



FINANCIAL LITERACY, WORK ENGAGEMENT, AND PROFESSIONAL DEVELOPMENT: A STRUCTURAL EQUATION MODEL ON TEAMWORK AMONG PUBLIC SCHOOL TEACHERS

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Abstract:

This study examined how financial literacy, work engagement, and professional development influence teamwork among public elementary school teachers in Region XII. Using a quantitative, non-experimental design, the research surveyed 400 teachers selected through stratified sampling using the Raosoft sample size calculator. Statistical analysis employed mean calculations, Pearson correlation, multiple regression, and structural equation modeling, with data collected using validated survey instruments adapted for this study. Results showed very high levels of teamwork and professional development, along with high levels of financial literacy and work engagement. Meanwhile, all three independent variables significantly correlated with teamwork. Through structural equation modeling, Model 3 emerged as the best fit, revealing key relationships: financial literacy was characterized by financial attitude and training; work engagement by absorption and dedication; and professional development by thematic knowledge and human resource development. Furthermore, teamwork was primarily defined by mutual support and communication. The findings demonstrated that these three factors significantly impact teachers' teamwork effectiveness.

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1. Introduction

Teacher teamwork has become an increasingly pressing issue in the educational sector despite widespread recognition of its benefits, with numerous challenges impeding effective collaboration among educators. Ineffective teacher collaboration negatively affects school performance and student outcomes (Quines & Albutra, 2023). Teachers' incapacity to work as a team may reduce their readiness to teach and could impact their dedication and behavior. Similarly, Woodland and Mazur (2019) found that effective teamwork is difficult to establish and maintain in a school setting with diverse personalities and teaching philosophies. Furthermore, research indicates that teachers struggle to build collaborative relationships with colleagues, primarily due to overwhelming workloads and conflicting schedules (Tuttle, Harrison, Johnson, & Mecadon-Mann, 2021).

While research on connections between financial literacy and teacher teamwork is limited, some studies suggest potential links between these areas. A study finds that high school business and finance teachers who engage in regular lesson planning and curriculum development with fellow teachers demonstrate greater financial knowledge in areas like investing, budgeting, credit, and insurance. Survey analysis shows significantly higher financial literacy exam scores for teachers involved in recurring team activities like curriculum building and peer coaching compared to non-collaborative peers. These results suggest collaborative teaching environments help improve and reinforce teachers' own understanding of personal financial management concepts (Fisher, 2021).

Moreover, some studies also demonstrate a positive relationship between teacher work engagement and effective teamwork. It was found that teachers who reported higher levels of dedication and enthusiasm for their jobs were more likely to collaborate with colleagues by sharing resources, providing feedback, and participating in learning communities (Tao, Lee, Sun, Li, & He, 2022). A similar study concludes that work engagement among teachers leads to improved communication, integration, and coordination within teacher teams. Teachers who feel invested and find meaning in their work tend to contribute more positively to team dynamics and collaborative efforts (Holmström, Tuominen, Laasanen, & Veermans, 2023).

Researchers have also found links between professional development and teamwork. A study claims that teachers who participated in professional learning communities showed significant improvements in cooperative behaviors such as co-planning lessons, peer coaching, and cross-classroom observations (Williams et al., 2021). In a related study, Guhao and Sioting (2023) emphasize that when teachers collaborate and feel empowered, they break down isolationist barriers, develop shared

responsibility, and engage in professional development—all of which strengthen the teaching environment.

Though existing research has established some correlations between teacher teamwork and heightened financial literacy, work engagement, and professional development, there remains a significant gap in understanding the holistic relationship between teamwork and these critical areas for teacher effectiveness. Limited identified studies to date have specifically analyzed whether improved teacher teamwork through activities like peer coaching and collaborative planning can causally increase financial skills, workplace dedication, and learning from professional training programs (Jones & Smith, 2022). In consideration of the foregoing assumptions, the researcher has not come across a study that dealt with a structural equation model on the teamwork of teachers using three exogenous variables, namely, financial literacy, work engagement, and professional development in public elementary schools. In this context, this study on the structural equation models of teamwork can provide vital insights to guide education leaders and policymakers in leveraging teacher collaboration to mutually enhance professional capabilities. The results may expand the literature and provide a database for researchers focusing on this topic in the academe.

The main thrust of this study is to determine the best fit structural equation model on teamwork among public school teachers in Region XII. The following are the specific objectives: first, to ascertain the level of financial literacy among public school teachers in terms of financial attitude, financial knowledge, financial behavior, financial attitude, and financial training. Second, to describe the level of work engagement among public school teachers in terms of vigor, dedication, and absorption. This study also aims to measure the level of professional development of public school teachers in terms of thematic knowledge, learning environment, cooperation, educational technology, research base, educational planning, evaluation and development of human resources. Fourth, to ascertain the level of teamwork among teachers in terms of team structure, leadership, situation monitoring, mutual support, and communication. Fifth, to determine the significant relationship between financial literacy and teamwork, work engagement and teamwork, and professional development and teamwork. Lastly, to find the best-fit model that predicts teamwork of public school teachers.

