the story, celebrate together, and set an example (Kouzes & Posner, 2018). It has a comparable explanation with individualized consideration where the latter fosters invention and creativity, while the former considers an individual's needs. Encouraging the heart indicates that leaders should express thanks for individual successes in order to acknowledge contributions. Exceptional leaders come up with original and heartfelt approaches to honor accomplishments and acknowledge the efforts of others (Costillas *et al.*, 2018; Vidal & Ginuba, 2022).

On team effectiveness as the dependent variable, effective teacher teamwork builds strong schools. This concept is the driving reason teacher-learning teams that support teacher-to-teacher professional learning and collaboration are increasingly commonplace in high-achieving schools. Specifically, teamwork is necessary between students, between students and teachers, and among parents and educators. The more teamwork fundamentals exhibited, the more opportunity exists for students to learn the vital skills of compromise and collaboration. In many academic settings, teachers in different departments team up to ensure a continuity of instruction for students. Also, when teachers and parents act as a team, it can reinforce positive behaviors and learning skills developed in the classroom and practiced at home (McQuerrey, 2018; Pettersen, 2020).

A team mission is defined as a jointly developed and agreed-upon statement between the leader and team members on why the team exists, where it is going, and why it is going to that direction. In parallel, it is said that a high-performing team has a clear mission and/or goals. The organization's mission describes its overall direction and general goals for accomplishing the mission (Bourgault *et al.*, 2018). The accomplishment of a team for a certain task and the resources at hand are considered in mission analysis. Meanwhile, team mission is the first indicator of team effectiveness. It is a statement of agreement and jointly developed that paves the way for the team in that direction to accomplish a mission (Quines & Piñero, 2022). Rethinking the vision, reformulating, and renegotiating the planning, finding new motivation, reorganizing team members, and

evaluating all individuals and organizations are all crucial components of transformational leadership (Lacerenza *et al.*, 2018).

Additionally, goal achievement is defined as the attainment of team goals that are clear, specific, measurable, realistic, and achievable (Bourgault *et al.*, 2018). The aptitude to recognize and order the activities that lead to the desired objectives is known as goal achievement. In achieving the required goals, team coordination is needed since it can be flexible as everyone is involved to contribute (Quines & Piñero, 2022). In academe, the guidance of the principal helps academic staff members better understand their job and become knowledgeable of themselves within the work environment. Thus, it ultimately contributes to the attainment of school goals. Moreover, positive behaviors among teachers and students are enhanced when they collaborate in achieving goals (Benoliel, 2021; Danbaba & Panshak, 2021).

Furthermore, employees can operate efficiently when they have good teamwork skills. Team members will be motivated to share the same work values when they understand their individual duties and responsibilities as well as how important it is for the rest of the team to rely on the quality of their work (Quines & Piñero, 2022). Within academic institutions, norms can offer a means for teachers to discuss common issues pertaining to instruction and learning with one another. It will support educators in establishing a space for interpersonal interactions and communication, resulting in a more fulfilling and stress-free work environment. Consequently, a "mirroring process" will emerge to disseminate and cultivate norms of cooperation and teamwork among the faculty of the larger school (Benoliel, 2021).

Meanwhile, work engagement as the mediating variable is beyond physical presence in the workplace. Work engagement is about the cognitive, physical, and emotional or psychological connection to the work. Thus, work engagement is about the cognitive, physical, and emotional involvement of the person in the work. In other words, the person engaged in the work with his knowledge, of his physical presence, and is emotionally engaged or the employees are psychologically connected to the work. These are the kinds of employees who are absorbed by their work willing to dedicate their time and themselves to the work and are motivated to come out with quality output. An engaged employee is giving everything to the work, his knowledge, and physical and emotional attachment to the work. These are the employees who are full of ideas about their work, feel delighted about what they are doing, and maintain a high level of energy and stamina to pursue the work on hand (Abun *et al.*, 2021; Ogechukwu *et al.*, 2021).

In addition, work engagement is a matter of concern for leaders and managers in organizations across the globe; they recognize it as a vital element affecting organizational effectiveness. Work engagement is defined as a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption. Employee engagement concerns the degree to which individuals make full use of their cognitive, emotional, and physical resources to perform role-related work. Thus, employees who are engaged in their work have energetic, enjoyable, and effective connections with their work. They state that leadership is a crucial antecedent to engagement. Leadership

research shows that certain leadership behaviors have a clear association with engagement. Trust in the leader, support from the leader, and creating a blame-free environment are considered to be components of psychological safety which leads to employee engagement (Gode *et al.*, 2020; Narayanamma *et al.*, 2022; Zahed-Babelan *et al.*, 2019).

Moreover, this study is anchored on Theory Y by McGregor (1960) wherein leaders act in the belief that individuals who make up the team are motivated internally, and are emotionally attached to the tasks, duties, and responsibilities they are given. Employees who fall within this range are seen as valuable assets and drive the internal workings of the firm. Leaders that are within this frame tend to be democratic and freely interact with their subordinates; allowing them to design, construct, and publish their work in an appropriate manner in line with workload. In essence, drawing from the line of team effectiveness, theory Y gives the impression of natural feeling towards work, capability of self-direction, seeking responsibility, and ability to make quality decisions.

