Servant Leadership of School Heads, Organizational Culture and Teamwork: A Causal Model on Teacher Engagement of Public Secondary School Teachers

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Abstract

This study aims to determine the best-fit structural model on teacher engagement of public secondary school teachers in the Region XI, Philippines. It examines the interplay between exogenous variables: servant leadership of school heads, organizational culture and teamwork on teacher engagement. It tries to understand how these factors influence each other and contribute to fostering a more engaging environment for teachers. The study utilized a descriptive correlational technique through structural equation modelling (SEM). Selected were 400 respondents using stratified random sampling. Findings show that servant leadership of school heads; organizational culture; and teamwork showed significant relationships with the endogenous variable, teacher engagement. Further, results showed that the best fit model is the Generated Model 3 showing direct causal relationship of the exogenous and endogenous variables. Furthermore, structure modifications revealed that servant leadership of school heads was grounded by the retained indicators: *building community* and *empowering people* which is highly reinforced by organizational culture, described by retained indicators- *organizational management* and *organizational cohesion*. Likewise, teamwork, was strengthened by the retained indicators: *communication* and *coordination*. When results of this study are given consideration, the goal of quality education in the Sustainable Development Goals that is quality education is positively achieved which resulted from highly engaged teachers.

Keywords: education, servant leadership, organizational culture, teamwork, teacher engagement, SEM, teachers, Philippines

Introduction

Teacher engagement is one key element in making schools successful. (Nogadas, and Apostol, 2024) In an article written by Hodges (2018) citing Gallup discovery where there are 31% of the teachers in US have shown engagement to work. The percentage of disengaged teachers is higher than half at 56% and what is most alarming is that 13% of these workers intentionally disengaged at work (Gallup, 2015; Hodges, 2018) as cited by Alutaya and Guhao (2023). The situation is not far from our country where

school heads shared the same sentiments during the school heads conference. The decreasing involvement of teachers is one among the factors that affect the quality of services which learners deserve.

Teacher engagement being the key element in the education is essential if success is the prime target. The willingness of employed teachers to engage in the organization's activities shows a healthy atmosphere. It is likely to bring success in whatever team goals and eventually ultimate success. Teachers need to involve and participate in all activities because it contributes to the end goal (Dai, and Wang, 2023). Engaged employees have a great impact on the organization. Engagement plays a major role as an antecedent in many organizational outputs like employee performance, commitment, and competitive advantage (Rameshkumar,2020). When teachers are highly motivated and inspired, they undoubtedly get involved and take part in all tasks or activities. When several teachers prefer to watch or just do the average while some few will work extra mile, the efforts often become useless and may weaken the whole team's harmony. Teachers' engagement will not cause failure, yet such low participation affects the group's entire performance. This can cause disruption and dissatisfaction of the organization members, which decreases the team morale. (De Smet, Mugayar-Baldocchi, Reich, and Schaninger, 2023).

Highly engaged teachers show commitment to their job by being involved in school activities. Teachers' engagement in their job is one of the factors of work satisfaction and success in team goals (Dewi, Rodli, Nurhidayati, 2021). Many studies on work engagement exist indicating and elaborating how leaders can affect employee engagement in any organization. Leaders nowadays have varied avenues of gaining wisdom, more knowledge about leadership and the best skills in leading a team through different resources from books, studies, informative videos for enhanced leadership for different organizations. However, no or limited studies reveal the direct effect of servant leadership, organizational culture and teamwork on teacher engagement.

To maintain success, employee engagement like that of teachers, needs to be enhanced or increased, especially amidst organizational changes (Nazari, Ghanizadeh, and Mirzaee, 2023). Several studies also found that highly engaged employees display productivity and are cognitively and emotionally aligned to team goals leading to better performance and success (Reilly, 2023). In similar idea, teachers as essential employees in the department must become more engaged to achieve the desired outcome.

According to Hassan and Ahmed's (2011) The study of Quines and Guhao (2021) , authentic leaders exhibit high levels of honesty, a strong sense of mission, and a commitment to their core beliefs. Consequently, they cultivate a more trustworthy dynamic in their workgroups, leading to numerous favorable outcomes. Genuine leadership builds followers' faith in the leader and shows how this faith, in turn, forecasts the followers' dedication to the work; it also encouraged the followers' trust in the leader and the workers' commitment to their jobs. Additionally, interpersonal trust acted as a mediator in the relationship between employees' work engagement and leadership style, and it also predicted employees' work engagement. In a similar way, teachers are also committed and engaged to their job when trust is observed and lived by the organization. When leaders strengthen the team with trust, it radiates positive atmosphere leading to favourable outcomes.

Teacher engagement is one major aspect that is essential for school productivity and success in all activities, absence of it or lack of engagement can largely affect the desired goals. This is validated by the study of Ajayi, and Olawale (2024) disclosing that teachers who have a high degree of involvement with their organizations will be highly committed to helping them become more productive and competitive in the global market. Nonetheless, a teacher's level of participation varies depending on a number of variables, including leadership, organizational culture, motivation, and job satisfaction (Akmalia, Nst, and

Siahaan, 2023). Additionally, it was determined that work engagements affected employee performance and that there is a relationship between teacher's job engagement and leadership. Furthermore, teacher engagement is dependent to servant leadership as leaders possesses qualities inviting for members to collaborate or engage. A leader can heighten the team performance by motivating them likewise as a leader, modelling engagement is essential to the organization as supported by the study of Mutha and Srivastava, (2023) In addition, the study demonstrated a substantial correlation between the organizational culture and work engagement, indicating that the latter is a significant predictor of the former among government school teachers. It was inferred that an organization's function, behaviors, values, and patterns must be present for teachers to be highly engaged in their work. (Derakhshan, Greenier, and Fathi, 2023). Another study of Hidayat, Maitimo and Suwu (2020) showed that the servant leadership and organizational culture have a positive effect on job satisfaction and work engagement.

The study of Sario and Villocino (2023) shows correlation where results revealed a significant relationship between teamwork and teacher engagement in relation to work condition and professional development. The mindset and spirit of teamwork is what makes the company operates more effectively (Liewkasemsant, 2023). It might be improved by motivating peers to take an active role, splitting them up into smaller groups so that they can work together while supporting each other holding each other accountable for their unsuccessful efforts. (Sario, and Villocino, 2023).

This study supports the goal for quality education in the Sustainable Development Goals (SGD) which ensures inclusive and equitable quality education and promote lifelong learning opportunities for all. Providing the best quality of education for our young learners starts from the teachers who are engaged in their work with the active support of the school heads, the whole organization working together as a team. This section contains a review of related literature and studies in the international and local setting that provided a substantial contribution to the conceptualization of this study. Ephemeral reviews of the related studies are also presented. The review starts with extensive analysis that highlights the impact and effectiveness of servant leadership with the following indicators: *integrity, self-sacrifice, building community, empowering people, emotional healing,* and *visioning* (Green, 2023) influence of organizational culture with the indicators: *organization characters, organization managers, organization cohesion, organization emphasis* and *organization rewards* (Tabatabaei, 2024) the impact of teamwork with *communication, coordination, the balance of member contribution, mutual support, effort* and *cohesion* (Casakina, and Cascinib, 2023); to the level of teacher engagement with *cognitive engagement, emotional engagement, social engagement* to colleagues *and social engagement* to students (Shahvarani, Azari Noughabi, and Razi, 2023)

Servant Leadership of School Heads

Above all qualities in a leader should be *integrity* (DeWitt, 2023). The leader operates in accordance with the values outlined in the value system and will uphold moral and ethical standards based on moral standards and defensible principles. A servant leader possesses these qualities and is steadfast in their resolve to treat everyone with respect, regardless of their circumstances (Kim, 2023)

One important quality that is thought to be necessary for many successful leadership philosophies is *self-sacrifice* (Zaidi, and Siddiqui 2021). In addition to deserving of praise, school leaders who frequently forgo their own comfort, privilege, and leisure or relaxation in favor of personal or, occasionally, family time also frequently see success with their programs and projects. Numerous studies have shown that a leader's selflessness reduces irresponsible behavior and is positively correlated with followers' esteem for

the leader. These results highlight the benefits and drawbacks of self-sacrifice by leaders as well as the significance of the workplace environment in this particular leadership process (Yang, Senewiratne, Newman, Sendjaya, and Chen, 2023).

The study of Sabanal and Guhao (2024) disclosed that a leader's motivation and duties are centered on assisting others. A servant leader's primary objective and source of motivation is to inspire excellence in others; this strategy's secondary outcome is organizational success. A servant-leader fosters an atmosphere that is empowering, interactive, and supportive of followers' abilities in order to help boost employee enthusiasm and effectiveness, which ultimately results in increased organizational success. Identically, servant leaders are vital in school communities where they model quality service to others regardless of position so that teachers are further encouraged to also serve others.