2. Literature Review

Elomina (2021) stated that financial literacy is a basic need of an individual to prevent financial mismanagement as it requires understanding and proficiency in various financial skills. Being financially literate is necessary for improving one's cognitive capacity, increasing productivity, and developing economic and financial stability. Similarly, financial literacy is fundamentally dependent on having a strong foundation of financial knowledge. Those who lack sufficient financial understanding often struggle to effectively manage their personal finances (Khawar & Sarwar, 2021).

Further, financial knowledge, financial behavior, financial attitude, and financial training have a substantial impact on public school teachers' financial management practices. Training resulted in better financial behavior, such as increased savings, increased borrowing, lower default rates, and a higher likelihood of initiating new fruitful activities (Delmo, Sarmiento, & Bugador, 2023). Financial literacy interventions and programs designed for teachers are necessary since teachers must be wise in their finances. Teachers should have a good financial education to prevent debt issues and, more importantly, to improve their knowledge of the basic concepts and the importance of financial literacy (Casingal & Ancho, 2022).

Teacher work engagement represents a positive psychological state marked by vigor, dedication, and absorption in professional activities. It was noted by Baldoz and Guhao (2020) that when employees are engaged, organizational gaps are reduced and productivity increases. In addition, work engagement has evolved to become a key measure of teaching excellence, encompassing factors such as instructional capability, problem-solving skills, and organizational commitment. It represents a positive psychological state that is essential for achieving school objectives (Burić & Macuka, 2018).

Moreover, in extensive research conducted by Jaya and Ariyanto (2021), far-reaching benefits of work engagement were demonstrated, such as teacher job satisfaction, reduced burnout, and elevated classroom effectiveness. This supports the claim of Decuyper and Schaufeli (2020) that institutional success is significantly influenced by employee work engagement, which consequently results in improved teacher effectiveness and collaboration.

In today's educational landscape, teacher professional development stands as a crucial element for driving meaningful educational change and progress. The ongoing need for teachers to learn and develop their skills is of paramount importance for advancing education (He, Guo, & Abazie, 2024). Additionally, Quines and Monteza (2023) asserted that professional development is the cornerstone of quality education. The exceptional classroom management skills demonstrated by teachers contribute to enhanced student performance and create a more effective learning environment. The very high levels of educational leadership and humane relations indicate that teachers are effective leaders who can build and sustain relationships that inspire and motivate others. Meanwhile, a high level of thematic knowledge foundations represents vital instructional capacities enabling teachers to provide conceptually sound learning experiences around curriculum topics (Depaepe, Verschaffel, & Star, 2020). A strong research base can help identify the key features of professional development that are most likely to lead to changes in teachers' knowledge, beliefs, and instructional practices (Bergmark, 2023). Furthermore, teachers who demonstrated high ratings in cooperation made meaningful collaborative efforts and interactions among professionals as they engaged in learning and growth opportunities. Correspondingly, cooperation with parents and peers results in enriching students' learning by creating friendly and healthy relations (Kaunickienė & Bubnys, 2021).

Kaae (2021) asserted that effective communication and mutual support in teams have reduced the potential for error, resulting in enhanced patient safety and improved clinical performance. She added that factors contributing to poor team performance include poor communication skills, ineffective team practice, and lack of experience working as part of a team. Khadija et al. (2024) showed that there are positive relationships of moderate and significant correlations between all the principals' leadership styles and the teamwork skills of teachers. While high levels of leadership (transformational, transactional and laissez-faire) the teachers reported about their school head, were associated with high levels of teamwork skills of the teaching staff.

Additionally, Quines and Nino (2023) propounded that teamwork is consistently identified as a crucial component of success in today's professional sector. In the same vein, it was found that team attitudes and participation levels are connected to individual team members' experiences of burnout, which manifests as exhaustion, cynicism, and reduced professional efficacy. These factors also influence work engagement dimensions including vigor, dedication, and absorption, even after accounting for individual members' job demands and resources (Guhao & Quines, 2021).

Relatively, this study is anchored on the Social Exchange Theory developed by Homans (1950), which posits that individuals engage in social exchanges based on the perceived costs and benefits of the relationship. Ultimately, social exchange theory suggests that when teachers perceive teamwork as beneficial and supported, they are more likely to engage in collaborative efforts, reinforcing the relationships between these factors (Ahmad, Nawaz, Ishaq, Khan, & Ashraf, 2023). In this study, the higher the financial literacy (Martinez & Andal, 2022), work engagement (García-Buades, Peiró, Montañez-Juan, Kozusznik, & Ortiz-Bonnín, 2020), and professional development (Park & Park, 2022), the higher their level of teamwork.

Another supporting theory in this study is the Social Cognitive Theory by Bandura (1986). He stressed that learning occurs in a social context through observation, imitation, and modeling. People learn from one another via social interactions and experiences. Social cognitive theory powerfully explains that when teachers collectively discuss and practice financial skills, they reinforce shared knowledge and efficacy. This anchor the essential role of teamwork in building financial literacy by enabling modeling and social transmission of knowledge and behaviors.

Additionally, the Job Demands-Resources (JD-R) Theory by Bakker and Demerouti (2007) supports this study by providing a strong rationale for examining the significance of teamwork among public school teachers in promoting work engagement. Applied to teachers, this suggests cooperation in teams provides an important resource to enhance engagement. Collaborating provides social support, information sharing, and task coordination. JD-R theory powerfully explains that by working cooperatively, teachers gain key resources like peer collaboration and mentoring, which drive higher levels of dedication, absorption, and vigor at work.

