



## THE MEDIATING EFFECT OF PROFESSIONAL DEVELOPMENT ON THE RELATIONSHIP BETWEEN WELL-BEING AND ENGAGED TEACHERS

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### **Abstract:**

The primary aim of the study is to find out the significance of the mediating effect of professional development on the relationship between well-being and engaged teachers. Utilizing a correlational technique as well as a quantitative non-experimental and mediation research design, data were obtained from 300 public elementary school teachers working in Baganga North and South districts, Davao Oriental. The researcher used a universal sampling technique and the statistical tools mean, Pearson  $r$ , and path analysis. From the results of the study, it was found that there are very high levels of well-being, engaged teachers, and professional development. In addition, there are significant relationships between well-being and engaged teachers, well-being and professional development, and professional development and engaged teachers. Lastly, professional development has a partial mediating effect on the relationship between well-being and engaged teachers. The findings of this study contribute to the existing body of knowledge on well-being, engaged teachers, and professional development in education.

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**Keywords:** education, well-being, engaged teachers, professional development, correlation, teachers, Philippines

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## 1. Introduction

In a previous study by Bergdahl and Hietajaravi (2022), poorly engaged teachers react differently, become irate, and overlook students who show signs of disengagement. Issues with engaged teachers concern most school heads across countries since poor engagement adversely affects the overall effectiveness of schools. In a similar vein, another study by Sudibjo and Riantini (2023) ascertained that the level of work disengagement of teachers is a universal concern. A large number of teachers are not engaged at work, and thus, schools need to anticipate the challenge of disengaged teachers.

Furthermore, the research by Zhong and Li (2020) found out that engaged teachers are more productive, active, committed, and eager to carry out their tasks and duties in a dynamic educational system. Engaged teachers significantly promote a supportive learning environment and the best type of social connection. Similarly, Saucier *et al.* (2022) emphasized that engaged teachers are important for effective teaching. The psychological experiences experienced by educators and those of their students are closely related to one another. Specifically, teachers' enjoyment in the classroom is positively related to their students' enjoyment.

In the study of Angelini *et al.* (2024), well-being has a significant relationship with engaged teachers. The more teachers are engaged in their work, the more they are satisfied with their lives, which, in turn, improves well-being. Relatedly, the research by Zakaria *et al.* (2021) determined that an increase in well-being leads to engaged teachers. Positive well-being and engaged teachers result in personal resources such as self-esteem, optimism, self-efficacy, and active coping.

In addition, a related study by Chow (2022) highlighted that professional development targeting the holistic development of teachers can promote well-being. Teacher well-being is enhanced through effective professional development programs. Also, another study by Zhao (2022) found out that well-being positively influences professional development. Through the professional development cycle, well-being is improved, job stress is reduced, and the professional development cycle becomes more successful.

In a similar study by Ji (2023), it was concluded that professional development results in engaged teachers. There are positive effects of engaged teachers and professional development, namely: heightened engagement in professional learning and enhanced teaching efficacy. Lastly, Kelly *et al.* (2022) in their research assessed that professional development is linked with engaged teachers. It is important to implement professional development that is school-based to maintain engaged teachers.

On the other hand, the study by Lozano *et al.* (2024) determined that the domains of well-being in terms of autonomy, relatedness and competence have non-significant effects on engagement. There is a need to improve communication, teamwork, and job skills to boost engagement. Also, the research by Ilgan *et al.* (2023) identified that there is no significant correlation between professional development and well-being.

Professional development has nothing to do with well-being until teachers feel their profession is highly valued in society. Further, the recent study by Oroye-Okpoudhu (2025) found out that there is no significant relationship between engagement and professional development. Teachers encounter several challenges that limit their engagement, including inadequate funding, heavy workload and limited administrative support, among others.

The main thrust of the study was to find out the significance of the mediation of professional development on the relationship between the well-being and engaged teachers in Baganga North and South Districts. Moreover, it has the following objectives. First, to describe the level of well-being of teachers in terms of workload well-being, organizational well-being, and student interaction well-being. Second, to ascertain the level of engaged teachers in terms of emotional engagement, social engagement with colleagues, cognitive engagement, and social engagement with students. Third, to describe the level of professional development of teachers. Fourth, to determine the significance of the relationship between well-being and engaged teachers, well-being and professional development, and professional development and engaged teachers. Fifth, to determine the significance of the mediation of professional development on the relationship between well-being and engaged teachers.