In support of the study is the Leadership Theory by Fiedler and House (1988) wherein consideration (concern for people and relationship behaviors) and commencing structure (concern for production and task behaviors) are vital variables. Consideration is referred to the amount of confidence and rapport, a leader engenders in his subordinates. Meanwhile, initiating structure, on the other hand, reflects the extent, to which the leader structures, directs, and defines his/her own and the subordinates' roles as they have the participatory role toward organizational performance, profit and accomplishment of the mission.

Additionally, this study is also supported by Fredrickson's (2001) Broaden-and-Build Theory which maintains that the experience of positive feelings such as joy, interest, challenge, enthusiasm, and inspiration can expand the individual's attention, thought processes, and actions, all of which build enduring psychological and social resources that promote emotional well-being. Work engagement that embraces positive, challenging, meaningful, and inspiring work experiences will generate a broad spectrum of positive thinking and feelings, and build the personal resources that help individuals achieve their personal goals and aspirations, improving their satisfaction with life in general.

3. Material and Methods

The respondents of the study included 300 public elementary school teachers in North and South Districts of Baganga, Province of Davao Oriental. A stratified random sampling technique was used in the study. In this method, there is a possibility that each person in the population sample could be selected as a subject. It ensured that the results would be comprehensive to the context currently studied. This stratified sampling approach divides the population into groups or strata. The concept is that the groups are formed so that the demographic units are comparable (Salkind, 2007). Moreover, the idea was that the groupings were made so that the population units within the groups were

similar. Specifically, with a total population of 485 teachers for the 2 Districts, the sample size was taken using Slovin's formula (n = N / (1 + Ne2) (Stephanie, 2003). In this case the public elementary school teachers in North and South Districts, Baganga only were the groups to become respondents. In particular, included in this study as the respondents were the regular public elementary school teachers of the 2 identified districts. The respondents were chosen accordingly to answer the questionnaire with confidentiality. The researcher believed that such a sample size and number of respondents could represent the population.

Moreover, the researcher considered the inclusion and exclusion criteria in the selection of the respondents of the study. In particular, included in this study as the respondents were the regular public elementary school teachers of the 2 identified districts, who were currently employed and whose plantilla numbers were in the Department of Education, as they were the ones who were in the position to provide useful information upon testing the hypothesis of the study.

On the other hand, those teachers who were not teaching under the elementary department in the areas of North and South Districts, Baganga were excluded from the study, for they were in different work environments and supervision. Also, teachers who were working in the secondary and private schools whether in the same identified areas including those teachers who hold managerial or supervisory positions were excluded from the study.

Furthermore, the respondents were free to decline to participate in the survey without any form of consequence or penalty or loss of benefits. 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.

As to the research locale, this study was conducted in 2 districts of public elementary schools in North and South Districts, Baganga, 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. Baganga is a first-class municipality in Davao Oriental province. There are 18 barangays in all. It is located in Davao Oriental's "First" Voting Congressional District, with a land area of 94,550 hectares as of 2007.

In this connection, the researcher believed that this is the appropriate locale of the study because it has a good number of respondents which ensured concrete results of the study, and that the researcher has not come across a study using the variables on leadership behaviors of school heads, work engagement and team effectiveness of teachers in the local setting. Also, these 2 identified districts were chosen to be the focus of the study considering that as a teacher, I have encountered various experiences that teachers needed to maintain the leadership behaviors of school heads, work engagement, and team effectiveness of teachers, especially during this pandemic time to be able to

deliver what was expected of them by the students. The schools' accessibility and proximity to the researcher, likewise were considered as the reasons for the choice of the research locale.

The study employed a quantitative non-experimental research design using the descriptive-correlation technique. It was used since the researcher was interested in determining the degree of connection between variables. Additionally, it tried to define and understand the state of the current study (Creswell, 2014). The correlational technique is a non-experimental approach in which it analyses the relationship between two or more variables without reserve. It also looks into the degree of association by relating it with other variables. Apparently, correlational studies have independent and dependent variables with the effects of the independent variable observed on the dependent value (Patidar, 2013). This design was used to align the variables based on the discussion of the aforementioned related literature. This technique was appropriate since the study aimed to determine whether there was a significant relationship between leadership behaviors of school heads, work engagement, and team effectiveness of teachers in which the findings of the study may become good inputs in the formulation of relevant programs and activities for the betterment of both the teachers and the students, as well.