Finally, another supporting theory by Vygotsky (1978) as cited by Adams (2006), the Social Constructivism Theory, suggests that learning is an active process shaped by social interactions. Applied to professional development for teachers, this theory posits that team-based activities will maximize learning compared to individual training. When teachers collectively make sense of concepts introduced in professional development, it enhances understanding and integration of new teaching practices (Jones, Cohen, Schad, Caratachea, & Smith, 2020). In summary, social constructivism theory explains that because understanding is socially built, effective teacher professional development requires teamwork and collective meaning-making.

3. Material and Methods

The respondents involved in this study were 400 public elementary school teachers in the Department of Education, Regional Office XII. Region XII, also known as SOCCSKSARGEN, is an administrative region of the Philippines, located in the southwestern part of the island of Mindanao. The researcher opted to choose the big divisions. Breakdowns of the respondents were as follows: General Santos City (99), Koronadal City (32), South Cotabato (148), and Sarangani (121). The sample size of this study was calculated through the Raosoft sample size calculator. Raosoft online calculator is designed specifically for population surveys to calculate the sample size and determine how many responses are needed to meet the desired confidence level with a margin of error which is usually 5% (Puisa, Montewka, & Krata, 2023). Moreover, it is helpful for research planning as it provides the target number of study participants needed to ensure findings represent the population within a desired level of precision.

Further, inclusion criteria were prepared for the participants to qualify as respondents to the study. They must be public elementary school teachers, holders of permanent status in the Department of Education, with item positions teacher I to III and Master teachers I to IV. In addition, they can be of any gender if they can provide answers to the questionnaire. The respondents are expected to give reliable information regarding the financial literacy, work engagement, professional development, and teamwork of public school teachers. However, individuals with head teacher posts, retired or resigned Department of Education teachers, and those from private schools will be excluded from the respondents. Moreover, participation in the study is entirely voluntary, allowing respondents the autonomy to choose whether or not to take part based on their individual preferences, availability, and level of comfort with the research.

This study used a descriptive-correlational technique of Structural Equation Modeling (SEM) to examine the degree to which teamwork is related to the following variables: financial literacy, work engagement, and professional development. Structural equation modeling is a powerful multivariate statistical technique that combines factor analysis and multiple regression analysis to estimate the interrelated dependencies among observed and unobserved variables (Wang & Wang, 2020). As cited by Ferrando and Guhao (2024), SEM is essential to arrive at the best-fit model since its elements are

represented through specific shapes and symbols. Latent variables are depicted using oval shapes, while rectangular figures linked to these ovals indicate the observable indicators that measure each latent construct. More so, the directional relationships between variables are shown through arrows. A single-headed arrow demonstrates a direct causal influence from one variable to another, whereas a double-headed arrow represents a correlational relationship between variables.

In the collection of data, the researcher followed a systematic procedure. The researcher asked permission from the University of Mindanao Ethics Review Committee (UMERC), through a letter, addressed to the Schools Division Superintendents of the Divisions of General Santos City, Koronadal City, South Cotabato, and Sarangani Province. The said letter was furnished to the heads concerned with the 4 identified divisions to allow the researcher to conduct the study on the 400 public elementary and secondary school teachers. As soon as the request was approved, the researcher visited the target schools as a courtesy call and planned on the conduct of the survey to all concerned respondents. Lists of contact numbers/email addresses of all respondents/teachers were requested from the offices of the concerned school heads/principals. Those served as the basis of the researcher for data gathering. All retrieved questionnaires were encoded in the excel template after verification and checking as to the completeness of the answers.

In addition, the statistical tools used in this study include Mean in order to determine the levels of financial literacy, work engagement, and professional development and teamwork of respondents. Pearson Product-Moment Correlation (Pearson r) to determine the significance of the relationship between teachers' teamwork and the following variables: financial literacy, work engagement, and professional development. Lastly, Structural Equation Model was utilized to explore and determine the best fit model of the predictors of teamwork among public school teachers. This multivariate technique is a combination of factor analysis and multiple regression analysis, and it was used to analyze the structural relationship between measured variables and latent constructs (Bongcayat & Guhao, 2020).

Assessing the goodness-of-fit of a model is crucial to ensure that the proposed model adequately represents the observed data. The following are the criteria used in evaluating the model's fit: Chi-Square/Degrees of Freedom (CMIN/DF) $0 < \text{value} < 2$; Normed Fit Index (NFI) > 0.95 ; Tucker-Lewis Index (TLI) > 0.95 ; Comparative Fit Index (CFI) > 0.95 ; Goodness of Fit Index (GFI) > 0.95 ; Root Means Square of Error Approximation (RMSEA) < 0.05 ; P of Close Fit (P-close) > 0.05 ; and Probability Level (P-value). All specified indices must constantly remain within their permissible ranges for a model to be the best fit (Borchet, Lewandowska-Walter, Połomski, Peplińska, & Hooper, 2020).

Moreover, to ensure compliance with ethical considerations in research, the researcher adhered to the standards established by the University of Mindanao Ethics Review Committee, particularly in dealing with the participants and data. The researcher secured a certificate of approval with UMERC Protocol No. UMERC-2024-297. Ethical practices were upheld by ensuring voluntary participation, maintaining respondents'

privacy and confidentiality, obtaining informed consent prior to involvement, following appropriate recruitment protocols, clearly communicating potential risks and benefits, avoiding plagiarism, refraining from data fabrication or falsification, securing necessary permissions from relevant organizations or sites, disclosing any conflicts of interest, and properly attributing authorship contributions.