Moreover, the researcher had not come across a study that dealt with the mediating influence of professional development on the relationship between well-being and engaged teachers in the local setting. It is in this context that the researcher is interested in determining whether the professional development has a mediating influence on the relationship between the well-being and engaged teachers in Baganga North and South Districts. In a related study by Ornaghi *et al.* (2024), it was recommended that future research assess the effectiveness of policies aimed at improving teachers' well-being and engagement and make adjustments based on feedback and research findings. Additionally, the study by Garcia-Alvarez *et al.* (2023) suggested that future studies may include methodological strengths in the research design: control groups, follow-up measures after the end of the program, and a more homogeneous sample in terms of gender. Lastly, this can raise concern for the intended beneficiaries of this study and possibly develop action plans to produce engaged teachers, improve their professional development, and develop their well-being, thus, the need to conduct this study.

## 2. Literature Review

In a similar study by Tarraya (2023), teacher workload well-being refers to strategizing, inspired work, and professional commitment of teachers. It is ideal to explore means of getting the work done without compromising teacher well-being, personal lives, and professional self-concept. Also, the study by Mousavi *et al.* (2022) defined organizational well-being as the ability of the organization to promote and maintain physical, mental and social health for teachers. Through organizational well-being, the organization becomes a safe and supportive environment for meaningful sharing, effective

management, and empowered and inspired teachers. Abdelaziz *et al.* (2024) in their study determined that organizational well-being is important as it keeps schools functioning during disruption. This transformative mindset highlights the positive impact of organizational well-being on resilience and teacher performance.

In a similar vein, Holles (2023) defined student interaction well-being as teachers being friendly, available, and trustworthy in their interactions with students. A better understanding of student interaction well-being will influence the ways in which caring practices can be implemented to enhance well-being. Student interaction well-being serves as a foundation for caring faculty behaviors. Further, a previous study by Trolan *et al.* (2020) found out that student interaction well-being is positively associated with both student and teacher well-being. Student interactions matter in terms of well-being; thus, it is important for teachers and school heads to consider how to prioritize demands on teachers' time.

Additionally, the study by Morrow (2021) defined cognitive engagement as teachers feeling knowledgeable about and connected to their roles. The long-term benefits of high-level cognitive engagement include fostering more innovation at work and enhancing teacher confidence in their ability to make decisions. Also, in the previous study by Hellbusch (2022), cognitive engagement stimulates teachers to intellectually challenge themselves in the practice of teaching or in their content areas. Intellectual stimulation gives teachers meaning and access to cognitive engagement.

Similarly, the research by Farhah *et al.* (2021) refers to social engagement with students as teachers being responsible for fostering positive relationships with their students. In order to effectively fulfill their job of leading and educating pupils in schools, instructors need to develop and maintain close relationships with their students. Further, in another study by Dang *et al.* (2022), social engagement with students maximizes multidimensional engagement, which in turn leads to effective learning. This builds a strong foundation for developing student cognition and social skills in learning.

In a previous study by Islami *et al.* (2022), effective professional development improves teacher practices and student outcomes. It focuses on teaching strategies to support learning in the classroom, supporting collaboration for teachers, and collaborating in their learning. Also, Sancar *et al.* (2021) determined that teacher professional development is critical in improving student success. To facilitate teacher professional development, there is a need to understand the process of teacher professional growth and the conditions that promote such growth.

Furthermore, in a similar study by Nguyen and Ng (2020), the importance of teacher professional development in raising teaching standards and ensuring student learning was highlighted. Teachers emphasize that sharing tools and techniques is a simple and comfortable approach for students to learn from one another. Finally, another study by Gülsen and Çelik (2021) assessed that for a school to be successful, the culture must value teacher professional development as well as collegiality, collaborative leadership, and teamwork. It is also important to take a closer look at the direct

connection between teacher professional development and academic achievement in schools.

### 3. Material and Methods

The research locale of the study was in the Baganga North and South districts, Davao Oriental. The researcher believed that the Baganga North and South Districts of Davao Oriental were the appropriate locale of the study because it has a good number of respondents, which ensured concrete results of the study. The total population of the public elementary school teachers in the 2 districts is 485, and a sample size of 300 elementary teachers became respondents of the study. The sample size is based on St. Olaf College (2024) that for a population of less than 1,000, a sample size of 300 or a ratio of 30% is advisable to ensure representation of the sample. Also, despite repeated attempts in the face-to-face distribution and retrieval of the survey questionnaire, a number of the teacher-respondents were not around for some official business outside school, or others were on seminars and on leave of absence. This study utilized a universal sampling technique. The universal sampling technique is used when all the members of the population are taken as the respondents. The use of universal sampling could provide helpful information to test the hypothesis of research (Avron *et al.*, 2019).