Servant leaders emphasize *building community* in addition to strengthening leadership inside the group or company. Leaders recognize the enormous potential in the community of stakeholders' contributions, who are eager to work together to achieve the team objectives. Additionally, capacity building, subleader training, and encouraging community involvement will be taken into account (Cleveland, 2023). In the framework of cooperation and reciprocity, community involvement is defined as the mutually beneficial exchange of information and resources. By including the community in the picture, you can foster a collaborative atmosphere by giving people a greater sense of ownership and involvement in the project. (Rijal, 2023)

Empowering people is a wonderful sign of servant leadership. According to Wen, J., Huang, and Teo, 2023), effective leadership involves empowering individuals, providing them with the necessary skills, and allowing them to advance in their area of expertise, rather than simply taking the initiative and managing and leading your team. When developing their talents to unite, inspire, and model for their subordinates in a better organization, leaders should also think about cascading the taught skills to empower their subordinates and equip them for future leadership roles. Leadership is more frequently than not about exercising independent authority; rather, it is about developing your people to possess the abilities and traits of the successful new leader. Giving them authority, assigning tasks, and identifying them so they can gain practical experience in order to become proficient in the skill. (Owen, 2024)

In any organization, the leaders' *emotional healing* is just as important as the leadership itself. A servant leader who exhibits traits like empathy, compassion, altruistic calling, and healing is able to comprehend and manage the feelings and emotions of their followers. This fosters not only a psychologically and emotionally sound workforce but also a sense of unity, teamwork, and enduring relationships, hence, improving organizational performance. (Sharma, Dhanta, and Sharma, 2024)

Servant leaders are aware of their opportunity to support people's healing. They are oriented toward healing in order to help individuals become complete. Servant leaders can support this recovery because they are highly sensitive and compassionate (Wu, Liden, Liao, and Wayne, 2021). As stated by by D'Ascoli, and Piro, (2023), individuals who aspire to become outstanding servant leaders should develop their abilities to foster an atmosphere that values resolving emotional conflicts and one should also be emotionally intelligent. (Abiodullah and Aslam ,2020).

Another sign of a successful leader is *visioning*. Motivated individuals can successfully coordinate their actions and achieve alignment with the vision. With a clear vision, leaders and even employees may make decisions without constantly seeking advice from superiors or colleagues. Leaders must have a compelling vision to persuade their supporters that whatever objectives they have set for themselves, they are attainable. Those who are led by visionaries will inspire people to dream for better times and ways. To

recognize the potential, abilities, and qualities of their team members, leaders must also possess visioning skills (Carvajal, Sanchez, and Amihan, 2023)

Organizational Culture

Teachers will be more engaged in their careers if their organization has a positive culture. The term "*organizational culture*" first appeared in the 1970s and 1980s, and by 1995, it had become one of the most prominent but divisive concepts in management study and practice. Furthermore, cultural concepts have been defined in a variety of ways. Ranging from good behavioral rules/norms to shared values, ideologies, beliefs, and shared patterns of meaning (Modise, 2023); Culture, according to Assaye (2021), is a set of shared values and ideas that define which behaviors are acceptable and expected within a given group. Different relationships between team members, teams, organizations, and so on build and maintain organizational culture. (Bagga, Gera, and Haque, 2023).

One of the indicators of Organizational Culture is *organizational character* which refers to the personality characteristics of different individuals in an organization that the outside world has recognized. It is one of the key differences between organizations and an important theoretical perspective for analyzing and predicting organizational behaviors. (Bhattacharyya, and Krishnamoorthy, 2023) It is deemed essential in an organization as this may affect the team positively or negatively, and character in each member in the team builds up the integrity of a company, organization, or institution. (Abduraimi,Mustafi and Islami (2023)

According to Sioting and Guhao (2023), the significance of corporate trust cannot be overstated. In any school, several practices are supposed to boost teachers' organizational trust, particularly trust founded on cognitive abilities. Furthermore, cognitive trust could support followers' faith in their leaders' decisions and actions. Parallel to this, the study demonstrates that a positive team or organizational culture, particularly one that values positive conduct like trust, is essential to successful team or organizational performance.

Another indicator in the organization's culture is the *organization managers,* which is equally as important as other indicators. Each department or team needs flexible and highly competent managers to drive the group towards the successful end result. Being asked to do more than carry out their assigned tasks, they are also being asked to use their analytical, interpretive, and synthesis skills to help the organization learn how to solve the novel problems it is increasingly facing in a time of rapid change. Traditional management development programs, on the other hand, convey a paradoxical message to learners when they are constructed in such a manner that they undermine the reasoning skills of managers who are pushed by the company to depend more largely on their own reasoning; described as the total anticipated values of the organization derived from the various parts of behavior that an individual performs over time and is impacted by environmental demands. As a result, the notion of manager performance based on environmental demands has been developed as a novel concept. (Ogutu, El Archi, and Dénes Dávid, 2023)

Cohesion is one of the most important organizational factors which plays an important role in the success of an organization (Waseem, Iqbal, and Khan, 2024). Officials or managers perform with efficiency and quality work processes because efficient management is dependent on these underlying variables, and they play an effective role in managers' performance which can influence the organization's cohesion. As a result, organizational variables may be used to predict manager performance as a behavioral system that better embodies the roles and tasks of managers in the company. Modifying elements like moral

commitment and group efficiency are among them, and each of them, as an underlying component, improves the current influence and results. Management skills build cohesion of the team members, leading to enhanced performance. (Watanabe, Shafiq, Nawaz, Saleem, and Nazeer, 2024)

Another crucial metric that positively influences all kinds of businesses is *rewards*. Teachers who perform well are motivated by prizes or incentives, much more so. When their efforts are praised or acknowledged, teachers are seen to be really involved in the activity. Since positive reinforcement reinforces itself, it can be used to guide employees' motivation in the desired direction (Lyons, and Bandura, 2023). Employees with motivation outperform those without it in terms of output, efficiency, and readiness to work toward company objectives (Alsaqqaf, 2023). The accomplishment of organizational objectives will inevitably give the business a competitive edge. (Fatonah, 2023). When workers believe their efforts are valued and respected, the firm will experience increased employee motivation and, consequently, improved performance.

According to Song, Chai, Kim, and Bae's (2018) study on job performance in learning institutions, learning-organization culture positively impacted instructors' work engagement and self-efficacy in Korean labor institutions. Similarly, teachers' self-efficacy enhanced their work engagement and job performance, and there was a statistically significant correlation between the two. It has also been demonstrated that self-efficacy and work engagement moderate the relationships between teachers' job performance and the learning-organization culture of workforce-education schools.

Teamwork

One key component of a functioning team is *teamwork*, which is essential to any successful firm. We've therefore started to switch from solo to team activities. Since no two teams are the same, context is essential to understanding team dynamics and results. Teams that work in a variety of environments, though, are frequently more alike than not. Establishing cooperative workplace environments is critical for fostering psychological safety, which can be used as a tool for dispute resolution, safety, error mitigation, learning, and performance enhancement. (Patil, Raheja, Nair, Deshpande, and Mittal, 2023) Motivational walls and posters abound, with teamwork as a team. Collaboration is difficult to articulate, even though it is usually evident to witness. Teamwork is any activity where a group of people collaborate to convert inputs into team outputs, like satisfaction and effectiveness. Although it is not always simple to achieve, most businesses find that having clear, easy-to-follow action plans in place that are developed by all employees helps them reach their objectives. Teachers' dedication to an organization needs to be reinforced. Increasing collaboration, having the principal exercise appropriate situational leadership, and having a high level of self-efficacy can all help teachers become more committed to their organization. (Çoban, Özdemir, and Bellibaş, 2023).

The effectiveness and commitment of a group are influenced by interpersonal *communication*. The skills to communicate both verbal or written, is the capacity to convey ideas and communicate in a way that is appropriate throughout the organization is essential for success (Em, 2023). Interaction. The ability to speak successfully is referred to as "communication skills". It is necessary for employees to be able to communicate effectively and politely to everyone who speaks in a type that employs gestures and body language in interacting with others. "An individual who modifies communication to the requirements of listeners, ensuring that listeners grasp what you're saying by paying close attention to what you're saying the entire message, restating and challenging the audience to guarantee to understand. (Garg, 2023)

Coordination of work teams is essential for handling large undertakings involving multiple teams. Effective interpersonal coordination is essential to the success of any team. In an interactive team, coordination is challenging due to the constantly changing and unpredictable nature of the scenario. Interpersonal coordination theories and methods that highlight the assistance provided by environmental information offer reasonable explanations for how interpersonal cooperation could still evolve. To make the most of time and resources, cooperation must be closely monitored (Cai, 2023). Regardless of the size of the organization, school, or private group, department leaders and the individuals assigned to every work must collaborate to prevent errors or miscommunications. (Paula, 2023)

A favorable measure of collaboration is the *balance of member contribution*, which is more particularly the effort and workload of each member that contributes to the success of the organization and the community than it does money. It appears that all workers in organizations had a variety of abilities, and they all contributed to the business's success. Due to the increased effort that instructors face in the classroom these days, each member is expected to contribute in some way. Fairness and equality would also promote teamwork since they boost morale after a contribution that benefits the organization. (Green, 2023)

Mutually supportive departments and organizations foster a strong sense of camaraderie and anticipate success from their combined efforts toward achieving team goals. *Mutual support* is defined as offering coaching and feedback to enhance performance. It is significant because it aided educators in seeing the value of collaborating to advance their professional growth by offering assistance to one another. Because teamwork is built on collaboration rather than rivalry, mutual support affects everyday job performance and is favorably correlated with long-term job success. (Sekhar, and Patwardhan, 2023) Educators who engaged in cooperative learning activities within communities of practice and cultivated reciprocal relationships. Teachers should connect and participate in activities that foster reciprocal learning in high school communities of practice, according to findings to improve personal growth. (Smeplass, 2023)

Another crucial element influencing group performance and one that is thought to be necessary for any endeavor to succeed is the *collaborative effort* that the team puts forth in all of its activities, whether they be in the classroom or inside an organization. (Taddese, 2023) It is noted that without teamwork, it is impossible to attain increased production or performance. Many businesses would spend money on cooperation and teamwork since most successful outcomes were impacted or created by the team's ability to work together to complete tasks, which made the work easier. Nothing about work is hard, challenging task can never be resolved by solid team effort (Kouzes, and Posner, 2023)

Team *cohesion* is another crucial component of teamwork, indicating that these ideas influence the intended interprofessional collaboration. When team members demonstrated higher levels of emotional intelligence, team cohesion was at its highest. Additionally, self-efficacy had a positive effect on team cohesion. It has been demonstrated that high levels of self-efficacy buffer the relationship between emotional intelligence and team cohesiveness. High emotional intelligence contributed to the development of self-efficacy and increased team cohesion. Enhanced team cohesiveness led to better team participation and performance. A team's composition attempts to better fulfill duties and further pursue high efficiency and high team performance (Black, Kim, Rhee, Wang, and Sakchutchawan, 2019). group. It's possible that cohesiveness and leadership abilities have a greater impact on team performance (Atweh, Marie Moacdieh, and Riggs, 2022).