4. Results and Discussion

Table 1: Level of Financial Literacy

Indicators	SD	Mean	Descriptive Equivalent
Financial Knowledge	0.61	4.14	High
Financial Behavior	0.62	3.65	High
Financial Attitude	0.59	3.86	High
Financial Training	0.68	3.91	High
Overall	0.51	3.89	High

Presented in Table 1 is the high level of financial literacy of teachers, with an overall mean rating of 3.89 and a standard deviation of 0.51. The means of indicators range from 3.65 to 4.14 with a descriptive equivalent of high, indicating that financial literacy is often observed/manifested by public elementary teachers in Region XII.

Additionally, results show that financial knowledge got the highest mean value of 4.14. This indicates that educators know and understand financial terms and concepts. Moreover, they strategize to minimize the risks they might get from their financial decisions. On the other hand, financial behavior gained the lowest mean value of 3.65 among the four indicators. This implies that teachers' financial behavior has the most potential for improvement. Teachers' awareness and experience influence their rationality when making financial decisions so planning, reviewing, and assessing expenditures monthly could be beneficial to stay on budget.

The results supported the claim made by Nalasa-Costuna and Tantiado (2023) that teachers are financially literate and capable of comprehending and utilizing a variety of financial skills. They have the ability to make financial decisions across a variety of financial contexts. Further, in consonance with the findings of Tilan and Cabal (2021), even though teachers have a high level of financial knowledge, they have the lowest mean at financial behavior, which the researchers suggest that public school teachers on their own accord may seek financial advice from professionals to gain suggestions and ideas on how they can better manage their finances, proper usage of their credit cards, and guidance for their spendings and utilization of assets for additional income generation and investments.

Table 2: Level of Work Engagement

Indicators	SD	Mean	Descriptive Equivalent
Absorption	0.61	3.99	High
Vigor	0.61	4.00	High
Dedication	0.65	4.24	Very High
Overall	0.56	4.07	High

A summary of the level of work engagement of teachers in public schools is exhibited in Table 2. The weighted mean rating is 4.07 with a standard deviation of 0.56 and is described as high. The mean ratings of the indicators of work engagement range from 3.99 to 4.24. These results exhibited that teachers are immersed in their work and found it meaningful and worthwhile.

Moreover, it can be gleaned from the results that dedication received a descriptive equivalent of very high and gained the highest mean value of 4.24. This implies that teachers always manifested dedication in carrying out their profession. They remain enthusiastic and inspired to work despite the challenges. Meanwhile, absorption, with a mean of 3.99 described as high, got the lowest mean among the three indicators of work engagement. It indicates that educators tend to forget everything around them when they are immersed in their work.

The study's findings supported Guhao's (2023) assertion that educators have a high degree of work engagement, as seen by their strong sense of pride in their profession, their intense work-related happiness, and their inability to disengage from it. Similarly, it aligns with the contention of Kuok (2022) that individuals who are highly engaged in their work are enthusiastic, proud, and love carrying out their jobs. In addition, there are indications that employees who are committed to their jobs are happier at work and are less likely to leave, as claimed by authors (Guhao & Quines, 2021), emphasizing that highly engaged employees work hard without experiencing job-related stress. This not only leads to success, but also fosters a great work atmosphere.

Table 3: Level of Professional Development

Indicators	SD	Mean	Descriptive Equivalent
Thematic Knowledge	0.62	4.19	High
Learning Environment	0.62	4.34	Very High
Cooperation	0.61	4.29	Very High
Educational Technology	0.63	4.28	Very High
Research Base	0.75	3.75	High
Educational Planning	0.62	4.27	Very High
Evaluation	0.63	4.20	Very High
Development of Human Resources	0.63	4.29	Very High
Overall	0.55	4.20	Very High

Shown in Table 3 is the professional development of public elementary school teachers, which has an average rating of 4.20 and an average variance of 0.55, with an interpretive

rating of very high. This posits that indicators of professional development are always observed/manifested by public elementary school teachers.

The assessments proved that learning environment had the greatest average rating of 4.34, which is classified as very high. This means that teachers always create a positive and healthy classroom atmosphere for learners. Moreover, only one of the eight indicators of professional development, which is research base, got the lowest mean value of 3.75, which equates to a narrative equivalent of high. It implies that teachers are aware of the benefits of research and apply these in educational contexts. However, this area has to be prioritized in order for educators to address emerging problems in schools through investigation and research interventions/projects.

The very high level of professional development of teachers resulted from the very high levels of responses, which means teachers have demonstrated their ability to establish a supportive classroom atmosphere that promotes collaboration and enriches student learning (Quines & Tubo, 2023). The findings are consistent with the study of Arifin, Suryaningsih & Arifudin, (2024), which concluded that there is compelling evidence of the interconnectedness between teachers' professional development and learning environment. By acknowledging and leveraging this relationship, educational stakeholders can work collaboratively to create learning environments that foster academic excellence, empower educators to reach their full potential, and, ultimately, ensure the success of all students.