As part of the criteria in the selection of respondents, the researcher considered the inclusion, exclusion and withdrawal requirements. For the inclusion criterion, the respondents are the regular public elementary school teachers for the academic year 2025-2026, and they have been in the teaching assignment for a period of 2 years, as they are the ones who are in a position to provide useful information upon testing the hypothesis of the study. For the exclusion criterion, those teachers who are not teaching under the elementary departments in the 2 districts of Baganga, Davao Oriental, were excluded from the study, for they were in a different work environment and supervision and also those teachers who are working in the junior and senior high departments and private schools whether in the same identified areas, including those teachers who hold managerial or supervisory positions. As to the withdrawal requirement, the respondents were free to decline to participate in the survey without any form of consequence, penalty or loss of benefits. They were not forced to answer the research questionnaire and were encouraged to return it to the researcher for its automatic disposal. Moreover, they can withdraw anytime from their participation in the research process if they feel uncomfortable about the study.

An adapted instrument was used in the gathering of data for this study. The questionnaire has three parts. Part 1 dealt with the questions about well-being and was taken from Collie (2014), entitled *Teacher Well-being: Building Better Schools with Evidence-Based Policy*. The indicators are workload well-being, organizational well-being, and student interaction well-being. Part II dealt with the questionnaire on engaged teachers, and it has four indicators, namely: emotional engagement, social engagement with colleagues, cognitive engagement, and social engagement with students, which

were taken from Klassen *et al.* (2013) on Measuring teacher engagement: development of the engaged teachers scale (ETS). Part III is the mediating variable, professional development, which was taken from Hişmanoğlu & Hişmanoğlu (2010) entitled English language teachers' perceptions of educational supervision in relation to their professional development: A case study of Northern Cyprus.

For the evaluation of the results of the three variables, a Likert scale of 1 to 5 was used. The following are the range of means with its descriptions 4.20 – 5.00 or Very High which means measures are always manifested; 3.40 – 4.19 or High which means measures are often manifested; 2.60 – 3.39 or Moderate which means measures are sometimes manifested; 1.80 – 2.59 or Low which means measures are seldom manifested; and 1.00 – 1.79 or Very Low which means measures are not manifested at all. The survey questionnaire was subjected to validation by experts (4 internal and 1 external), and the consolidated results from the experts obtained an average weighted mean of 4.60, which has a verbal description of very good. Pilot testing was conducted, and the reliability of the scales was established using the Cronbach alpha coefficient, with the results of 0.968 for professional development, 0.932 for well-being and 0.925 for engaged teachers. The study covered the period January - December 2025.

This is a non-experimental quantitative study that employed a descriptive-correlation technique in analyzing the data. This is descriptive in the sense that the researcher did not change the behavior of the people or the respondents in this study, but only gathered the data through a survey (Cliffs Notes, 2013; McMillan, 2010). The correlational technique looks into the degree of association by relating it with other variables (Patidar, 2013). This technique was appropriate since the study aimed to determine whether there was a significant relationship between well-being as the independent variable and engaged teachers as the dependent variable and professional development as the mediating variable, in which the findings of the study may become good inputs in the formulation of relevant programs and activities for the betterment of both the teachers and the students, as well.

Moreover, a mediation model was used in this study. The mediation model is one that seeks to identify and explicate the mechanism or process that underlies an observed relationship between an independent variable (well-being) and a dependent variable (engaged) via the inclusion of a third explanatory variable, professional development (mediating variable). The mediator variable served to clarify the nature of the relationship between the independent and dependent variables. In other words, mediating relationships occur when a third variable plays an important role in governing the relationship between the other two variables (MacKinnon, 2008).