Moreover, a mediation model was used in this study. The mediation model is one that seeks to identify and explicate the mechanism or process that underlies an observed relationship between an independent variable (leadership behaviors of school heads) and a dependent variable (team effectiveness) via the inclusion of a third explanatory variable, known as a mediator variable (work engagement). Rather than hypothesizing a direct causal relationship between the independent variable and the dependent variable, a mediational model hypothesized that the independent variable influenced the mediator variable, which in turn influenced the dependent variable. Thus, the mediator variable served to clarify the nature of the relationship between the independent and dependent variables. 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 collection of data, the researcher followed a systematic procedure. The researcher asked permission from the Dean, Professional Schools, through a letter addressed to the Schools Division Superintendent of the Division of Davao Oriental. The said letter was furnished to the School Heads concerned with the 2 identified districts to allow the researcher to conduct the study to the 300 public elementary school teachers. As soon as the request was approved and strictly observing the safety protocols in this pandemic time as per mandate by the Inter-Agency Task Force for the Emerging Infectious Disease (COVID-19) such as physical/social distancing and wearing of facemasks, the researcher immediately visited the concerned school heads of the 2 districts, as part of the courtesy call and discussed the plan on the conduct of online survey thru google forms to all concerned respondents. During the courtesy call, a list and contact numbers/email addresses of all respondents/teachers were requested from

the offices of the concerned school heads/principals. The list served as the basis for the researcher for the data gathering. Also, before the actual data collection, the researcher secured Certificate of Compliance from UMERC to ensure compliance of some ethical considerations in research.

All retrieved questionnaires were encoded in the Excel template after verification and checking as to the completeness of the answers. After all the tallying and validating of results, the data was analyzed and interpreted in line with the objectives of the study. Based on the findings of the study, conclusions and recommendations were formulated.

In addition, these statistical tools were used in this study, to include Mean in order to determine the level of leadership behaviors of school heads, work engagement, and team effectiveness of teachers. Pearson Product Moment Correlation (Pearson r) was used to determine the significance of the relationship between the leadership behaviors of school heads and the team effectiveness of teachers; between the leadership behaviors of school heads and work engagement; and between the work engagement and team effectiveness of teachers. Medgraph using Sobel z-test. This was used to determine the significance of the mediation of work engagement on the relationship between the leadership behaviors of school heads and the team effectiveness of teachers.

Another important aspect of this research was the observance of ethical consideration since the researcher aimed to impart authentic knowledge, truth, and prevention of error in doing research. The researcher did not force the respondents to join the data gathering. The researcher ensured that the data to be gathered were kept confidential and that such information was utilized only for the research. Each target respondent was given an informed consent form before the gathering of data. The participants were carefully selected based on the criteria provided in the research. The study did not involve high risks of situations that the respondents had experienced. The elementary teachers are the primary beneficiaries of the study. The study underwent plagiarism check in the University using the Turnitin, to ensure that no plagiarism happened in the whole duration of the study.

The study had no conflict of interest (COI) since the researcher had no relationship with the respondents of the study. There was no deceit and everything that was written and reflected was true and has undergone validation and thorough checking from different experts in the field of research. Considering the risks of COVID-19, and in the conduct of the online data gathering, the researcher utilized Google Forms where the respondents indicated their responses to the specific item questions being asked. Furthermore, no person was authorized to publish nor present this paper except for the researcher herself or her adviser without the consent of the researcher. Lastly, before the conduct of actual data collection, the researcher secured a Compliance Certificate from UMERC with the understanding that all ethical considerations were properly observed.

4. Results and Discussion

Table 1: Level of Leadership Behaviors of School Heads

Indicators	SD	Mean	Descriptive Level
Modeling the Way	0.42	4.60	Very High
Inspiring a Shared Vision	0.43	4.58	Very High
Challenging the Process	0.52	4.56	Very High
Enabling Others to Act	0.59	4.57	Very High
Encouraging the Heart	0.62	4.60	Very High
Overall	**0.44**	**4.58**	**Very High**

The level of leadership behaviors is very high, resulting from the very high levels of responses. The indicators *modeling the way, encouraging the heart, inspiring a shared vision, enabling others,* and *challenging the process* have very high ratings. These indicators are arranged from highest to lowest level. The very high-level rating of *modeling the way* is suggestive of the very high extent to which teachers earn the right and the respect to lead through direct involvement and action. This claim is in line with various authors (Costillas *et al.*, 2018; Guerrero *et al.*, 2018; Vidal & Ginuba, 2022) wherein modeling the way is one of the leadership behaviors that emphasize leaders who can walk their talk established on personal principles. It is done by setting examples for their followers who share the same ideals. By employing this, leaders can gain respect from the people.

The very high level of *encouraging the heart* suggests that teachers enable input into key decisions from all levels of the organization, appreciating individual contributions, and celebrating accomplishments. This is also in line with various authors (Costillas *et al.*, 2018; Vidal & Ginuba, 2022) stating that encouraging the heart indicates that leaders should express thanks for individual successes to acknowledge contributions. Exceptional leaders come up with original and heartfelt approaches to honor accomplishments and acknowledge the efforts of others.