Furthermore, the results affirm the study of Khanifar, Sahranavard Nashtifani, and Ebrahimi (2021), revealing that the factors influential on the professional development of teachers are educational strategies and programs, development of creativity and innovation, strategies for improving human resources, career development, development of knowledge management, and tendency to research and build networks.

Table 4: Teamwork

Indicators	SD	Mean	Descriptive Equivalent
Team Structure	0.59	4.17	High
Leadership	0.66	4.23	Very High
Situation Monitoring	0.60	4.14	High
Mutual Support	0.61	4.08	High
Communication	0.61	4.21	Very High
Overall	0.54	4.17	Very High

In Table 4, the overall means of each dimension were computed. The total weighted mean score of teachers' teamwork is 4.17, with an accepted variance of 0.54, indicating an interpretive grade of very high. This means that teamwork is evident among public elementary school teachers in Region XII. The mean ratings of the indicators range from 4.23 to 4.08. Leadership got the highest mean, described as very high and mutual support garnered the lowest mean, with a descriptive equivalent of high. It implies that excellent leadership skills are necessary for teachers to effectively collaborate within and among

the school's stakeholders. Similarly, mutual support is often manifested but could potentially be leveled up.

The very high level of teamwork is parallel to the findings of Quines and Nino (2023), which claimed that an exceptional degree of collaboration demonstrates that teachers possess strong teamwork abilities, which enhance both individual and collective performance. Similarly, it implies that teamwork among public elementary school teachers is always evident because of effective leadership, which fosters a supportive environment where members feel valued and motivated to collaborate effectively. The results corroborated Oh, Lee, and Zo's (2021) assertion that dynamic and effective leaders understand and concentrate on inspiring and motivating team members to perform at their full potential, as the latter is equally important to the success of the organization. Respecting the abilities of each team member is the priority, as this further helps to motivate the team.

Furthermore, it was confirmed by Samuel and Matthew (2021) that the basic idea behind teamwork is mutual support. Effective teams thrive on mutual support rather than destructive competition among members. This collaborative environment is characterized by cooperative interactions and respect for each team member's contributions and decisions. When team members work together effectively, both the quality of ideas and their acceptance within the team improve significantly. Effective teamwork promotes innovative approaches to improve job efficiency, develop best practices, solve problems effectively, embrace change, and cultivate creativity (Johari, Abdul Wahat, & Zaremohzzabieh, 2021).

Table 5: Significance of the Relationship between Financial Literacy and Teamwork

Financial Literacy	Teamwork					
	Team Structure	Leadership	Situation Monitoring	Mutual Support	Communication	Overall
Financial Knowledge	.567* (0.000)	.434* (0.000)	.572* (0.000)	.553* (0.000)	.536* (0.000)	.603* (0.000)
Financial Behavior	.324* (0.000)	.218* (0.000)	.358* (0.000)	.366* (0.000)	.309* (0.000)	.356* (0.000)
Financial Attitude	.436* (0.000)	.326* (0.000)	.448* (0.000)	.437* (0.000)	.417* (0.000)	.468* (0.000)
Financial Training	.371* (0.000)	.366* (0.000)	.356* (0.000)	.323* (0.000)	.269* (0.000)	.384* (0.000)
Overall	.517* (0.000)	.412* (0.000)	.528* (0.000)	.510* (0.000)	.464* (0.000)	.551* (0.000)

*Significant at 0.05 significance level.

Shown in Table 5 are the results of the test of the relationship between financial literacy and teamwork. The findings indicate that the overall values disclose a positive and significant connection between financial literacy and teamwork since the overall r-value is .449 with a p-value of less than 0.05.

As a matter of fact, all indicators of financial literacy reveal positive correlations with teamwork, as represented by the p-value of .000 and the correlation coefficient r-value of .551. More specifically, the result show that Financial Knowledge emerge as the most influential financial literacy factor, showing strong positive correlations with teacher teamwork. Financial Attitude and Financial Training demonstrate substantial positive relationships with teamwork indicators. Though still significant, Financial Behavior displays the weakest positive correlations among teamwork factors.

The results supported Lestari, Muhdaliha, Firdaus, Suhendra, and Brabo's (2024) claim that employees with high financial literacy showed increased confidence in team leadership roles and collaborative decision-making processes. In a related study, Lancian, Arak, and Susada (2024) claimed that financial literacy interventions positively influenced teacher collaboration and teamwork behaviors. The results indicated that financially literate teachers were more likely to engage in collaborative planning, resource sharing, and team-based professional development activities.

Table 6: Significance of the Relationship between Work Engagement and Teamwork

Work Engagement	Teamwork					
	Team Structure	Leadership	Situation Monitoring	Mutual Support	Communication	Overall
Absorption	.502* (0.000)	.428* (0.000)	.493* (0.000)	.518* (0.000)	.547* (0.000)	.564* (0.000)
Vigor	.477* (0.000)	.380* (0.000)	.458* (0.000)	.493* (0.000)	.487* (0.000)	.520* (0.000)
Dedication	.601* (0.000)	.512* (0.000)	.535* (0.000)	.574* (0.000)	.636* (0.000)	.649* (0.000)
Overall	.586* (0.000)	.490* (0.000)	.551* (0.000)	.588* (0.000)	.620* (0.000)	.643* (0.000)

*Significant at 0.05 significance level.