In the research, Impact of Leadership, Teamwork, and Employee Engagement: An analysis of the relationship between teamwork and employee engagement revealed that every variable found was a

predictor of that relationship. (Berraies, and Chouiref, 2023) Employee engagement is significantly impacted by variables including the working environment (r square = 0.223), leadership (r square = 0.275), and cooperation and peer support (r square = 0.194). Another crucial element that is thought to significantly boost motivated workers, such as field teachers, is teamwork.

Teacher Engagement

Since 1970s, research on teacher engagement has shown its impact on learning institutions. Engaged teachers influence positive behavior towards achieving desired results. Their performance depends on their engagement to team goals. Goal-driven, well-recognized teachers are highly engaged and better team players. Disengaged members often cause problems in the field. Well-motivated team members perform beyond work hours. Since this is how businesses see their brand and image in the eyes of their customers and community, *branding* encourages engagement. For skilled teachers looking for improved opportunities in the teaching industry, school brand is important. Instructors seek out institutions that represent their ethics and where they feel students can reach their greatest potential. When schools rank among the top institutions, more workers apply; one factor that may be taken into account is whether or not the community or other stakeholders believe that working with them gives benefits that go above and beyond. Teachers find that school branding is crucial because it builds pride and confidence, which in turn improves employee engagement and morale while also fostering a stronger sense of teamwork. (Johnson, and Hinchliffe, 2023).

New employees and teachers require orientation and training to familiarize themselves with school roles, policies, and expectations. These mandatory trainings are mandatory for both new and old employees. Teachers continuously learn and enhance their teaching skills through continuous training, especially in the era of technology-driven learning. School heads should send their teaching force for further studies and training to improve performance and school proficiency. (Daing, and Mustapha, 2023)

Teachers who are satisfied are more content and devoted to their work. It is true that an increasing number of people are constantly looking for greater opportunities, better items, and even better careers. Disgruntled workers eventually become worn out and perform poorly, which can be caused by a variety of things that influence instructors' effectiveness in the classroom. Undoubtedly, contented educators exhibit a high level of engagement and a happy demeanor that positively impacts their colleagues, resulting in exceptional performance. It presented difficult measures and required school administrators' actions and innovations to give instructors opportunity to consistently keep their energy in order to maintain strong morale and deliver excellent instruction. The schools will never stop trying to find every way to give instructors valuable experience and support. (Werang, Agung, Pio, Asaloei, and Leba, 2023)

Theoretical Framework

This study is anchored on the theory of Robert K. Greenleaf (1970) highlighting the idea that the best leaders are the ones who are best servants first, the ones who do not need much attention instead become the person of example of action in an organization. Best leaders are those who possess the expected skills of listening, persuasion and have the access to intuition and foresight. They value the idea of showing how things are done or the leadership by doing.

The theory of organizational culture by Edgar Henry Schein (2010) also strongly supports this study where organizations like that of the educators foster the set values, beliefs, and or rules that outlines the influence of appropriate behaviour and reflected in the members' actions. The organization has principles and

ideologies which are followed and respected by the entire group. This theory explains the need for organization's unified set of standards from appropriate behaviour to work attitude and policy standards towards the wholesome branding and likewise making the group more productive with the sense of fulfilment.

Moreover, this study is anchored on the theory of teamwork by Bruce W. Tuckman (1965) on the importance of team collaboration and that each member has vital role to play and act as active member by the effort contributed to the goal's success. Tuckman explains that teams will undergo stages in every project or program in order to meet the desired outcome and success which is essential for the development of the organization. This theory values the inclusivity of all members and that the success of all endeavors have to come from each member who recognizes embedded responsibility to take part in the group he is in.

William Kahn's (1990) research on employee engagement with regard to utilizing organization members and their job roles shows that engaged employees use their bodies, minds, and emotions to express themselves when performing their roles. Members' leaders and network of support inside the team have a big impact on their level of engagement. (Mutha, and Srivastava, 2023) Moreover, employee engagement pertains to attaining a company's strategic objectives through the creation of favorable circumstances for human resources to flourish and for every worker, manager, and executive to be fully committed to their work, enabling them to offer their utmost in the firm's best interests. Furthermore, it was observed that the idea of employee involvement seems like common sense put simply. As per the notion, it is the responsibility of the management of a business to guarantee that every employee is completely committed and enthusiastic about their work. Simply said, being engaged is when you are totally committed to and excited about your work, which keeps your interest and inspires you to succeed at your best. (Sekhar, Patwardhan and Vyas, 2018)

In addition, Chan's (2019) research served as the foundation for the current study. They contend that work engagement is significantly impacted by an employee's job satisfaction. Therefore, an employee's perception of how enjoyable or unsatisfying their work is will decide how satisfied they are with it. It is further supported by Hidayat (2023) discovery that an employee's satisfaction with their job offerings has an impact on the variability of work engagement. These studies unequivocally show a link between the two variables; hence, our analysis may provide additional credence to this assertion. Driving factors such as remuneration and bonuses, recognition, and achievement must be met for an employee to be satisfied with their work (Bolatito, and Mohamoud,2024).

In this study, four hypothesized models that may help public secondary school teachers in Region XI improve teacher engagement were evaluated for best fit. The first conceptual paradigm shows how exogenous variables like organizational culture, teamwork, and servant leadership directly affect the endogenous variable, teacher engagement, as supported by theories and research. Latent variables cannot be directly measured since they cannot be immediately observed. As a result, every latent construct has several measurements or observable variables linked to it.

The first latent variable is servant leadership, which will be assessed using six criteria: *integrity, self-sacrifice, building community, empowering people, emotional healing and visioning*. As a result, integrity is a crucial attribute of servant leaders who genuinely choose to serve others and set an example. Self-sacrifice is another attribute of a leader who prioritizes the needs of his followers and the community over his own; cultivating a community that involves the community and emphasizes the value of giving back to it; empowering individuals through task delegation, letting team members make critical decisions, and

praising outstanding work that encourages team participation. *Emotional healing* highlights on personal well-being while visioning uses intuition and foresight to see what comes next or circumstance for clearer direction having a strong sense of mission. (King, 2021)

Organizational cohesion, which involves effectively communicating opinions and sharing information with the entire team, is the second latent variable. It is characterized by five indicators: organizational characters, organizational managers, organizational cohesion, organizational emphasis and organizational rewards. Organizational characters fulfill the mission and handle all aspects of operation; managers that emphasize discipline, performance, and participation in job-related decisions; organization rewards that recognize team accomplishments, employ promotions, and recognize commendable behavior (Dhir, 2019).

Furthermore, teamwork constitutes the third exogenous variable, with six specific indicators: *communication*, specifically regarding the transparency of information shared with the team; *coordination* of all project or program tasks toward team goals; *balance of member contribution* as crucial in identifying potentials of each member participating in the achievement of team goals; *mutual support* to each other's valuable contribution towards team success, effort means the determined attempt to help the team. *Cohesion* is the quality in which each team member feels accountable for upholding and safeguarding the team by remaining united. (Leong, Lim, and Huang, 2023)

The latent endogenous variable *teacher engagement*, has four indicators: *cognitive engagement, teachers' emotional engagement*, which is their internal passion and sense of fulfillment in their chosen field; *colleagues' social engagement*, which is their ability to value team relationships and interact with coworkers in the workplace; and *students' social engagement*, which is their ability to show empathy for one another and make them feel cared for and valued.

There are more models in the study. The conceptual structure of the study is displayed in Figure 1, which also illustrates how servant leadership, organizational culture, and teamwork relate to teacher engagement. The single-headed arrow that points from three exogenous variables to the endogenous teacher engagement serves as an illustration of this.

This study has six objectives, first is to determine the level of servant leadership second, to determine the level of organizational culture third, to determine the level of teamwork fourth, to determine the level of teacher engagement among public secondary school teachers. Also, it aims to determine the significant relationship between the exogenous variables: servant leadership of school heads, organizational culture and teamwork with the endogenous variable, teacher engagement. Moreover, this study aims to recognize the best fit model that predicts teacher engagement among public secondary school teachers. This study is relevant to sustainable development goals as the outcome adds to the best quality of education by increasing teacher engagement and commitment of their teaching profession.

This study is significant globally to all other relative institutions or organizations as may be reference to address similar issues like poor engagement of employees, how leaders bring out the best potential and heighten team concerns; provision of scenarios that could aid boost teachers' engagement worldwide for better improved services. Moreover, tis study favourably supports Sustainable Development Goals (SDG) for equitable quality education to intensify lifelong opportunities for all.

Specifically, this study is also significant to the Department of Education as equivalent to realizing its thrust, vision, and mission. It is said to be evident in most cases in any organization regardless of the size, especially with DepEd to foster camaraderie and strong collaboration by the initiative to forge teachers' engagement in the field. Furthermore, this study show significance to school leaders and teachers who

would positively collaborate and work together to fulfil the team goals. (Rubiah, Telaumbanua, Marzuki,Zulkipli and Dwiputra, 2024) . School heads will gain more ideas from this study on laying more ways to reach out and value their teachers to inspire them to work collaboratively and be engaged in the school tasks. Also, this study is beneficial to teachers who play a major role in the success of all the programs and initiatives of the schools in their context. This explains further how teachers can increase school performance in realizing their roles in the community as the catalyst and agents of change in society. (Rubiah et.al, 2024) This can be achieved by helping each other and participating in all their daily activities relative to achieving the department goal.