Table 2: Level of Team Effectiveness of Teachers

Indicators	SD	Mean	Descriptive Level
Team Mission	0.49	4.73	Very High
Goal Achievement	0.52	4.69	Very High
Empowerment	0.54	4.67	Very High
Open and Honest Communication	0.59	4.60	Very High
Positive Roles and Norms	0.52	4.69	Very High
Overall	**0.48**	**4.68**	**Very High**

The very high level of team effectiveness resulted from the very high levels of responses. The indicators of *team mission, goal achievement, positive roles and norms, empowerment,* and *open and honest communication* were arranged from highest to lowest. The very high level of *team mission* is indicative of the very high extent to which teachers show a greatly developed and agreed-upon statement between the leader and team members on why the team exists. This claim is in line with various authors (Lacerenza *et al.*, 2018; Quines

& Piñero, 2022) wherein the accomplishment of a team for a certain task and the resources at hand are considered in mission analysis. Rethinking the vision, reformulating, and renegotiating the planning, finding new motivation, reorganizing team members, and evaluating all individuals and organizations are all crucial components of transformational leadership.

Additionally, the very high level of *goal achievement* is suggestive of the very high level of attainment of team goals which are clear, specific, measurable, realistic, and achievable. This is in line with various authors (Benoliel, 2021; Danbaba & Panshak, 2021) stating that the guidance of a principal helps academic staff members better understand their job and become knowledgeable of themselves within the work environment. Thus, it ultimately contributes to the attainment of school goals. Positive behaviors among teachers and students are enhanced when they collaborate in achieving goals.

Further, the very high level of positive roles and norms suggests that the teachers have very high capabilities to fulfill their responsibilities and rules of behavior. This is also in line with various authors (Benoliel, 2021; Quines & Piñero, 2022) who mentioned that norms can offer a means for teachers to discuss common issues pertaining to instruction and learning with one another. It will support educators in establishing a space for interpersonal interactions and communication, resulting in a more fulfilling and stress-free work environment. Consequently, a mirroring process will emerge to disseminate and cultivate norms of cooperation and teamwork among the faculty of the larger school.

Table 3: Level of Work Engagement of Teachers

Items	SD	Mean	Descriptive Level
At my work, I am feeling bursting with energy.	0.62	4.60	Very High
At my job, I am feeling strong and vigorous.	0.69	4.49	Very High
When I get up in the morning, I am feeling like going to work.	0.66	4.62	Very High
Being able to continue working for very long periods at a time.	0.63	4.55	Very High
At my job, I am being very resilient, mentally.	0.63	4.57	Very High
At my work, I am always persevering, even when things do not go well.	0.74	4.52	Very High
I am finding the work that I do full of meaning and purpose.	0.60	4.62	Very High
I am being enthusiastic about my job.	0.50	4.68	Very High
My job is inspiring me.	0.51	4.76	Very High
I am being proud of the work that I do.	0.56	4.74	Very High
To me, my job is challenging.	0.58	4.71	Very High
Time flies when I am working.	0.54	4.69	Very High
When I am working, I am forgetting everything else around me.	0.69	4.44	Very High
I feel happy when I am working intensely.	0.61	4.56	Very High
Being immersed in my work.	0.56	4.60	Very High
I am getting carried away when I am working.	0.57	4.60	Very High
It is difficult to detach myself from my job.	0.53	4.66	Very High
Overall	**0.50**	**4.61**	**Very High**

The very high level of work engagement reveals the very high degree of self-directed commitment of personal resources to the range of tasks required by a certain organizational role of the teachers. This claim is in line with various authors (Abun *et al.*, 2021; Ogechukwu *et al.*, 2021) who stated that an engaged employee is giving everything to the work, his knowledge, physical and emotional attachment to the work. These are the employees who are full of ideas about their work, feel delighted about what they are doing, and maintain a high level of energy and stamina to pursue the work at hand.

Moreover, the results of the study are also in line with various authors (Gode *et al.*, 2019; Narayanamm *et al.*, 2022; Zahed-Babelan *et al.*, 2019) wherein employee engagement concerns the degree to which individuals make full use of their cognitive-emotional, and physical resources to perform role-related work. Thus, employees who are engaged in their work have energetic, enjoyable, and effective connections with their work. Trust in the leader, support from the leader, and creating a blame-free environment are considered to be components of psychological safety that lead to employee engagement.

Table 4.1: Significance on the Relationship Between Leadership
Behaviors of School Heads and Team Effectiveness of Teachers

Leadership Behavior	Team Effectiveness					
	Team Mission	Goal Achievement	Empowerment	Open and Honest Communication	Positive Roles and Norms	Overall
Modeling the Way	.574* (0.000)	.679* (0.000)	.699* (0.000)	.587* (0.000)	.635* (0.0000)	**.699* (0.000)**
Inspiring a Shared Vision	.571* (0.000)	.702* (0.000)	.621* (0.000)	.647* (0.000)	.620* (0.000)	**.697* (0.000)**
Challenging the Process	.547* (0.000)	.682* (0.000)	.632* (0.000)	.641* (0.000)	.578* (0.000)	**.680* (0.000)**
Enabling Others to Act	.599* (0.000)	.632* (0.000)	.604* (0.000)	.482* (0.000)	.465* (0.000)	**.610* (0.000)**
Encouraging the Heart	.640* (0.000)	.688* (0.000)	.601* (0.000)	.673* (0.000)	.522* (0.000)	**.689* (0.000)**
Overall	**.687* (0.000)**	**.785* (0.000)**	**.730* (0.000)**	**.704* (0.000)**	**.646* (0.000)**	**.782* (0.000)**