Found in Table 6 are the results of the test of the relationship between work engagement and teamwork. As mirrored in the hypothesis, the relationship was tested at a 0.05 level of significance. The total r-value of .643 with a p-value less than .05 indicated that the null hypothesis was rejected. This demonstrates a link between work engagement and teamwork.

More specifically, the result reveals that all indices of work engagement are positively correlated with teachers' teamwork. Since the p-value is less than 0.05, the overall r-value is .564 on absorption, .520 on vigor, and .649 on dedication. Hence, data show a positive association between the two variables. This is supported by Guhao and Quines (2021), who mentioned that teamwork attitudes and work participation are linked to the burnout of individual team members in terms of fatigue, frustration and decreased professional effectiveness and work commitment in terms of vigor, dedication, and absorption after managing the job demands and resources of individual members.

Table 7: Significance of the Relationship between Professional Development and Teamwork

Professional Development	Teamwork					
	Team Structure	Leadership	Situation Monitoring	Mutual Support	Communication	Overall
Thematic Knowledge	.687* (0.000)	.539* (0.000)	.669* (0.000)	.680* (0.000)	.708* (0.000)	.744* (0.000)
Learning Environment	.714* (0.000)	.574* (0.000)	.616* (0.000)	.620* (0.000)	.664* (0.000)	.723* (0.000)
Cooperation	.674* (0.000)	.565* (0.000)	.640* (0.000)	.645* (0.000)	.704* (0.000)	.732* (0.000)
Educational Technology	.686* (0.000)	.586* (0.000)	.668* (0.000)	.621* (0.000)	.651* (0.000)	.730* (0.000)
Research Base	.481* (0.000)	.321* (0.000)	.502* (0.000)	.516* (0.000)	.456* (0.000)	.515* (0.000)
Educational Planning	.687* (0.000)	.524* (0.000)	.657* (0.000)	.660* (0.000)	.715* (0.000)	.735* (0.000)
Evaluation	.718* (0.000)	.585* (0.000)	.714* (0.000)	.693* (0.000)	.728* (0.000)	.780* (0.000)
Development of Human Resources	.694* (0.000)	.572* (0.000)	.676* (0.000)	.658* (0.000)	.709* (0.000)	.751* (0.000)
Overall	.776* (0.000)	.618* (0.000)	.748* (0.000)	.741* (0.000)	.774* (0.000)	.829* (0.000)

*Significant at 0.05 significance level.

Shown in Table 7 are the results of the assessment of the affiliation between teachers' professional development and teamwork. The findings suggest that there is a favorable and substantial association between the two variables, with a p-value of less than .05 and an overall r-value of .829. In particular, all of the dimensions of professional development correlate positively with teamwork. Evaluation with an r-value of .70 and a p-value of less than .05 has the strongest positive correlation with teamwork. Meanwhile, a research base with a p-value of less than .05 and an r-value of .515 displays the weakest positive relationship with teamwork among the professional development indicators, though deemed significant.

The results affirm the study which was conducted by Mustapha and Zakaria (2013), which highlighted the importance of professional development activities that go beyond knowledge or skill-based training, and are associated with more positive teamwork and performance. Similarly, Sario and Villocino (2023) explained that teachers' professional learning through collaborative effort enhances knowledge in authentic settings and unpacks the capabilities to author their pedagogical changes. Teachers' teams operate in a collective zone of proximal development when exploring practice problems and sharing ideas and suggestions for possible solutions.

Table 8: Summary of Goodness of Fit Measures of the Three Structural Equation Models

Model	CMIN/DF 0<value<2	P-Value > .05	NFI > .95	TLI > .95	CFI > .95	GFI > .95	RMSEA < .05	P-Close > .05
1	4.383	.000	.905	.913	.925	.836	.092	.000
2	4.013	.000	.952	.946	.963	.931	.087	.000
3	1.614	.067	.989	.991	.996	.985	.039	.699

Table 8 depicts the summary of the goodness of fit measures of the three structural equation models. It signifies that based on the result of the data gathered, Chi-Square/Degrees of Freedom has a criterion of $0 < \text{value} < 2$ obtained a model fit value of 4.383 for model 1; 4.013 for model 2 and 1.614 for model 3, While P-value has a criterion of > 0.05 and a model fit value of .000 for model 1, .000 for model 2 and .067 for model 3; Also, for the Normed Fit Index has a criterion of > 0.95 with the model fit value of .905 for model 1, .952 for model 2 and .989 for model 3. Moreover, the Tucker-Lewis Index, which has a criterion of > 0.95 , obtained a model fit value of .913 for model 1, .946 for model 2, and .991 for model 3. For the Comparative Fit Index, which has a criterion of > 0.95 gained a model fit value of .925 for model 1, .963 for model 2, and .996 for model 3. The Goodness of the fit index has a criterion of > 0.95 revealed a model fit value of .836 for model 1, .931 for model 2 and .985 for model 3;

Furthermore, the RMSEA- Root Means Square of Error Approximation has a criterion of < 0.05 , gaining a model fit value of .092 for model 1, .087 for model 2, and .039 for model 3. The Index P-Close Fit has a criterion of > 0.05 , revealing a model fit value of .000 for model 1, .000 for model 2, and .699 for model 3. Results showed that among the three structural equation models, only model 3 had indices that consistently indicated an outstanding fit to the data. Therefore, it is identified as the best-fit model.