Figure 1. Conceptual framework of the study showing direct relationship of the latent exogenous variables towards the latent endogenous variables.
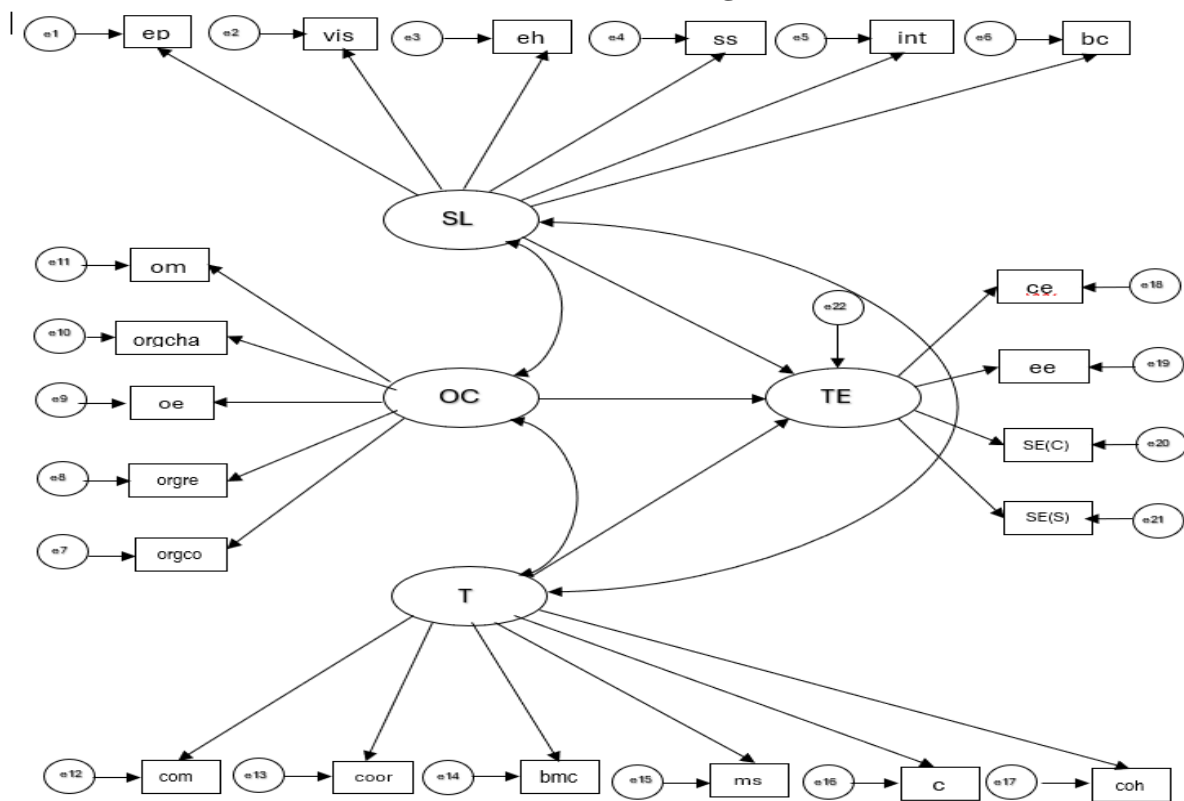
Legend

int- Integrity	orgcha- Organizational Characteristic
ss-Self-Sacrifice	om-Organizational Manager
bc-Building Community	orgco-Organizational Cohesion
ep- Empowering People	oe-Organizational Emphasis
eh-Emotional Healing	orgre-Organizational Rewards
v- Visioning	OC- Organizational Culture
SL- Servant Leadership	

com- Communication	ce-Cognitive Engagement
coor- Coordination	ee-Emotional Engagement
bmc-Balance of Member Contribution	ec-Social Engagement(colleagues)
ms-Mutual Support	ses- Social Content (students)

e-Effort   TE- Teacher Engagement

coh-Cohesion

T-Teamwork

Method

This section outlines the research methods employed in this study which include the research respondents, research subjects, research instruments, research procedure in gathering data, and statistical tools used for data analysis throughout the research.

This research is administered in Davao Region, known as Region XI, one of the regions in the Philippines located at the southern portion of Mindanao, Philippines. It is circumscribed on the east and south by the Philippine Sea, on the west by Bukidnon and SOCSARGEN Region, and its North by CARAGA region. The Davao Region consisted of five provinces with three component cities and three other cities namely: Davao Oriental, Davao de Oro, Davao del Norte, Davao del Sur, and Davao Occidental. Their capital cities are Mati City, Davao de Oro has no Capital City, Tagum City, Digos City, Davao Occidental has no city, respectively. The other three cities are Davao City, Island Garden City of Samal, and Panabo City. The respondents of the study are the public secondary school teachers from the eleven divisions of Region XI on the aforementioned locale.

The study's respondents were chosen using stratified random sampling and selected 400 public school teachers from various schools in DepEd Region XI divisions of Southern Mindanao were polled. The number of respondents per division were determined via proportionate quota sampling. In proportionate quota sampling, the percentage of each subgroup is calculated using the population's actual proportion (Alvi, 2016). Following the fundamental rule for the number of respondents appropriate for Structural Equation Modeling (Kline, 2023), which is between 200 and 400, the researcher attempted to work backward by using an appropriate sample per strata in quota sampling, which is 10 (Changing Minds, 2012) at .05 significance level. The respondents are assumed to have relevant contributions to the study which will eventually provide the significant results that would benefit the entire department in the region. In addition, participants are required to meet certain requirements in order to be considered research respondents (inclusion). They must be a permanent public-school teacher with item positions teacher I through III and Master teachers I through IV in the Department of Education. If they can answer the questions on the form, they can be of any gender. Participants are requested to provide precise information on servant leadership of school heads, organizational culture, teamwork, and teacher engagement. Those who hold the post of head teacher, retired or resigned teachers from the department, and those who worked in private schools, on the other hand, are excluded from the survey.

The selected expert panel revalidated the research instrument, which was modified from earlier studies to guarantee that the findings address the study's research questions. In order to revalidate the content, the researcher presented the panel with the amended and adapted questionnaire. This was used to collect data by giving target participants access to a soft copy of the questionnaire via Google Form in the event that hard copies could not be delivered in person. In addition, data collection via Google Form ensures that target participants are still reached with fewer difficulties because the questionnaire is completed electronically and is automatically saved. However, respondents may opt out of the survey if their interest is in conflict or they are unsure about the confidentiality of the information, or they are too busy to devote time to the survey because of other obligations. Other individuals who are interested will receive the

questionnaire from the researcher. The researcher initiated the data collection between June to July of 2023.

This study used structural equation modeling as part of a quantitative, descriptive-correlational research strategy. Studies that employ quantitative methods analyze data using statistical methods and mathematical models to get numerical results that are thought to be more objective. Research on how and why events change is of relevance to quantitative studies (Moore, 2016). Finding the best fit model for teacher engagement among secondary school teachers in public schools was the goal of this study.

In this study, the descriptive-correlational methodology was used. According to Quaranta (2017), a descriptive correlational study is one in which the main goal of the researcher is to record relationships between variables instead of trying to establish a causal relationship. It is descriptive since it discussed the levels of servant leadership, organizational culture, teamwork, and teacher engagement. In the meanwhile, it is correlational since it will look at how closely exogenous and endogenous components are linked.

Structural equation modeling is used to produce the best-fit model (SEM). Additionally, it can be utilized to look into hypothesized relationships by turning a theoretically based model into a route diagram. In the social sciences, structural equation modeling is a statistical method that is employed. Structural equation modeling has several benefits over linear regression analysis, even though they are similar. Among its many advantages over structural equation modeling are its ability to uncover relationships between hidden structures that are not directly measured, account for potential errors in the measurements of the observed variables, and be a very helpful tool for analyzing extremely complex multiple variable models and revealing both direct and indirect relationships between relationships. It is also a preferred way of analysis in doctorate dissertations and academic research (Civelek, 2018).

There are four instruments used in this study design in accordance with the research problem. Primary data were used in gathering information about the study which consists of four parts, namely: servant leadership, organizational culture, teamwork and teacher engagement. Since the survey questionnaires used in the study was sourced from various related researches, restructuring is carried out to make the instrument more applicable to current and local setting.

To make the instrument more appropriate and credible, it was validated by five expert validators with an overall rating of 3.88 described as good. After validation, pilot testing was conducted. The questionnaires were checked through Cronbach alpha for its validity, it is said that the closer Cronbach alpha coefficient is to 1.0 the greater is the internal consistency of the following items are in the scale. In addition, Bonett and Wright (2015) said that an acceptable reliability value depends on the type of application. Further, the focus should be on the population reliability value rather than sample reliability value. The rule of the thumb as provided by George and Mallery (2003) emphasize that if the result is equal or greater than 0.9, it is excellent; equal or greater than 0.8 is good; equal or greater than 0.7 is acceptable; equal or greater than 0.6 is questionable; equal or greater than 0.5 is poor; and less than 0.5 is unacceptable. Moreover, according to Santos (1999), the score between 0.80 – 0.90 is considered very good. The Cronbach alpha of this survey instrument used is 0.89 in one variable and 0.90 on the other three variables which indicates that the instruments were valid and very reliable.

The questionnaire on servant leadership was adapted from the work of Qiu and Larry Dooley (2019). It comprises of six indicators namely: integrity, self-sacrifice, building community, empowering people, emotional healing and visioning. The questionnaire in organizational culture was adapted from the work of Vaijayanthi, and Shreenivasan, (2014) It comprises five indicators namely: organization characters, organization managers, organization cohesion, organization emphasis and organization rewards. The

questionnaire on teamwork was adapted from the work of Dayan, and Di Benedetto, (2009). The tool has six indicators namely: communication, coordination, balance of member contribution, mutual support, effort and cohesion. Furthermore, the questionnaire on teacher engagement was adapted from the work of Klassen, Yerdelen , Durksen (2013). The tool has four indicators namely: cognitive engagement, emotional engagement, social engagement with colleagues and social engagement with students.