The correlation between the measures of leadership behaviors and team effectiveness revealed a significant relationship. This implies that leadership behaviors are significantly correlated with team effectiveness. The findings of this study are in line with the studies of various authors (Gadirajurrett *et al.*, 2018; Koekemoer *et al.*, 2021) stating that leadership behaviors are important factors in achieving the team's desired results. Leaders can act as role model among team members by sharing creative ideas and knowledge to facilitate working cooperatively and efficiently. Leadership behaviors and team effectiveness are important paths for work engagement. Leadership behaviors are types of supervisory support resources, and team effectiveness is a collegial resource in

which both form social support as it involves the supervisor and colleagues the employee works with.

Table 4.2: Significance on the Relationship Between Leadership
Behaviors of School Heads and Work Engagement of Teachers

Leadership Behaviors	Work Engagement Overall
Modeling the Way	.410* (0.000)
Inspiring a Shared Vision	.323* (0.000)
Challenging the Process	.357* (0.000)
Enabling Others to Act	.388* (0.000)
Encouraging the Heart	.324* (0.000)
Overall	**.416*** **(0.000)**

The correlation between measures revealed that there is a significant relationship between leadership behaviors and work engagement. This implies that leadership behaviors are positively correlated with work engagement. The result of the study confirms various authors (Ariussanto *et al.*, 2019; Schaufeli, 2021) who mentioned that leadership behaviors facilitate, strengthen, connect, and inspire employees in order to increase their work engagement. By facilitating, strengthening, connecting, and inspiring, the employees' basic psychological needs for autonomy, growth, connectedness, and meaning are satisfied, which in turn, increases their work engagement. Fulfilling supporting factors, such as work environment, leadership behavior, team and co-workers, training and career development, compensation, organizational policies, and workplace well-being, will increase work engagement and have a positive effect on performance.

Table 4.3: Significance on the Relationship between
Work Engagement and Team Effectiveness of Teachers

Work Engagement	Team Effectiveness					
	Team Mission	Goal Achievement	Empowerment	Open and Honest Communication	Positive Roles and Norms	Overall
Work Engagement	.407* (0.000)	.578* (0.000)	.549* (0.000)	.536* (0.000)	.499* (0.000)	**.568*** **(0.000)**

The correlation between the measures of work engagement and team effectiveness revealed a significant relationship. This implies that work engagement is positively associated with team effectiveness. This claim is in line with various authors (Uddin *et*

al., 2019; Wood *et al.*, 2020) wherein work engagement of employees could improve team effectiveness in organizational contexts. Engaged employees are more likely to contribute to co-workers which predicts enhanced teamwork performance or effectiveness. Work engagement of team members positively impacts team satisfaction. Work-life balance, job content, monetary benefits, and team effectiveness are important drivers of work engagement for both executives and non-executives.

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

Path	Estimates		SE	C.R.	P
	Unstandardized	Standardized			
LB ⟶ WE	.469	.416	.059	7.919	***
WE ⟶ TE	.283	.293	.035	8.165	***
LB ⟶ TE	.719	.660	.039	18.421	***

The aim of this study is to contribute to the literature regarding the possible mediating variable for the relationship between leadership behaviors and team effectiveness. Specifically, work engagement was investigated as a possible mediating variable that could explain the effect of leadership behaviors on team effectiveness. Partial mediation is found in the study, and important and significant direct effects were presented that may help in the enhancement of the existing research on leadership behaviors and team effectiveness. Significantly, the present study on the relationship between leadership behaviors and team effectiveness is supported by the study of McGregor (1960) wherein leaders act in the belief that individuals that make up the team are motivated internally, and are emotionally attached to the task, duties, and responsibilities they are given. Specifically, the current study has found that work engagement is a partial mediator of leadership behaviors and team effectiveness and met Baron and Kenny's (1986) mediation guidelines.

In this connection, the mediation analysis involved the path between leadership behaviors and team effectiveness, and the path between work engagement and team effectiveness. The findings confirm the relationship between leadership behaviors and team effectiveness leading to support for various authors in this study (Gadirajurrett *et al.*, 2018; Koekemoer *et al.*, 2021) who declared that leadership behaviors are important factors in achieving the team's desired results. Leaders can act as a role model among team members by sharing creative ideas and knowledge to facilitate working cooperatively and efficiently. Leadership behaviors and team effectiveness are important paths for work engagement. Thus, work engagement conveys good leadership behaviors and team effectiveness.

5. Recommendations

The researcher came up with recommendations based on the results of the study. The domain of leadership behaviors of school heads which is challenging the process got the lowest mean. Thus, the researcher recommends that the Department of Education

implement targeted training programs and professional development opportunities for school heads, emphasizing skills and strategies related to challenging the process. This may include workshops, seminars, or coaching sessions aimed at enhancing their ability to initiate change, foster innovation, and encourage creative problem-solving within the school environment. Additionally, the Department of Education may consider incorporating these aspects into leadership competency frameworks and performance evaluations to ensure sustained improvement. By addressing this identified area for improvement, educational leaders can contribute more effectively to a dynamic and adaptive school culture, ultimately enhancing overall school performance and effectiveness.