4.1 Best Fit Model on Teamwork of Teachers

The findings revealed there is a best-fit structural model that effectively predicts teamwork among public elementary school teachers in Region XII. The model demonstrated that financial literacy, work engagement, and professional development served as significant predictors of teamwork. However, the model suggests that among the four indicators of financial literacy, only two were shown to be significant predictors of teamwork, to wit: financial attitude and financial training.

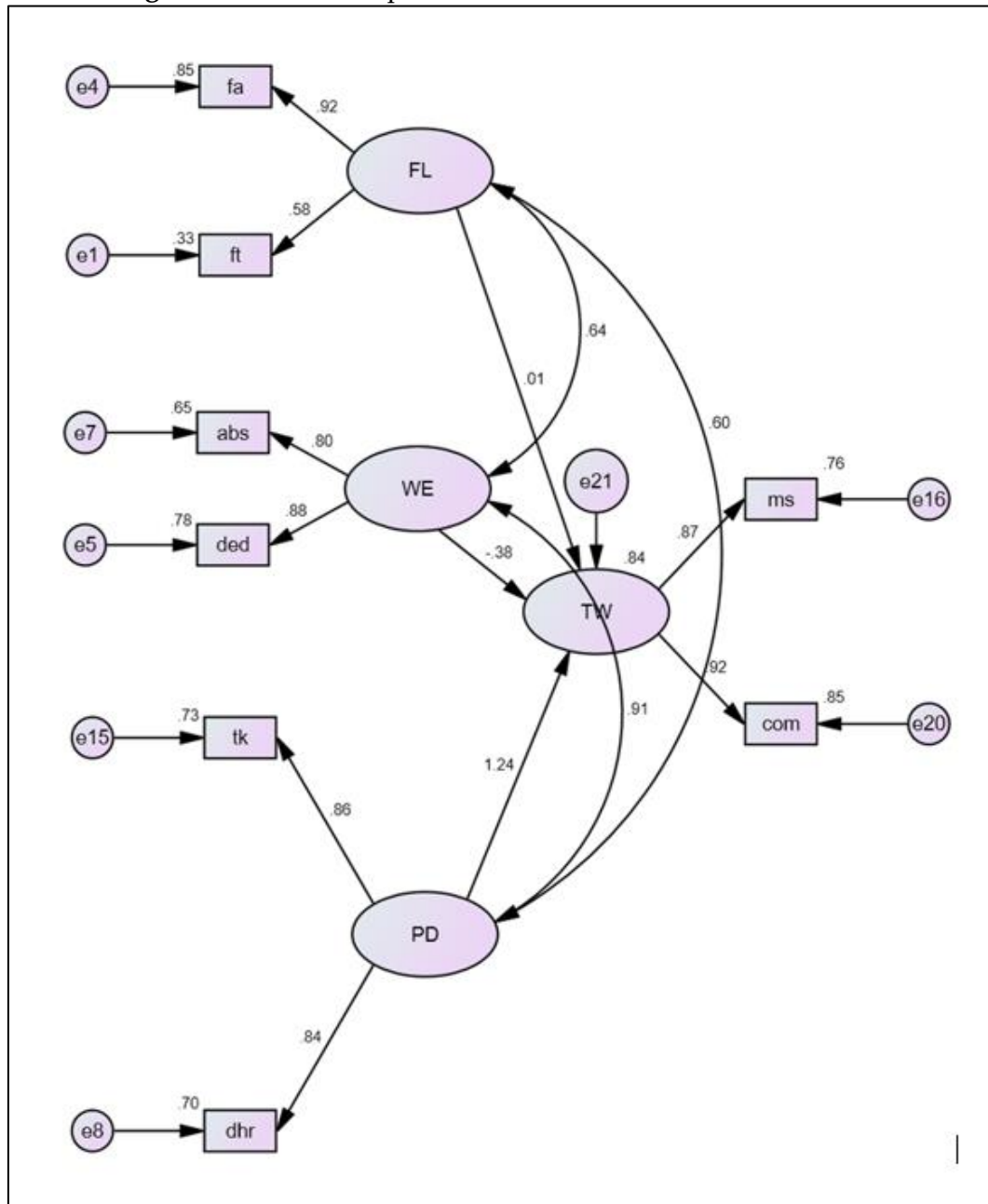
These findings align with Ho and Lee's (2023) findings that positive financial attitudes were associated with improved team performance. Their study highlighted those with healthy financial attitudes showed better team communication, increased willingness to support colleagues, higher levels of team engagement, and enhanced collaborative problem-solving abilities. Additionally, this expanded the idea presented in the study of Martinez and Andal (2022), where it was found that structured financial training programs significantly predicted teamwork quality. Their analysis revealed that employees who received financial training demonstrated an enhanced ability to communicate and contribute to group decisions, improved collaborative skills, and a more substantial commitment to team goals.

Further, the result of this study reinforced the findings that teamwork is predicted by teachers' work engagement. In work engagement, only two out of three domains were uncovered to affect teamwork namely: absorption and dedication. This is in consonance with the statement of various authors (García-Buades, Peiró, Montañez-Juan, Kozusznik, & Ortiz-Bonnín, 2020) that absorbed employees feel fully engrossed with the task they are carrying out, which can provide a great deal of focus and concentration when engaging in a team task. This is also congruent with the study findings of Wild, Mayeaux and Edmonds (2023), who highlighted that teachers with high dedication levels exhibited stronger team loyalty, demonstrated better communication and showed investment in the group's success.