To interpret the means of servant leadership, organizational culture, teamwork, and teacher engagement, the following measurement or scales are used: range of means from 4.20 to 5.00 with descriptive level of *Very High* and interpreted as the measure is always evident among public school teachers; from 3.40 to 4.19 has descriptive level of *High* and interpreted as oftentimes evident among public school teachers; range from 2.60 to 3.39 is described as *Moderate* and is interpreted as occasionally evident among public school teachers; 1.80 to 2.59 which is described as *Low* has an interpretation of seldom evident among public school teachers and lastly, range from 1.00 to 1.79 being described as *Very Low* and interpreted as never evident among public school teachers.

To determine the best fit model, the following indices were used with their corresponding criterion: Chi-Square/ Degrees of Freedom criterion is 0 < value < 2; P-Value has the criterion of > .05; the Normed Fit Index (NFI) with > .95 ; Tucker- Lewis Index (TLI) at the criterion > .95; Comparative Fit Index (CFI) with a criterion of > .95; Goodness of Fit Index (GFI) shall have > .95 criterion ; the Root Mean Square of Error Approximation (RMSEA) has the criterion < .05 and the P of Close Fit (P-Close) Fit has > .05 criterion.

Cronbach alpha was used to test the scales' reliability, and the results are provided in the tool description. Cronbach's alpha was computed and found to be 0.959, indicating the reliability of the instruments. The panel of examiners validated the four sets of questionnaires before approving them. The construct validity of the instruments was rated 3.88 altogether, indicating a respectable ranking for the instruments. Before it was distributed, the experts' recommendations for edits, remarks, and changes were incorporated into the final draft.

On January 5, 2021, the University of Mindanao Ethics Review Committee (UMERC) granted authorization to perform the study, however, it took quiet sometime to pursue due to some aspects that had been fixed later relative to the first step towards collecting data. Due to erratic connectivity, creating the survey questionnaire in Google Form on January 23, 2023 was a little difficult at first, but it was successful after multiple tries. During the first week of May 2023, the adviser's request letter was resubmitted to the DepEd Regional Director's office along with the DepEd Region XI Research Department. Following acceptance, letters were issued to each of the eleven Division Superintendents along with the Region's permission attached. The timeframe for floating and retrieving questionnaires was then set for June to July of 2023.

In particular, the researcher began administering the questionnaires simultaneously to friends, colleagues, and acquaintances on June 26, 2023, to July 23, 2023, in the Division of DepEd Davao Occidental, DepEd Davao del Sur, and Digos City, DepEd Davao City, Davao Del Norte with Tagum City, DepEd Davao De Oro, and DepEd Davao Oriental schools. After that, the collected data were secretly calculated, examined, and interpreted appropriately. Participants in this study include male and female public secondary school teachers in positions I through IV of the Department of Education, as well as master teachers I through III (inclusion). Nonetheless, the study's participants are not allowed to include school administrators, non-teaching staff, or teachers from elementary or private schools (exclusion). The researcher gave the participants information about their freedom to participate and their right to withdraw at any time, free of

charge, before the questionnaire was made available to them. Sincere and complete respect is given by the researcher to the participant's decision to withdraw from the study.

The data were analyzed and interpreted using the appropriate statistical tools as shown below:

Mean is used to determine the level of servant leadership of school heads, organizational culture, teamwork and teacher engagement of public secondary school teachers.

Pearson r, also known as Pearson Product–Moment Correlation, is a statistical method for calculating the correlation between two variables. For naturally distributed joint data with a normal bivariate distribution, the Pearson correlation coefficient is usually utilized (Shantal, Othman, and Bakar, 2023). It was utilized in this study to examine the link between the exogenous variables of servant leadership of school heads, organizational culture and teamwork as well as the endogenous variable teacher engagement of public secondary school teachers.

Maximum Likelihood Structural Equation Modeling. A series of connected dependence connections were simultaneously estimated using this multivariate method, which combines the elements of component analysis and multiple regression (Hair, Ringle & Sarstedt, 2013). It was specifically utilized to test the proposed model and identify the teacher engagement model that best fit the data. The following indices were taken into consideration to assess the goodness of fit of the proposed models: Root Mean Square Error of Approximation, Tucker-Lewis Index (TLI), Chi-Square/Degrees of Freedom, the Goodness of Fit Index or (GFI), the Normed Fit Index (NFI), and Comparative Fit Index (CFI). According to Savalei and Bentler (2010), the main goal of the test is to make sure that characteristics with poor correlations with the qualities of the other latent variables.

Results and Discussion

In this section, the data collected from the respondents on servant leadership of school heads, organizational culture, teamwork and teacher engagement are communicated, evaluated analyzed and interpreted in the light of research objectives.

The Level of Servant Leadership in Table 1 is measured by integrity, self-sacrifice, building community, empowering people, emotional healing and visioning which data show overall average of 4.47 mean and standard deviation of 0.245 which is described as *very high*. This means that the degree of servant leadership is reflected in the public secondary school teachers having six indicators. Furthermore, building community and empowering people were recorded with the highest rating of 4.48 mean which is *very high* followed by self-sacrifice and visioning at 4.47 still *very high*, then followed by Integrity with 4.45 mean at *very high* and lastly emotional healing at 4.44 mean which is still gaining *very high* result. Further, building community and empowering people which recorded the highest at 4.48 indicate that servant leaders positively build community while empowering their members or teachers in the field.

Further, leader's integrity is strengthened when they lead by example showing no trace and free from misconduct of corruption likewise never abuse power over personal gains and not compromising ethical principles just to succeed. The kind of leaders who is willing to do as he/she speaks and humble serve others without expecting recognition or rewards describe an ideal leader of the team, this is so when joining in community activities. Great leaders allow its people to be creative in exploring or making decisions for the group. Similarly, these leaders should have knowledge and awareness of what is going on and foresee what is about to happen in order to make some adjustments and preparations. (Coppoolse, and Bollinger, 2023)

Table 1 Level of Servant Leadership

Indicator	SD	Mean	D.E.
Integrity	0.297	4.45	Very High
Self-Sacrifice	0.341	4.47	Very High
Building Community	0.391	4.48	Very High
Empowering People	0.387	4.48	Very High
Emotional Healing	0.379	4.44	Very High
Visioning	0.281	4.47	Very High
Overall	**0.245**	**4.47**	**Very High**

The level of Organizational Culture in table 2 shows the overall mean of the five indicators as *Very High* at an overall average of 4.51 mean and 0.285 standard deviation. Recorded both organizational managers and organizational cohesion at 4.54 mean or 0.367 standard deviation with *very high* description, these were followed by organizational rewards with the mean of 4.52 at 0.361 standard deviation and still *very high,* next is the organizational characteristics gaining 4.49 mean and the organizational emphasis having 4.45 mean yet still reflected as *Very High*. Topping among the five indicators with the same mean of 4.54 are organizational managers and cohesion, indicating that managers or leaders of the organization helps strengthening the culture and cohesion which positively promotes collaboration among the team. Organization is characterized as structured by nature yet diplomatic in handling operational aspects; they emphasize discipline and employee performance as they manage or lead the team. Moreover, members of the healthy organization admire leaders who value their opinion and is consultative for the welfare of the team and recognizes performance with promotions as observed to be one of the factors creating positively engaged employees. (Akpa, Asikhia, and Nneji, 2021)

Table 2 Level of Organizational Culture

Indicators	SD	Mean	D.E.
Organizational Characteristics	0.349	4.49	Very High
Organizational Managers	0.434	4.54	Very High
Organizational Cohesion	0.367	4.54	Very High
Organizational Emphasis	0.371	4.45	Very High
Organizational Rewards	0.361	4.52	Very High
Overall	**0.285**	**4.51**	**Very High**

On the level of Teamwork, table 3 showed an overall *very high* results at 4.50 mean with 0.281 standard deviation supported specifically by communication with 4.53 mean, and standard deviation of 0.327 that indicates that support from colleagues boost up teacher teamwork, followed by coordination at 4.52 mean still at very high. Both mutual support and effort reflected 4.50 mean, closely followed by balance of member contribution at 4.49 mean with 0.416 standard deviation and then cohesion at 4.45 mean; all indicators registered significantly *very high* results. This further explains that teamwork is strong when frequent communication within the team is observed in order to have harmony in making tasks done while recognizing potential members who have contributed and supported team goals.

Teacher engagement becomes evident when they work as a team. This idea was proven in the study of Sario and Villocino (2023) that teamwork is the attitude and spirit that helps an organization perform

better It can be enhanced by encouraging colleagues to actively participate in groups, splitting them into smaller groups so they can collaborate while supporting one another, while holding them accountable when their work is ineffective. Through collaborative tasks they will also enhance their communication to meet desired goals. (Sulistiani, and Sipakoly, 2024)

Table 3 Level of Teamwork

Indicators	SD	Mean	D.E.
Communication	0.327	4.53	Very High
Coordination	0.393	4.52	Very High
Balance of Member Contribution	0.416	4.49	Very High
Mutual Support	0.364	4.50	Very High
Effort	0.380	4.50	Very High
Cohesion	0.268	4.45	Very High
Overall	**0.281**	**4.50**	**Very High**

Table 4 shows the Level of Teacher Engagement with significantly very high overall mean of 4.57 , standard deviation of 0.335 indicating that teachers are highly engaged in school tasks and responsibilities given which supports a solid team. Among the four indicators recorded social engagement to students as the highest at 4.60 mean, which highlighted the degree of engagement of our teachers to students in the public secondary schools. This is followed by emotional engagement with 4.57 mean and a standard deviation of 0.402; then cognitive engagement at 4.56 mean and finally social engagement with colleagues with the result 4.55 mean but still at *very high* description meaning engaged teachers are committed to work and happy at what they are doing while they care about their colleagues yet being warm with their students and even care about their well-being.