The researcher assured that all procedures in collecting data were properly followed during the conduct of the study. The researcher sent a letter asking for permission from the Schools Division Superintendent of the Department of Education Division of Davao Oriental. Then, the researcher furnished the letter asking for permission from the School Heads of the participants. Once approved, the survey questionnaires were administered to the respondents of the Baganga North and South

districts, Province of Davao Oriental. Moreover, the researcher immediately visited the concerned school heads of the identified schools, as part of the courtesy call and discussed the plan on the conduct of face-to-face mode of data gathering with all concerned respondents. The researcher tabulated all the data in the Excel spreadsheet and then emailed it to the assigned statistician for statistical treatment. The statistician's interpretation of the collected data became the basis for the formulation by the researcher of the data analysis, discussion and recommendations.

The following tools were used in analyzing and interpreting the data. Mean to determine the level of professional development, well-being and engaged teachers. Pearson Product-Moment Correlation (Pearson  $r$ ) was used to determine the significance of the relationship between professional development, well-being and engaged teachers. Path Analysis was used to determine the significance of the mediation of professional development on the relationship between well-being and engaged teachers. Path analysis is a type of multiple regression statistical method used to assess causal models by analyzing the connections between a dependent variable and multiple independent variables. It applies multiple regression with standardized variables, using the  $\beta$  coefficient to test the significance of path coefficients (Chaitanya & Tevari, 2024).

The researcher observed and followed full ethical standards in the conduct of the study. The respondents of the study included 300 public elementary school teachers in Baganga North and South, all under the Division of Oriental. No force was used on the respondents to join the data gathering; they were free to decline to participate, and they could withdraw anytime from their participation in the research process if they felt uncomfortable about the study. Confidentiality of the data was always observed, and each target respondent was given an informed consent form prior to the gathering of data. The study did not involve high-risk situations that the respondents may experience. Some mitigating measures were also considered, to include the psychological, financial and physical preparations. The study underwent a plagiarism check in the University using Turnitin, and the study has no conflict of interest (COI) since the researcher has no relationship to the respondents of the study. For purposes of the publication, the adviser becomes a co-author of the study. Also, before the actual data collection, the researcher secured a Certificate of Approval from UMERC (UMERC No. 2025-319) to ensure compliance with some ethical considerations in research.

#### **4. Results and Discussion**

Revealed in Table 1 is the level of well-being, which has gained an overall mean rating of 4.45 or very high and a standard deviation of 0.50. This shows that the measures of well-being are always manifested. The indicators with the highest mean are workload well-being and student interaction well-being, both with a mean score of 4.39, described as very high and a standard deviation of 0.52 and 0.44, respectively. Meanwhile, the indicator with the lowest mean is organizational well-being, with a mean score of 4.36 or very high and a standard deviation of 0.49.

**Table 1: Well-Being**

Indicators	SD	Mean	Descriptive Level
Workload Well-being	0.52	4.39	Very High
Organizational Well-being	0.49	4.36	Very High
Student Interaction Well-being	0.44	4.39	Very High
<b>Overall</b>	<b>0.50</b>	<b>4.45</b>	<b>Very High</b>

The very high level of workload well-being and student interaction well-being implies that the teachers have great strategizing, inspired work, and professional commitment, as well as are friendly, available, and trustworthy in their interactions with students. This is coherent with the authors (Holles, 2023; Tarraya, 2023) who mentioned that it is ideal to explore means of getting the work done without compromising teacher well-being, personal lives, and professional self-concept. Also, A better understanding of student interaction well-being will influence the ways in which caring practices can be implemented to enhance well-being. Student interaction well-being serves as a foundation for caring faculty behaviors.

Moreover, the very high level of organizational well-being implies that the school highly promotes and maintains the physical, mental and social health of teachers. The result is aligned with authors (Abdelaziz *et al.*, 2024; Mousavi *et al.*, 2022), wherein organizational well-being is important as it keeps schools functioning during disruption. This transformative mindset highlights the positive impact of organizational well-being on resilience and teacher performance. Through organizational well-being, the organization becomes a safe and supportive environment for meaningful sharing, effective management, and empowered and inspired teachers.

**Table 2: Engaged Teachers**

Items	SD	Mean	Descriptive Level
Emotional Engagement	0.52	4.47	Very High
Social Engagement with Colleagues	0.51	4.43	Very High
Cognitive Engagement	0.55	4.36	Very High
Social Engagement with Students	0.53	4.57	Very High
<b>Overall</b>	<b>0.32</b>	<b>4.45</b>	<b>Very High</b>

Shown in Table 2 is the level of engaged teachers with an overall mean of 4.45 described as very high and a standard deviation of 0.32. This means that the measures of engaged teachers are always manifested. The indicator of social engagement with students gained the highest mean score of 4.57, labeled as very high, with a standard deviation of 0.53. On the other hand, the indicator with the lowest mean is cognitive engagement, with a mean score of 4.36, labeled as very high and with a standard deviation of 0.55.