Further, results showed that open and honest communication was the lowest domain in terms of teachers' team effectiveness. The researcher recommends that school heads prioritize efforts to improve communication strategies within the teaching team. It is advisable for school heads to foster an open and transparent communication culture by implementing regular team meetings, forums, or workshops specifically addressing effective communication skills. Providing training on active listening, constructive feedback, and conflict resolution can further enhance interpersonal connections among teachers. Creating a supportive environment where educators feel encouraged to express ideas and concerns will contribute to a more cohesive and collaborative team. Moreover, school heads may consider soliciting feedback from teachers to understand communication challenges and tailor interventions accordingly. By focusing on enhancing communication within the teaching team, school heads can positively impact overall team effectiveness and contribute to a more productive and harmonious work environment.

Moreover, given that "When I am working, I am forgetting everything else around me" represents the lowest item in teachers' work engagement and aligns with the concept of immersive focus at work, it is recommended for teachers to intentionally cultivate and harness this immersive focus for enhanced professional satisfaction and performance. Teachers can benefit from incorporating mindfulness techniques and time-management strategies into their routines to optimize periods of deep concentration. Additionally, creating a conducive work environment that minimizes potential distractions can further support sustained focus. Encouraging periodic breaks and stress-reducing activities during the workday can contribute to a healthy balance between immersive focus and overall well-being. By acknowledging and intentionally leveraging this lowest item, teachers can maximize their work engagement, leading to increased effectiveness in the educational setting.

Additionally, when research findings indicate that interpersonal communication does not have a significant mediating effect on the relationship between self-efficacy and work engagement of teachers in public elementary schools, it suggests opportunities for future research in this area. Future researchers may investigate other potential mediating factors that may explain the relationship between self-efficacy and work engagement among teachers. Consider factors such as leadership styles, organizational culture, job

satisfaction, or teacher support systems. Further, other researchers may also complement quantitative research with qualitative studies to gain a deeper understanding of the experiences and perceptions of teachers. Qualitative research can capture nuances and provide richer insights into the relationships at play. By pursuing these research directions, scholars can further advance our understanding of the complex interplay between self-efficacy, interpersonal communication, and work engagement among teachers in public elementary schools.

In light of the identified significant mediating effect of work engagement on the relationship between the leadership behaviors of school heads and the team effectiveness of teachers, public elementary schools are recommended to implement targeted strategies to enhance both leadership practices and work engagement among teaching staff. Firstly, the DepEd may invest in leadership development programs for school heads, focusing on providing mentorship opportunities. Simultaneously, initiatives may be undertaken to promote work engagement among teachers. By addressing both leadership behaviors and work engagement, schools can create a synergistic effect that positively influences team effectiveness, ultimately improving the overall educational experience for both educators and students.

6. Conclusion

With consideration of the findings of the study, conclusions and recommendations are drawn in this section. There is a very high level of leadership behaviors and team effectiveness among teachers. There is also a very high level of work engagement of teachers. There is a significant relationship between leadership behaviors and team effectiveness. There is also a significant relationship between leadership behaviors and work engagement and a significant relationship between work engagement and team effectiveness. Also, there is a partial mediation on the effect of work engagement on the relationship between leadership behaviors and the work engagement of teachers.

The findings of the study clearly confirm the notion about the mediating effect of work engagement on the relationship between leadership behaviors and work engagement. The findings are supported by the anchor theory, the Theory Y by McGregor (1960) wherein leaders act in the belief that individuals that make up the team are motivated internally, and are emotionally attached to the task, duties, and responsibilities they are given. Further, the findings of the study are substantiated by the Leadership Theory by Fiedler and House (1988), and the Broaden-and-Build Theory by Fredrickson (2001).

The researcher would like to express her sincere thanks and appreciation to all those who helped make this study possible, including but not limited to the following:

To Dr. Raymunda L. Apostol, in this scholarly pursuit, for her precious time and valuable suggestions, knowledge, and professional guidance shared for the realization of this study. To the chairman of the thesis committee, Dr. Jocelyn N. Bacasmot, and the members: Dr. Rinante Genuba, Dr Mary Ann E. Tarusan, and Dr. Lorna T. General for their constructive comments and suggestions for the improvement of the study.

The officers of the Department of Education particularly the Division Superintendent for giving permission to conduct the study and to all the respondent-teachers who actively participated in the online data gathering.

To her parents Mama Jinky and Papa Rene and siblings John Dexter, Jean Peter, Nikka Justine, and Jairene, her supportive partner Robert, and friends for their selfless encouragement that made the researcher pursue higher education.

Finally, to our God Almighty, for everything that HE has done for us. To Him be the Glory and honor forever.

Conflict of Interest Statement
The authors declare no conflicts of interest.