Table 4 Level of Teacher Engagement

Indicators	SD	Mean	D.E.
Cognitive Engagement	0.384	4.56	Very High
Emotional Engagement	0.402	4.57	Very High
Social Engagement (colleagues)	0.376	4.55	Very High
Social Engagement (students)	0.422	4.60	Very High
Overall	**0.335**	**4.57**	**Very High**

Relationship between Levels of Servant Leadership and Teacher Engagement

Table 5 shows the significant association between servant leadership and teacher engagement with an overall r value of 0.520 and p value of 0.000 which is significant at 0.05 level which indicates that there is relationship between servant leaders towards the active engagement of teachers in their profession and the workplace.

Table 5 Significance on the Relationship between Levels of Servant Leadership and Teacher Engagement

Servant Leadership	Teacher Engagement				
	Cognitive Engagement	Emotional Engagement	Social Engagement (colleagues)	Social Engagement (students)	Overall
Integrity	.272* (0.000)	.319* (0.000)	.338* (0.000)	.274* (0.000)	.355* (0.000)
Self-Sacrifice	.233* (0.000)	.350* (0.000)	.354* (0.000)	.308* (0.000)	.369* (0.000)
Building Community	.196* (0.000)	.218* (0.000)	.257* (0.000)	.249* (0.000)	.273* (0.000)
Empowering People	.307* (0.000)	.284* (0.000)	.329* (0.000)	.268* (0.000)	.349* (0.000)
Emotional Healing	.293* (0.000)	.371* (0.000)	.428* (0.000)	.342* (0.000)	.424* (0.000)
Visioning	.386* (0.000)	.449* (0.000)	.384* (0.000)	.348* (0.000)	.463* (0.000)
Overall	.391* (0.000)	.461* (0.000)	.490* (0.000)	.419* (0.000)	.520* (0.000)

*Significant at 0.05 significance level.

In particular, when each indicator of servant leadership of school leaders was correlated with teacher engagement of the overall r value ranges from building community with the r value of .273 , empowering people having r value of .349, integrity with r value of .355; self-sacrifice having r value of .369, emotional healing at an r value of .424 and visioning having the r value of .463, all indicators having P value of 0.000 or less than 0.05 were all significant to teacher engagement having indicators overall r value which ranges from cognitive engagement of .391, social engagement to students with and r value of .419; this is followed by emotional engagement having an r value of .462 and social engagement with colleagues at an r value of .490, all these indicators with P value of 0.000 which is significant at 0.05 significance level.

Teacher engagement in work contributes cohesiveness which definitely turns every program or projects successful. This often reflects in an organization healthy relationship with each other which encourage all members to take part as they feel each role.Teacher engagement was shown to be helpful in describing and identifying effective teacher practices that teachers worked to improve student outcomes (Cagurangan ,2022).

Significance on the Relationship between Organizational Culture and Teacher Engagement.

Table 6 shows the significant relationship between organizational culture and teacher engagement when each indicator of organizational culture were correlated with the overall r value which ranges from organizational cohesion with overall r value of .469 followed by organizational emphasis having the r value of .473; organizational managers with the r value of .486; organizational rewards with the r value of .487 and organizational characteristics having r value of .513, all these indicators having P value of 0.000 or less than 0.05 significant to teacher engagement with all indicators significantly related specifically on social engagement with students having the overall r value of .518; cognitive engagement with the r value

of .538, also emotional engagement with r value of .549 and social engagement with colleague with an r value of .561 , all having P value of 0.000 that is less than 0.05 significance level where results show significant relationship between organizational culture and teacher engagement. The positive culture of support and cohesion of the team strengthens the spirit of oneness and therefore increase teacher engagement.

Furthermore, the result of the study is correlated to the study of Hidayat, Maitimo and Suwu (2020) disclosing that organizational culture has a positive effect on job satisfaction and work engagement, where teachers are more engaged in their job because they are given rewards or incentives for their hard work, they develop cohesion working with each other which heighten teachers' engagement.

Table 6 Significance on the Relationship between Levels of Organizational Culture and Teacher Engagement

Organizational Culture	Teacher Engagement				
	Cognitive Engagement	**Emotional Engagement**	**Social Engagement (colleagues)**	**Social Engagement (students)**	**Overall**
Organizational Characteristics	.385* (0.000)	.459* (0.000)	.476* (0.000)	.414* (0.000)	.513* (0.000)
Organizational Managers	.407* (0.000)	.400* (0.000)	.416* (0.000)	.415* (0.000)	.486* (0.000)
Organizational Cohesion	.411* (0.000)	.420* (0.000)	.404* (0.000)	.353* (0.000)	.469* (0.000)
Organizational Emphasis	.408* (0.000)	.396* (0.000)	.402* (0.000)	.392* (0.000)	.473* (0.000)
Organizational Rewards	.425* (0.000)	.407* (0.000)	.428* (0.000)	.386* (0.000)	.487* (0.000)
Overall	.538* (0.000)	.549* (0.000)	.561* (0.000)	.518* (0.000)	.641* (0.000)

*Significant at 0.05 significance level.

Significant Relationship between Teamwork and Teacher Engagement

Table 7 displays the importance of the relationship between the levels of teamwork and teacher engagement. All indicators were correlated teacher engagement specifically social engagement with students with the r value of .543; social engagement with colleagues having overall r value of .557 ; emotional engagement at an r value of .578 and cognitive engagement with an overall r value of .604 ; with all these indicators with P value of 0.000 or less than 0.05 and is significantly correlated to teamwork specifically in coordination having an r value of .493, cohesion with r value of .521 followed by balance of member contribution with .527 r value .Another indicator is communication with an r value of .532, the effort r value is .543 and mutual support with r value of .566. The table reveals the significant association of teamwork to teacher engagement which strengthens teacher engagement through teamwork. The result is supported by the study of Sario and Villocino (2023) revealing results with significant relationship between teamwork and teacher engagement which generates productivity. Teamwork has been essential to human evolution, advancement, and survival. Studies indicate that collaborative efforts

yield superior outcomes for any organizations compared to solo endeavors. Teamwork is regarded as one of the most productive work styles if goal achievement is the target. Each team member gain benefits from working with the team, it enhances connection and social engagement. (Boccoli, Gastaldi, and Corso, 2023).

Table 7 Significance on the Relationship between Teamwork and Teacher Engagement

Teamwork	Teacher Engagement				
	Cognitive Engagement	Emotional Engagement	Social Engagement (colleagues)	Social Engagement (students)	Overall
Communication	.434* (0.000)	.438* (0.000)	.482* (0.000)	.442* (0.000)	.532* (0.000)
Coordination	.432* (0.000)	.449* (0.000)	.374* (0.000)	.410* (0.000)	.493* (0.000)
Balance of Member Contribution	.481* (0.000)	.443* (0.000)	.432* (0.000)	.425* (0.000)	.527* (0.000)
Mutual Support	.480* (0.000)	.501* (0.000)	.456* (0.000)	.472* (0.000)	.566* (0.000)
Effort	.483* (0.000)	.460* (0.000)	.457* (0.000)	.436* (0.000)	.543* (0.000)
Cohesion	.557* (0.000)	.425* (0.000)	.431* (0.000)	.355* (0.000)	.521* (0.000)
Overall	.604* (0.000)	.578* (0.000)	.557* (0.000)	.543* (0.000)	.676* (0.000)

*Significant at 0.05 significance level.

Best Fit Model on Teacher Engagement

The original proposed model shown in Figure 1 needs modification to find the best fit. There are three generated models presented in this study. In order to identify the best fit model, all indices included must consistently fall within the acceptable ranges. Chi-Square/Degrees of Freedom value should be less than 2 but greater than 0 with its corresponding P-value that is greater than 0.05. Root Mean Square of Error Approximation value must be lesser than 0.05 and its corresponding P-Close value must be greater than 0.05. All the rest of the other indices such as Goodness of Fit Index, Comparative Fit Index, Normed Fit Index and Tucker-Lewis Index values must all be greater than 0.05.

Generated Model 1. Figure 2 showed the structural equation model 1 by virtue of standardized solution with three exogenous variable 1 servant leadership with six indicators these are: integrity, self-sacrifice, building community, empowering people, emotional healing and lastly visioning; the second exogenous variable organizational culture with five indicators namely: organizational characteristics, organizational managers, organizational cohesion, organizational emphasis and also organizational rewards. The third exogenous variable is teamwork with six indicators which are: communication, coordination, balance of member contribution, mutual support, effort and cohesion. The endogenous variable of this study is teacher engagement with four indicators, cognitive engagement, emotional engagement social engagement

with students and social engagement with colleagues. Since model one is not a good fit then generated model 2 shall be considered.

Figure 2. Structural Equation Model 1 in Standardized Solution

Goodness of Fit Measures of Structural Equation Model 1

Table 8 shows the goodness fit measures of structural equation model 1 which data results showing indices against the criteria; at P of Close Fit (P-Close) index model fit value of .016 at the criterion of >0.05,the Chi-Square/Degrees of Freedom (CMIN/DF) index model fit value of 2.415 which exceeded the criterion of 0 <value < 2, the Probability Level (P-value) of .000 does not fit for the criterion of >0.05, the Goodness of Fit Index (GFI) value of .906 with the criterion of >0.95 , the Comparative Fit Index (CFI) of .935 for the criterion > 0.95, the Normed Fit Index (NFI) of .895 not meeting the criterion > 0.95, the Tucker-Lewis Index (TLI) of .926 for the criterion >0.95 and the Root Means Square of Error Approximation (RMSEA) of .059 for the criterion < 0.05. The result showed that Structural Model 1 is a poor fit for no indices meet each criterion and careful consideration and potential adjustments were made to improve the data to find out the best fit model.