The very high level of social engagement with students implies that the teachers highly foster positive relationships with their students. The result is aligned with the authors (Dang *et al.*, 2022; Farhah *et al.*, 2021) who stated that social engagement with students maximizes multidimensional engagement, which in turn leads to effective learning. This builds a strong foundation for developing student cognition and social

skills in learning. In order to effectively fulfill their job of leading and educating pupils in schools, instructors need to develop and maintain close relationships with their students.

In addition, the very high level of cognitive engagement implies that the teachers feel knowledgeable about and are connected to their roles. The result is consistent with authors (Hellbusch, 2022; Morrow, 2021), wherein the long-term benefits of high-level cognitive engagement include fostering more innovation at work and enhancing teacher confidence in their ability to make decisions. Also, cognitive engagement stimulates teachers to intellectually challenge themselves in the practice of teaching or in their content areas. Intellectual stimulation gives teachers meaning and access to cognitive engagement.

**Table 3: Professional Development**

Items	SD	Mean	Descriptive Level
Prepares my mind to accept the development by explaining the importance of the latest educational issues.	0.52	4.45	Very High
Encourages me to be aware of the latest educational issues in order to exchange successful experiences with my colleagues.	0.51	4.38	Very High
Guides me to the books, research papers, and educational journals which may help in my professional development.	0.61	4.23	Very High
Holds meetings with the teachers to study and discuss the educational circulars sent by the Department of Education.	0.47	4.31	Very High
Encourages me to pursue self-learning to update profession experiences.	0.49	4.40	Very High
Encourages me to conduct case studies to solve some problems that they encounter.	0.57	4.36	Very High
Encourages me to continue my graduate or post-graduate studies to raise my professional and academic levels	0.49	4.38	Very High
Directs me to benefit from TV, radio, computer programs, and the Internet	0.49	4.28	Very High
Sends me to participate in organizing educational workshops, conferences, and symposiums and encourages other teachers to give lectures	0.44	4.26	Very High
Nominates me, together with other teachers, to attend educational workshops to encourage us to develop professionally	0.57	4.28	Very High
Allows me to specify my professional development needs	0.49	4.39	Very High
Advises me to participate in different courses, which help me to update my educational experiences	0.50	4.42	Very High
Allows me to act freely towards my duties, to be accustomed to carrying out responsibilities	0.50	4.43	Very High
Distributes the responsibilities among the teachers in a suitable way, relevant to our knowledge and professional abilities	0.50	4.48	Very High
Gives me the opportunity to express my professional opinions to gain benefits from them	0.54	4.45	Very High
Trains me to use modern teaching techniques	0.56	4.41	Very High
Trains me to develop students' thinking skills	0.48	4.37	Very High

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Trains me to develop students' communication skills	0.46	4.29	Very High
Directs me to learn about the results of educational research done on teaching techniques, to use the most appropriate ones in our teaching	0.64	4.13	High
Gives me the opportunity to use suitable teaching techniques for the students	0.46	4.30	Very High
Conducts workshops, seminars, or micro-teaching for me in the school	0.45	4.29	Very High
Makes me familiar with the latest issues about the curriculum	0.42	4.22	Very High
Allows me to discuss ways of solving any problem with the curriculum	0.46	4.17	High
Involves me in the curriculum development process	0.45	4.27	Very High
Helps me with preparing our teaching plans	0.37	4.16	High
Guides me to identify the students' developing characteristics to create positive learner attitudes towards learning	0.44	4.26	Very High
Directs me to develop our skills in dealing with the students' varied behaviors	0.47	4.34	Very High
Guides me to use effective methods to help students to overcome the difficulties that they face in learning	0.50	4.47	Very High
Help me how to deal with the outstanding students	0.47	4.33	Very High
Discusses the ways of treating the learners' weaknesses	0.45	4.29	Very High
Directs me to use the classroom activities which develop the learners' thinking skills	0.48	4.36	Very High
Encourages me to carry out extra activities	0.47	4.34	Very High
Makes me familiar with different techniques of classroom management	0.47	4.33	Very High
Guides me in encouraging our students to express their ideas	0.47	4.33	Very High
Directs me to establish a positive relationship with the students	0.50	4.55	Very High
Explains to me the ways of considering and teaching students with mixed abilities	0.50	4.44	Very High
Makes me familiar with the assessment techniques (i.e. continuous assessment, formal testing...)	0.50	4.52	Very High
Encourages me to take notes about students' in-class performance and use them as an assessment record	0.50	4.48	Very High
Trains me to design effective exams to be used in our classes	0.49	4.40	Very High
Provides me with recent assessment techniques	0.54	4.32	Very High
Trains me to ask students a variety of oral questions that are more suitable to the teaching-learning situation	0.50	4.52	Very High
Guides me to use practical ways of diagnosing the strengths and weaknesses of students	0.48	4.37	Very High
Encourages me to benefit from the assessment results to suggest ways and solutions for the difficulties that the students face	0.48	4.37	Very High
<b>Overall</b>	<b>0.49</b>	<b>4.35</b>	<b>Very High</b>