About the Author(s)
Charlene A. Lanaban is a Teacher II assigned at Campawan Elementary School, Campawan, Baganga, Davao Oriental, Philippines. She is a candidate for Master of Arts in Education, Major in Educational Management, University of Mindanao, Davao City, Philippines.
Raymunda L. Apostol, EdD is currently a Professor, Baganga Offsite, Davao Oriental, Philippines. She is a Public Schools Supervisor, Baganga North District, Sto Nino, Lambajon Baganga, Davao Oriental, Philippines.

References

Abun, D., Menor, R. I., Catabagan, N. C., Magallanes, T., & Ranay, F. B. (2021). Organizational climate and work engagement of employees of divine word colleges in Ilocos Region, Philippines. *International Journal of Research in Business and Social Science*, 10(1), 107-121.

Amorim, R. D. C., Bursey, A., Janowiak, D., Mccarty, C., & Demeter, B. (2018). Teamwork and motivation to leave the teaching profession: An exploratory study. *Journal of Education*, 198(3), 215-224.

Ariussanto, K. A. P., Tarigan, Z. J. H., MM, D., Sitepu, R., & Singh, D. S. K. (2020). Leadership style, employee engagement, and work environment to employee performance in manufacturing companies (Doctoral dissertation, EDP Sciences). *SHS Web of Conferences*. Retrieved from

https://www.shsconferences.org/articles/shsconf/pdf/2020/04/shsconf_icsh2020_01020.pdf

Arora, R., Gajendragadkar, S., & Neelam, N. (2023). Team effectiveness: A key to success in 'IT Organizations'. *Australasian Accounting, Business and Finance Journal*, 17(1), 97-110. Retrieved from https://ro.uow.edu.au/cgi/viewcontent.cgi?article=2326&context=aabfj

Askari, G., Asghri, N., Gordji, M. E., Asgari, H., Filipe, J. A., & Azar, A. (2020). The impact of teamwork on an organization's performance: A cooperative game's approach. *Mathematics*, 8(10), 1804. Retrieved from https://repositorio.iscte-iul.pt/bitstream/10071/21221/1/mathematics-08-01804.pdf

Bani-Melhem, S., Zeffane, R., & Albaity, M. (2018). Determinants of employees' innovative behavior. *International Journal of Contemporary Hospitality Management*. 30(3). Retrieved from https://www.emerald.com/insight/content/doi/10.1108/IJCHM-02-2017-0079/full/html

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.

Benoliel, P., & Schechter, C. (2018). Teamwork doubting and doubting teamwork. *Improving Schools, 21*(3), 225-239.

Benoliel, P. (2021). A team-based perspective for school improvement: The mediating role of school management teams. *Journal of Research on Educational Effectiveness*, *14*(2), 442-470. Retrieved from https://doi.org/10.1080/19345747.2020.1849481

Bourgault, A. M., Upvall, M. J., & Graham, A. (2018). Using Gemba boards to facilitate evidence-based practice in critical care. *Critical Care Nurse*, 38(3), e1-e7. Retrieved from https://aacnjournals.org/ccnonline/article/38/3/e1/20827/Using-Gemba-Boards-to-Facilitate-Evidence-Based

Caballero, C. G., & Guhao Jr, E. S. (2020). Structural equation model on organizational commitment of private schools' library personnel in Region XI. *Review of Integrative Business and Economics Research, 9*, 335-381.

Costillas, J. M., Labata, E. E., & Claros, R. E. (2018). Instructional competence via leadership practices among university faculty designated with administrative functions. *Asia Pacific Journal of Multidisciplinary Research*, *6*(1), 67-75. Retrieved from https://www.academia.edu/download/62129184/APJMR-2017.6.1.0820200217-1980-1u4tu8t.pdf.

Creswell, J. W. (2014). Research design. qualitative, quantitative and mixed: Methods approaches (2nd ed). London: Sage Publication

Danbaba, A. S., & Panshak, T. N. (2021). Educational leadership practices in secondary schools: The role of principals in goal achievement. *Sapientia Foundation Journal of Education, Sciences and Gender Studies*, *3*(1). Retrieved from http://www.sfjesgs.com/index.php/SFJESGS/article/download/144/135.

Fiedler, F. E., & House, R. J. (1988). Leadership theory and research, a report of progress. *International Review of Industrial and Organizational Psychology*, 19, 73-91.

Fredrickson, B. L. (2001). The role of positive emotion in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist*, 56, 218-226.

Gadirajurrett, H., Srinivasan, R., Stevens, J., & Jeena, N. (2018). Impact of leadership on team's performance. Retrieved from https://pdxscholar.library.pdx.edu/etm_studentprojects/1912/

Gode, H. E., Johansen, W., & Thomsen, C. (2020). Employee engagement in generating ideas on internal social media: A matter of meaningfulness, safety and availability. *Corporate Communications: An International Journal*, 25(2), 263-280. Retrieved from https://www.emerald.com/insight/content/doi/10.1108/CCIJ-03-2019-0024/full/html

Groysberg, B., Lee, J., Price, J., & Cheng, J. (2018). The leader's guide to corporate culture. *Harvard Business Review, 96*(1), 44-52.