Table 8 Goodness of Fit Measures of Structural Equation Model 1

INDEX	CRITERION	MODEL FIT VALUE
P-Close	**> 0.05**	.016
CMIN/DF	**0 < value < 2**	2.415
P-value	**> 0.05**	.000

GFI	> 0.95	.906
CFI	> 0.95	.935
NFI	> 0.95	.895
TLI	> 0.95	.926
RMSEA	< 0.05	.059

Legend:

CMIN/DF	-	Chi-Square/Degrees of Freedom
NFI	-	Normed Fit Index
TLI	-	Tucker-Lewis Index
CFI	-	Comparative Fit Index
GFI	-	Goodness of Fit Index
RMSEA	-	Root Means Square of Error Approximation
Pclose	-	P of Close Fit
P-value	-	Probability Level

**Goodness of Fit Measures of Structural Equation Model 2 in Standardized Solution**

Generated Model 2. Figure 3 shows the generated model 2 which exhibited the interrelationship of the exogenous variables where some indicators having low values were removed. The first exogenous variable servant leadership is strengthened by the remaining four indicators, integrity, building community, empowering people and visioning; the second exogenous variable organizational culture has the following retained indicators: organizational characters, organizational managers, and organizational cohesion while the third exogenous variable has three retained indicators which are: cognitive engagement, emotional engagement and social engagement with students.

Notably, all remaining indicators exerted direct influence on teacher engagement which emphasized impact of the three exogenous variables on the endogenous variable.

Additionally, model 2 has exhibited significant improvements in various indices compared to model 1. The GFI value has slightly improved from .906 to .955; the CFI has shown improvement from .935 to .969 and the TLI has also improved from .926 to .960, all of these meet the required criterion of greater than 0.95.

Furthermore, the following indices have exhibited improvement in the model 2; the P-Close has improved from .016 to .423, CMIN/DF has also improved from 2.415 to 2.055, the P-Value remained at 0.000 value, the NFI has improved from .895 to .943 and RMSEA slightly improved from .059 to .051. Model 2 has exhibited improvement on few indices however, remained unacceptable as failing to meet the required criterion indicating model 2 as poor fit. Thus, despite the improvements in some indices, comprehensive adherence to all criteria is imperative for deeming a model a good fit, therefore it is poor fit.

Figure 3. Structural Equation Model 2 in Standardized Solution
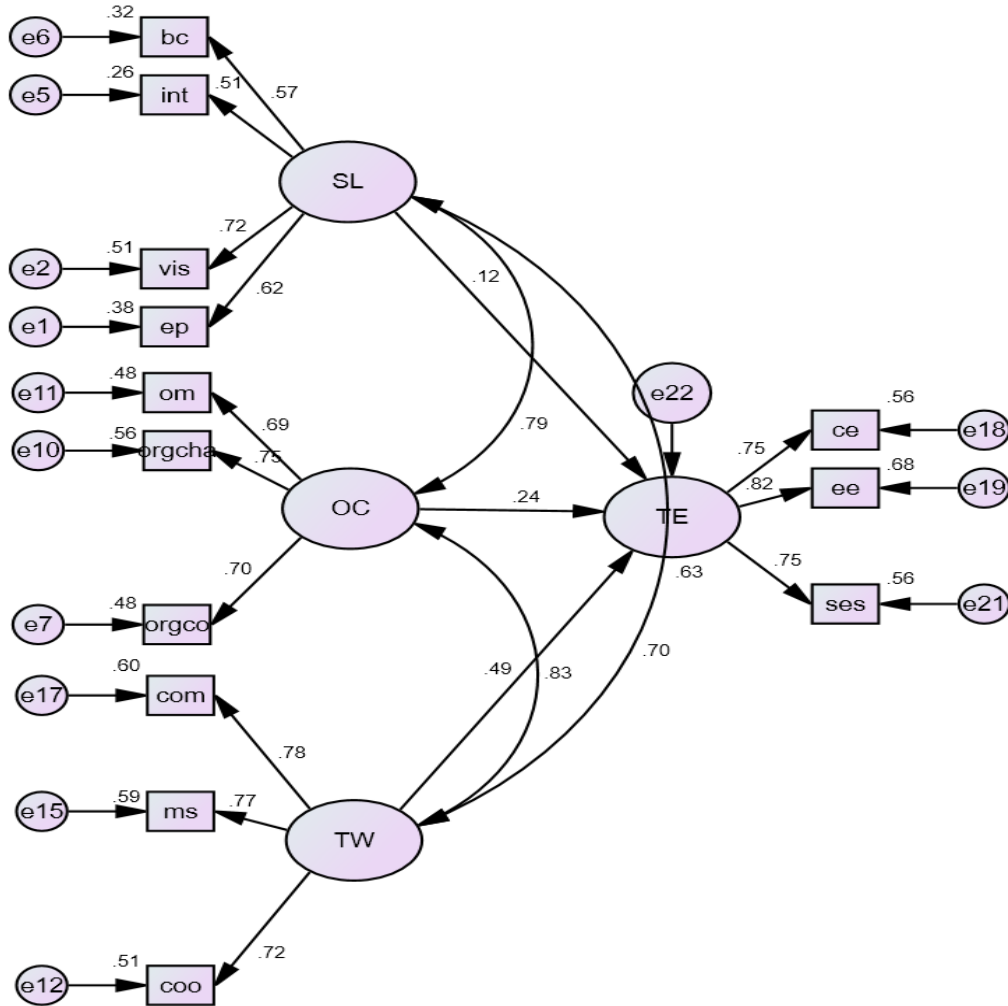
Legend: int – Integrity

orgcha – Organizational Characteristic

ss – Self-Sacrifice

om – Organizational Managers

bc – Building Community

orgco – Organizational Cohesion

ep – Empowering People

oe – Organizational Emphasis

eh – Emotional Healing

orgre – Organizational Rewards

vis – Visioning

OC – Organizational Culture

SL – Servant Leadership

com – Communication

ce – Cognitive Engagement

coo – Coordination

ee – Emotional Engagement

bmc – Balance of Member Contribution

sec – Social Engagement (colleagues)

ms – Mutual Support

ses – Social Engagement (students)

eff – Effort

TE - Teacher Engagement

coh – Cohesion

TW – Teamwork

Table 9 shows the goodness of fit measures of structural equation model 2 in standardized solution with the following data. The P of Close Fit (P-Close) value of .423 with the criterion of > 0.05; the Chi Square/Degrees of Freedom (CMIN/DF) value of 2.055 which is of greater value than the criterion 0

<value <2 ; the probability Level (P-value) is .000 with the criterion of > 0.05 the Goodness of Fit Index (GFI) of . 955 meet the criterion > 0.95 also the Comparative Fit Index (CFI) of .969 meets the criterion > 0.95. However, the Normed Fit Index (NFI) value of .943 does not meet the criterion > 0.95. Tucker-Lewis Index (TLI) value of .960 meet for the criterion > 0.95 and finally and finally, the Root Means Square of Error Approximation (RMSEA) with the value .51 at criterion < 0.05. The table shows some indices unfit or did not meet the set criteria except the GFI which is slightly greater than 0.95 also, the CFI of .969 and TLI with .960 with the values greater than .0.95 but still Structural Equation Model 2 in standardized solution is not the good fit model for the study.

Table 9 Goodness of Fit of Structural Equation Model 2 in Standardized Solution

INDEX	CRITERION	MODEL FIT VALUE
P-Close	**> 0.05**	.423
CMIN/DF	**0 < value < 2**	2.055
P-value	**> 0.05**	.000
GFI	**> 0.95**	.955
CFI	**> 0.95**	.969
NFI	**> 0.95**	.943
TLI	**> 0.95**	.960
RMSEA	**< 0.05**	.051

Legend:

CMIN/DF	-	Chi-Square/Degrees of Freedom
NFI	-	Normed Fit Index
TLI	-	Tucker-Lewis Index
CFI	-	Comparative Fit Index
GFI	-	Goodness of Fit Index
RMSEA	-	Root Means Square of Error Approximation
Pclose	-	P of Close Fit
P-value	-	Probability Level

**Goodness of Fit Measures of Structural Equation Model 3**

Generated Model 3. Finally, the generated model 3 as shown in Figure 4 exhibited the interrelationship of the exogenous variables, servant leadership of school heads, organizational culture, and teamwork and their causal relationship on the endogenous variable teacher engagement. Model 3 is a modified version of model 1 and model 2 where some indicators with low values were removed. Furthermore, substantial improvement among indices were manifested in model 3 when compared to model 2. The P-Close value has improved from .423 to .914 which met the criterion greater than 0.05, CMIN/DF value from 2.055 to 1.316 with the criterion less than 2; the P-value in model 1 and 2 both having 0.000 value has .150 for the criterion greater than 0.05. The GFI value from .955 to .986, CFI value from .969 to .995, NFI value is

from .943 to .979, TLI of .960 to .991 and RMSEA value of .051 has improved to .028. All values fall within acceptable ranges, hence, a good fit.

Moreover, the structural modification has revealed that servant leadership of school heads was grounded by the retained indicators: *building community* and *empowering people* which is very highly reinforced by *another* exogenous variable, organizational culture, which was defined by the retained indicators-*organizational management* and *organizational cohesion*. Finally, the structure was further significantly strengthened by the third exogenous variable, teamwork, which was outlined by the retained indicators: *communication* and *coordination*.