It is presented in Table 3 that the level of professional development styles has gained an overall mean score of 4.35 or very high and a standard deviation of 0.49. This shows that the measures of professional development are always manifested. The very high level of professional development is due to the high and very high mean scores obtained and the

computed mean scores of its specific items. Furthermore, the specific item “directs me to establish a positive relationship with the students” gained the highest mean score of 4.55, labeled as very high and with a standard deviation of 0.50. Meanwhile, the specific item with the lowest mean is “directs me to learn about the results of educational research done on teaching techniques to use the most appropriate ones in our teaching” with a mean score of 4.13, labeled as high and a standard deviation of 0.64.

The very high level of “directs me to establish a positive relationship with the students” implies that the teachers greatly support learning in the classroom. The result is coherent with authors (Islami *et al.*, 2022; Sancar *et al.*, 2021) emphasizing that effective professional development improves teacher practices and student outcomes. Teacher professional development is critical in improving student success. To facilitate teacher professional development, there is a need to understand the process of teacher professional growth and the conditions that promote such growth.

On the other hand, the high level of “directs me to learn about the results of educational research done on teaching techniques to use the most appropriate ones in our teaching” implies that the teachers highly raise their teaching standards. The result is aligned with the authors (Gülseven & Çelik, 2021; Nguyen & Ng, 2020), who highlighted that for a school to be successful, the culture must value teacher professional development as well as collegiality, collaborative leadership, and teamwork. It is also important to take a closer look at the direct connection between teacher professional development and academic achievement in schools. Teachers emphasize that sharing tools and techniques is a simple and comfortable approach for students to learn from one another.

**Table 4:** Overall Significance on the Relationships between Levels of Well-Being, Engaged Teachers, and Professional Development

	Well-Being	Engaged Teachers	Professional Development
Well-Being	1	.525**	.208**
Engaged Teachers	.525**	1	.280**
Professional Development	.208*	.280**	1

Presented in Table 4 are the results of the correlational analysis on well-being, engaged teachers, and professional development. It can be seen from the table that when well-being is correlated with the measures of engaged teachers, the overall r-value results in 0.525 with a p-value of 0.000, which is lower than the 0.05 level of significance. This implies that well-being has a significant relation with engaged teachers. Additionally, when well-being is correlated with the measures of professional development, the overall r-value results in 0.208 with a p-value of 0.000, which is lower than the 0.05 level of significance. This implies that well-being has a significant correlation with professional development. Also, when professional development is correlated with the measures of engaged teachers, the overall r-value results in 0.280 with a p-value of 0.000, which is lower than the 0.05 level of significance. This implies that professional development has a positive association with engaged teachers.

The correlation between measures revealed that there are significant relationships between well-being and engaged teachers, well-being and professional development, and professional development and engaged teachers. The result of the study is consistent with the authors (Angelini *et al.*, 2024; Kelly *et al.*, 2022; Zhao, 2022) stating that well-being has a significant relationship with engaged teachers. The more teachers are engaged in their work, the more they are satisfied with their lives, which, in turn, improves well-being. Also, well-being positively influences professional development. Through the professional development cycle, well-being is improved, job stress is reduced, and the professional development cycle becomes more successful. Lastly, professional development is linked with engaged teachers. It is important to implement professional development that is school-based to maintain engaged teachers.