Subsequently, just two of the eight measures of professional development, namely: thematic knowledge and development of human resources, remain as predictors of teamwork. As emphasized by Park and Park (2022), thematic knowledge serves as a critical foundation for building shared understanding, developing integrated teaching approaches, and fostering professional dialogue within educational teams. These findings collectively suggest that those with robust thematic knowledge are better equipped to contribute meaningfully to team initiatives, facilitate cross-disciplinary collaboration, and enhance overall team performance in educational settings. Furthermore, Hourani (2019) stated that human resource development stands out as a sequence of actions that support change and learning opportunities that can be available for employees to build effective teamwork and achieve interpersonal goals. Beyond its benefits for the organization, teamwork plays a vital role in individuals' professional development, improving their skills, knowledge, and task performance.

On the part of teamwork, only two out of three indicators persisted to be a measure. These were mutual support and communication. Previous researchers have found that communication promotes teamwork effectiveness. According to Eman, Hernández, and Romá (2023), the quality of communication inside the group is critical to developing team success, and this factor influences the association between charismatic leadership and group efficiency. Moreover, team culture fosters mutual support among members of a workgroup, improves communication quality, and allows team members to respect and share information, all of which contribute to team effectiveness.

Figure 1: Structural Equation Model 3 in Standardized Solution



Legend:

fk = Financial Knowledge
 fb = Financial Behavior
 fa = Financial Attitude
 ft = Financial Training
 FL = Financial Literacy
 abs = Absorption
 vig = Vigor
 ded = Dedication
 WE = Work Engagement

tk = Thematic Knowledge
 leen = Learning Environment
 coo = Cooperation
 et = Educational Technology
 rb = Research Base
 ep = Educational Planning
 eva = Evaluation
 dhr = Development of Human Resources
 PD = Professional Development

ts = Team Structure
 lea = Leadership
 sm = Situation Monitoring
 ms = Mutual Support
 com = Communication
 TW = Teamwork

5. Recommendations

Based on the foregoing results of the study, the following recommendations are suggested:

As revealed by the best-fit model for financial literacy, the Department of Education is encouraged to integrate financial literacy training into Continuing Professional Development (CPD) programs to ensure that teachers see it as an essential skill for their professional and personal lives. In addition, the implementation of Program on Awards and Incentives for Service Excellence (PRAISE) may be intensified to improve work engagement. Similarly, regular and religious conduct of Learning Action Cells, seminars and training is also suggested to help teachers improve their pedagogical, functional, and behavioral competencies. Moreover, schools may invest in digital resources and learning platforms that support continuous professional development, while also creating structured pathways for career advancement. This is in consonance with the recommendation of Quines & Monteza (2023) that continuing education and attendance to training-workshops may allow the improvement of teachers' thematic knowledge and expertise. Also, it is crucial to implement regular assessment mechanisms to identify knowledge gaps and provide targeted support.

Furthermore, establishing partnerships with educational experts and institutions can provide valuable opportunities for advanced learning and specialized training, ultimately contributing to enhanced teacher competence and improved educational outcomes. Quines & Piñero (2022) believed that teamwork enables members to stay informed about school changes while providing a platform to address teachers' problems and concerns. Likewise, implementing consistent communication channels, such as team meetings, to facilitate teacher connectivity, information sharing, and collaboration on ongoing projects or initiatives is vital in order to promote trust and mutual support among members of the organization. Lastly, it is also suggested that researchers validate the findings of this study by conducting additional research with a wider range of respondents or in different contexts. In addition, to find out the reasons for possible gaps in why some domains under the given variables are not significantly related.

6. Conclusion

The study's findings led to the following conclusions being made: Financial literacy and work engagement are exogenous variables with high descriptive equivalents. However, professional development was very high, indicating that its domains are always exhibited. Teamwork, on the other hand, is an endogenous variable that has a very high descriptive level, which means that it is always evident among teachers.

Findings also revealed a correlation between financial literacy and teamwork. Work engagement and teamwork were also discovered to be associated. Finally, a significant relationship between professional development and teamwork was also observed. The significant relationships between the exogenous and endogenous variables

imply that any increase in financial literacy, work engagement, and professional development results in a corresponding increase in teamwork among teachers.

The structural model indicates the best fit model for teamwork as proven by the summary of the goodness of fit satisfying all the indices for a structural equation model. Model 3 emerged as the best-fit structural model for teamwork as it indicated that by structural modifications, financial literacy was described by financial attitude and financial training, work engagement was defined by absorption and dedication, and professional development was measured by thematic knowledge and development of human resources. On the other hand, teamwork was defined by mutual support and communication.

The research's findings lend support to Homans' (1950) Social Exchange Theory which explains the interconnected relationships between multiple variables in the study. The significant correlations between financial literacy, work engagement, and professional development with teamwork suggest that when teachers possess stronger personal resources (financial knowledge, engagement, and professional skills), they are more likely to participate in positive team interactions and collaborative behaviors. This creates a reciprocal cycle of exchange that benefits both individual teachers and their teams.

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Soli Deo Gloria!

Conflict of Interest Statement

The authors declare no conflicts of interest.

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