This study conformed with the findings of Louw (2023) that the indicator empowering people has an influence on teacher engagement. Teachers were more engaged in their work when they are empowered and given responsibility. Out of six, two measures in servant leadership predicted teacher engagement. Members of the team or organization stick together for a positive result replicates engagement on their job in the field whereby improving the performance of the whole group. (Osserand, Gnankob, Ansong, and Issau, 2023)

Figure 4. Structural Equation Model 3 in Standardized Solution
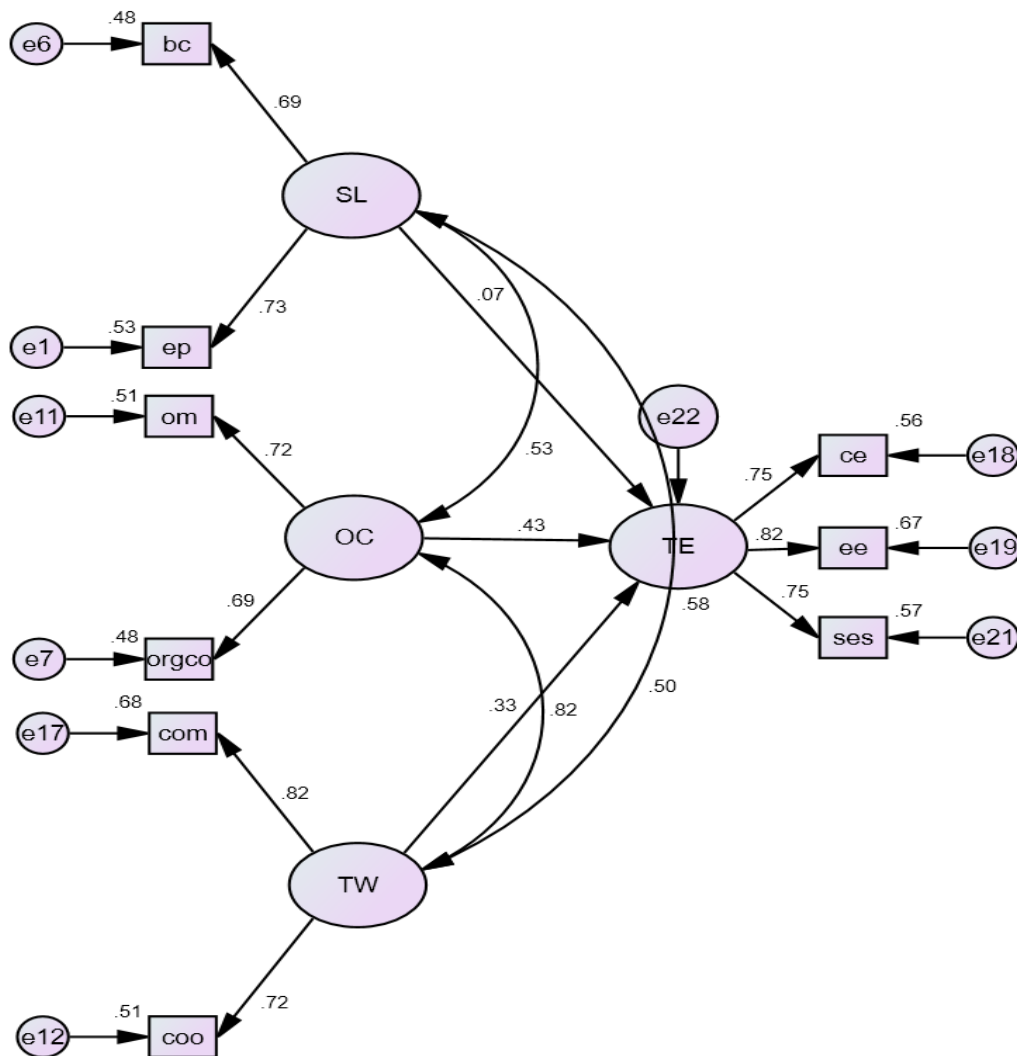
In addition, 2 out of 5 indicators on organizational culture has been strengthened by 2 remaining domains organizational managers and organizational cohesion which predicted the increase of teacher engagement. It is indeed another valuable factor influencing the engagement of teachers being handled by people-driven managers which invites team cohesion. In order to achieve organizational success, the study emphasized the significance of creating a friendly and inclusive work environment, offering chances for employee development and advancement, and cultivating a positive organizational culture and shared values. (Alkhodary, 2023)

Subsequently, only two of the six measures on teamwork which are, communication and coordination remains valuable predictors of teacher engagement; communication as the fundamental factor for any team to work alongside with coordination leads to ultimate teacher engagement. This result was highlighted by the study of Sario and Villocino (2023) revealing a significant relationship between teamwork and teacher engagement. Working as a team ensures a job done easily with others, when teamwork is emphasized in schools, and the team understands the value of teamwork and teachers willingly engage in whatever programs or activities in schools thereby improving teachers' engagement (Sario and Villocino, 2023).

Additionally, on teacher engagement three out of four indicators, cognitive engagement, emotional engagement and social engagement with students, remained persistent measures reinforced by the study of Klassen, Yerdelen, and Durksen (2013) revealing that the contribution to the measurement of teacher engagement is the novel inclusion of social engagement with students as a key component of overall engagement at work for teachers. The more engaged teachers, the more dedicated or committed they are into their work and can go the extra mile for positive overall outcome.

Table 10 Goodness of Fit Measures of Structural Equation Model 3

INDEX	CRITERION	MODEL FIT VALUE
P-Close	**> 0.05**	.914
CMIN/DF	**0 < value < 2**	1.316
P-value	**> 0.05**	.150
GFI	**> 0.95**	.986
CFI	**> 0.95**	.995
NFI	**> 0.95**	.979

TLI	**> 0.95**	.991
RMSEA	**< 0.05**	.028

Legend:

CMIN/DF	-	Chi-Square/Degrees of Freedom
NFI	-	Normed Fit Index
TLI	-	Tucker-Lewis Index
CFI	-	Comparative Fit Index
GFI	-	Goodness of Fit Index
RMSEA	-	Root Means Square of Error Approximation
Pclose	-	P of Close Fit
P-value	-	Probability Level

Conclusion and Recommendation

The results in this study revealed that the level of servant leadership is very high. Thus, the connection and extent of encouragement modelled by serval leaders in the schools generates active participation and teachers' engagement. The level of organizational culture is also very high which resulted to the positive culture characterized by the values lived in the team is evident in the public secondary school teachers. Similarly, the level of teamwork is very high and it is evident in the public schools as one contributory factor of team cohesion. Finally, the level of teacher engagement is very high, which result revealed that the endogenous variable, teacher engagement is evident towards the success of the defined goal.

Results revealed that Model 3 have all indices consistently direct a good fit to data as resulted to have all indices fall within each criterion set. Further, it can be said that there is best fit model that predicts teacher engagement of the public secondary school teachers in the region. The model has illustrated the importance of servant leadership of school heads, organizational culture and teamwork as predictors of teacher engagement. Therefore, the null hypothesis that there is no best fit model was rejected.

Furthermore, the findings revealed a correlation between servant leadership and teacher engagement. Also, organizational culture and teacher engagement revealed to be associated. Finally, teamwork is significantly observed to have connection. Moreover, the most sparing model (Model 3) conveyed a new concept that the endogenous variable teacher engagement of the public secondary school teachers is significantly best anchored to servant leadership which was grounded in terms of building community and empowering people, which was further reinforced by organizational culture defined by its retained indicators : organizational managers and organizational cohesion which is strengthened significantly by the exogenous variable teamwork specifically on communication and coordination. Finally, the final model (Model 3) shows direct causal relationship that links servant leadership, organizational culture and teamwork and demonstrated to be the best-fit model for teacher engagement of the public secondary school teachers.

The result of the study has supported the servant leadership theory of Robert K. Greenleaf (1970) claiming that teacher engagement is affected by servant leaders who possesses integrity, who builds community and empower its people. Similarly, the study affirmed the theory of organizational culture by Edgar Henry Schein (2010) which claimed that organizational culture is related to teacher engagement. This reveals

that organizational managers takes the lead as organizational cohesion is strengthened. Lastly theory of teams and teamwork of Bruce W. Tuckman (1965) highlighted by communication and coordination enhances teamwork. To deepen the team or organization's cohesiveness and positive relationship for the team to succeed in whatever endeavor, they have to understand the value of each member's contribution and teamwork.

Based on the results of the study, and as revealed by the best fit model, the researcher suggests that the Department of Education thereby implemented in schools to include community services or reach out programs which strengthens partnership with stakeholders, enhance staffing and tasking with programs handled by focal or project team leader to empower and train future leaders; provision of trainings for department heads or committee leaders on strategic management with team building periodic activities for all members to acquaint and improve camaraderie. Trainings through Learning Action Cell (LAC) session highlighting personal and professional development and strategies and trends in classroom teaching will also be adding huge contribution to the success of department goals. Another notable suggestion for the teachers to renew commitment and improve engagement is to include comprehensive rewards and recognition to individuals or groups who have great contribution to the achievements of the school. When employees are empowered and rewarded, engagement is positively enhanced.

This study may serve as crucial point of the Department of Education faculty development initiatives, policy and decisions on selection of teachers as well as promotions of school leaders who are willing to serve the whole community first than personal progress.

Finally, it is advised that researchers confirm the findings of this study using a larger sample size or in different environments. In order to improve social awareness of the underlying causes and mechanisms of job engagement in the workplace, they might also investigate additional factors, approaches, and resources. This will serve as a solid foundation for the creation of educational initiatives and policies that support the work involvement of educators and undoubtedly improve student learning.

Conflict of Interest Statement

This study had no trace of conflict of interest as the researchers personally funded this undertaking, and the administration and interpretation of data were made independently.

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