**Table 5:** Regression analysis showing the influence of well-being on engaged teachers as mediated by professional development

Step	Path	B	S.E.	$\beta$
1	c	.370	.035	.525***
2	a	.121	.033	.208***
3	b	.217	.060	.178***
4	c'	.344	.035	.488***

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p = 0.000$

Data was analyzed using the MedGraph after being subjected to a linear regression analysis. The mediation analysis, which was established by Baron and Kenny (1986) pertains to the mediating effect of a variable on the correlation between two other variables.

Mediation analysis includes four steps for the third variable to be considered as a mediator. Shown in Table 5 are the steps that were categorized as Steps 1 to 4. As presented, Step 1 reveals the significant direct effect of well-being towards engaged teachers. In Step 2, well-being shows a significant direct effect towards professional development, the mediator (M). Meanwhile, Step 3 presents the result of the analysis, which suggests that professional development significantly predicts engaged teachers. Further mediation analysis using medgraph is necessary to determine the significance of the mediation effect because paths a, b, and c are found to be correlated. This analysis will involve the Sobel z test. Full mediation will be achieved if the effect of the independent variable on the dependent variable fails to be statistically significant at the conclusion of the analysis. It implies that the mediator variable is the mediating variable for all effects.

Moreover, when the regression coefficient is significantly reduced on the last step and stays significant, then only partial mediation is attained, which suggests that a portion of engaged teachers is mediated by professional development, while other components are either directly influenced or indirectly affected by factors not involved in the paradigm. Furthermore, as observed in step 4 (denoted as c'), the influence of well-being on engaged teachers was seen to be reduced after being mediated by professional

development. With this, partial mediation occurred as the effect was found to be significant at  $p < 0.05$ . Additionally, the result of the computation of mediating effects is shown in Figure 2.

**Table 6:** Results of statistical analysis on the presence (or absence) of a mediating effect

Combination of Variables	Sobel z	p-value	Mediation
Well-being → Professional development → Engaged teachers	2.570527	$p < 0.05$	Partial mediation

The Sobel test in Table 6 yielded a z-value of 2.57,  $p < 0.05$ . This means that the mediating effect is partial, such that the original direct effect of well-being on engaged teachers was reduced upon the addition of professional development. The positive value of Sobel z indicates that the addition of professional development reduces the effect of well-being on engaged teachers.

Further, the computed effect size for the mediation test seen between the three variables is shown in the figure. The effect size determines the extent of the effect of well-being on engaged teachers, which can be associated with the indirect path. The total effect value of 0.370 is attributed to the beta of well-being on engaged teachers. The direct effect value of 0.344 is the beta of well-being on engaged teachers with development that now passes through professional development towards engaged teachers ( $a \cdot b$ , where “a” is the path between WB @ PD and “b” refers to the path between PD @ ET). The indirect effect is divided by the overall effect to obtain the ratio index; in this case, 0.121 by 0.370 equals 0.327. It seems that about 32.7% of the total effect of well-being on engaged teachers goes through professional development.

The aim of this study is to contribute to the literature regarding the possible mediating variable for the relationship between well-being and engaged teachers. Particularly, professional development was investigated as the possible mediating variable that could explain the effect of well-being on engaged teachers. Partial mediation is found in the study, and significant direct effects were presented that may help in the enhancement of the existing literature on well-being and engaged teachers. This implies that the effect of well-being on engaged teachers is heightened through professional development.

This is aligned with the authors (Chow, 2022; Ji, 2023; Zakaria *et al.*, 2021), wherein an increase in well-being leads to engaged teachers. Positive well-being and engaged teachers result in personal resources such as self-esteem, optimism, self-efficacy, and active coping. Moreover, professional development targeting the holistic development of teachers can promote well-being. Teacher well-being is enhanced through effective professional development programs. Lastly, professional development results in engaged teachers. There are positive effects of engaged teachers and professional development, namely: heightened engagement in professional learning and enhanced teaching efficacy.

## 5. Recommendations

For the three variables on well-being, engaged teachers and professional development which obtained very high levels of mean scores, the researcher recommends that the schools may continue to implement the best practices in the dealing with all its teaching and non-teaching staff, maintain the best behavior and engagement with all school employees and be open and approachable always most especially to the students and remain open to different opinions while at the workplace. This may include conduct of dialogues and focused group discussions with concerned teachers for any concerns and suggestions to thresh out some concerns and problems related to the teaching assignments, and even to some personal matters affecting the teachers.