Koekemoer, L., De Beer, L. T., Govender, K., & Brouwers, M. (2021). Leadership behaviour, team effectiveness, technological flexibility, work engagement and performance during COVID-19 lockdown: An exploratory study. *SA Journal of Industrial Psychology*, 47(1), 1-8. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8111706/

Kouzes, J. M., & Posner, B. Z. (2018). The student leadership challenge: Five practices for becoming an exemplary leader. John Wiley & Sons.

Lacerenza, C. N., Marlow, S. L., Tannenbaum, S. I., & Salas, E. (2018). Team development interventions: Evidence-based approaches for improving teamwork. *American Psychologist*, *73*(4), 517. Retrieved from https://psycnet.apa.org/manuscript/2018-23205-017.pdf.

MacKinnon, D. P. (2008). *Introduction to statistical mediation analysis*. New York: Erlbaum.

McGregor, D. (1960). *The human side of enterprise*. New York, McGraw Hill

McQuerrey, L. (2018). Why is teamwork important in the classroom? Retrieved from https://work.chron.com/teamwork-important-classroom-18281.html.

Narayanamma, P. L., Neelima, S., & Mounika, K. (2022). Employee engagement and organizational performance: A literature review. *Journal of Positive School Psychology*, 6(3), 3558-3563. Retrieved from https://journalppw.com/index.php/jpsp/article/view/2144

Ogechukwu, N. N., Nnabuife, E., & Okeke, P. (2021). Organizational climate and employee engagement of micro-finance banks in South-East, Nigeria. *Annals of Human Resource Management Research*, 1(2), 159-176.

O'Neill, T. A., & Salas, E. (2018). Creating high-performance teamwork in organizations. *Human Resource Management Review, 28*(4), 325-331.

Patidar, J. (2013). *Non-experimental research design*. Retrieved from http://www.slideshare.net/drjayesshpatidar/nonexperimental-research-design

Pettersen, L. (2020). The role of offline places for communication and social interaction in online and virtual spaces in the multinational workplace. *Nordicom Review*, 37(s1), 131–146. https://doi.org/10.1515/nor-2016-0028

Polega, M., Neto, R. D. C. A., Brilowski, R., & Baker, K. (2019). Principals and teamwork among teachers: An exploratory study. *Revista Ambienteeducação, 12*(2), 12-32.

Quines, L. A., & Piñero, M. Y. (2022). The mediating effect of job satisfaction on the relationship between team work skills and work values of teachers. *European Journal of Education Studies*, 9(11). Retrieved from https://oapub.org/edu/index.php/ejes/article/view/4520/7155.

Salkind, N. (2007). Encyclopedia of measurements and statistics. Retrieved from https://dx/doi.org/10.4135/97814129526644.n439

Schaufeli, W. (2021). Engaging leadership: How to promote work engagement?. *Frontiers in Psychology*, 12, 754556. Retrieved from https://www.frontiersin.org/articles/10.3389/fpsyg.2021.754556/full

Stephanie, E. (2003). Slovin's formula sampling techniques. Houghton-Mifflin, New York, USA

Stravakou, P. A., & Lozgka, E. C. (2018). School principals as leaders: Pre-service and in-service teachers' perspective. *New Trends and Issues Proceedings on Humanities and Social Sciences, 5*(3), 109-117.

Stronge, J. H., & Xu, X. (2021). Qualities of effective principals. *ASCD*. Retrieved from https://books.google.com.ph/books?hl=en&lr=&id=k_kuEAAAQBAJ&oi=fnd&pg=PP1&dq=Stronge+%26+Xu,+2021+leadership&ots=hv2iGGqfoG&sig=cMW1--BBv95i0WiP0HROAGA7YU&redir_esc=y#v=onepage&q=Stronge%20%26%20Xu%2C%202021%20leadership&f=false

Uddin, M. A., Mahmood, M., & Fan, L. (2019). Why individual employee engagement matters for team performance? *Team Performance Management: An International Journal*. Retrieved from https://doi.org/10.1108/TPM-12-2017-0078.

Vidal, L. T., & Ginuba, R. (2022). Leadership practices, empowerment, and educational adequacy: A causal model on workplace spirituality of public elementary school teachers. Retrieved from https://www.mijrd.com/papers/v2/i1/MIJRDV2I10005.pdf.

Wood, J., Oh, J., Park, J., & Kim, W. (2020). The relationship between work engagement and work–life balance in organizations: A review of the empirical research. *Human Resource Development Review*, 19(3), 240-262. Retrieved from https://core.ac.uk/download/pdf/327045828.pdf

Zahed-Babelan, A., Koulaei, G., Moeinikia, M., & Sharif, A. R. (2019). Instructional leadership effects on teachers' work engagement: Roles of school culture, empowerment, and job characteristics. *CEPS Journal*, 9(3), 137-156. Retrieved from https://www.pedocs.de/frontdoor.php?source_opus=18161