On the very high level of well-being of teachers, it is recommended that the school management thru the initiatives of the teachers, may continue the conduct of school-wide symposia (to be conducted 2x a year) for topics which are relevant to the time. The topics may include stress management, symptoms of anxiety and depression, anger management and such other topics as may be suggested, depending on the needs of the teachers of the present times. The need for some spiritual activities may also allow the teachers some reflection on themselves. This may include some activities like retreats or recollection, bible sharing or even the conduct of spiritual activities (ecumenical) as part of the yearly school-wide activities. Also, there may be continuous (to be done weekly), the building up of activities to keep the teachers physically fit and healthy, like dancing (zumba), volleyball, table tennis and such other sports which can just be easily facilitated within the school grounds or in the gymnasium.

Also, it is recommended to sustain existing activities in school, and motivating factors existing in school should be maintained and given to all the teachers. This may include the provision of free time to teachers to unwind and be able to mingle with other teachers through the get-together celebration for achievements and accomplishments obtained, giving of awards for teachers' successes by way of monetary prizes, certificates of recognition or plaques of appreciation/commendation.

Regarding the variable engaged teachers who obtained a very high level of mean score, the researcher may recommend that the school continue to establish the good rapport that exists in the school. This may include a review or revisit of some school rules and policies affecting the school, teachers and students, as well. If changes may occur in some policies, the conduct of orientation and re-orientation may be facilitated as part of information dissemination. There may be regular conduct of consultation periods to allow teachers to open up whatever they have in mind. The conduct also comes out with monthly awardees to deserving teachers for their achievements or accomplishments achieved while teaching. The school management may always respect the teachers' academic freedom, and the school management may always listen to the sides of the teachers before any drastic action is taken in case of some problems and issues among teachers or teachers and students' relationships. The school may always instill in the minds of the school staff and teachers that sincerity, commitment and dedication of

everybody counts most and that everybody is always willing to extend a helping hand to those who are in need and that what matters most is the education of the students.

A very high level of professional development was also obtained, and with his the researcher recommends that the school management may continue to allow the teachers to enroll and proceed for their professional development (master's or doctoral degrees) by way of scholarship or grant of soft loans to pay for the school fees and other school requirements. Also, continue to allow the teachers to attend seminars and workshops in ICT, communication skills and competencies, time management, critical thinking skills, leadership training, interpersonal skills and other training to enhance teaching strategies and develop teachers' abilities in many fields and allow them to grow and be empowered and become role models to their students. There should always be room for teachers to be exposed to activities like planning, problem solving and decision-making, or even trust-building, so that the teachers will be motivated to stay and continue their services as teachers.

On the result of the partial mediation effect of professional development on the relationship of well-being and engaged teachers, and considering the performance of the school as shown by the teachers' support and cooperation, first, the school may conduct an evaluation on the school's plans and programs versus its level of implementation. Also, a peer performance evaluation for teachers and a teacher performance evaluation to be done by the students may be a regular annual activity. It is also recommended that there should always be constant communication between school management, teachers and students and that everyone should always be reminded of the school's vision, mission and goals, so that the best working relationship will be manifested as everyone gets out to the community and to the society, bringing a good image of the school.

As to future researchers, the researcher recommends that other quantitative studies be conducted in other regions on a larger population using structural equation modelling or with the use of mediating variables to determine if the results of the study are affected by other variables. For the best practices of the schools, a phenomenology-qualitative study may be conducted involving school management, teachers and students.

## **6. Conclusion**

There is a very high level of well-being. There is also a very high level of engaged teachers, as well as a very high level of professional development. Moreover, there is a significant relationship between well-being and engaged teachers. There is also a significant relationship between well-being and professional development, as well as a significant relationship between professional development and engaged teachers. In addition, professional development has a partial mediating effect on the relationship between well-being and engaged teachers.

The results of the study clearly affirm the notion that professional development has a partial mediating effect on the relationship between well-being and engaged

teachers. The conclusions confirm the anchor theory, the Broaden and Build Theory by Fredrickson (2001), which emphasizes the ways that the characteristics of teacher well-being can be associated with teacher behavior inside and outside the classroom. Furthermore, the results of the study are also supported by the Self-Determination Theory by Ryan and Deci (2000), the Job Demands and Resources Theory by Demerouti *et al.* (2001), the Three Ecologies Theory by Guattari (2000), and the Work Engagement Theory by Kahn (1990).

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### **Conflict of Interest Statement**

The authors declare no conflicts of interest.

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