

Professional Development and Efficacy Among Public Elementary School Teachers

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ABSTRACT: Professional development is an essential tool for equipping educators with the skills, confidence, and support they need to succeed in this fast-paced setting. This study investigated the relationship between teachers' professional development and efficacy in handling the challenges of contemporary classrooms. To investigate the relationships between variables, the study employed both correlational and causal research designs. Using stratified random sampling, 104 public elementary school teachers from Cagayan de Oro City's West II District were chosen as respondents. Data were gathered using an adapted five-point Likert scale survey questionnaire that measured levels of participation in professional activities and confidence in performing teaching tasks. The Mean, Standard Deviation, and Pearson r correlation were used to assess the quantitative data at a 0.05 level of significance. High levels of teacher efficacy and professional growth were observed in the results, and a weak but significant relationship was found between the two variables. Regression analysis revealed that among the professional development variables, in-service training and graduate education emerged as significant predictors of teachers' efficacy. The model indicated that these predictors explained a meaningful portion of the variance in teachers' instructional strategies, classroom management, and student engagement. It is recommended that school heads be strongly encouraged to prioritize and support structured in-service programs and advanced academic pursuits, such as master's or doctoral studies, as these have the greatest impact on boosting teacher confidence and instructional performance.

KEYWORDS: efficacy, graduate education, professional development

I. INTRODUCTION

Teacher efficacy is defined as teachers' confidence in their ability to guide learners to achievement. This includes assisting learners in developing effective programs and successfully transforming them into better community citizens. (Ancho & Arrieta, 2021). As such, the teaching profession is highly complex and requires teachers to demonstrate their expertise and effectiveness in working with diverse learners.

Teachers around the world are navigating a more complex educational environment marked by rapidly advancing technology, diverse classrooms, and evolving curricula. To remain effective in the face of these changes, educators must continually update their pedagogical approaches in the classroom. It becomes clear that professional development is an essential tool for equipping educators with the skills, confidence, and support they need to succeed in this fast-paced setting. Positive feedback that benefits both teachers and learners is created when teachers with high self-efficacy are able to establish ambitious goals, persevere through difficulties, and use creative, student-centered solutions (Tschannen-Moran & Woolfolk Hoy, 2021).

Even though professional development is acknowledged as being important, conventional methods frequently fail. Many programs focus on passive, compliance-driven training that does not meet the actual demands of the classroom or foster long-lasting confidence. This deficiency is most noticeable in public elementary schools, where educators must contend with scarce resources, a wide range of learner needs, and limited access to ongoing, situation-specific support. According to research, mastery experiences, including practicing new skills, evaluating learner work, and getting tailored feedback, can boost self-efficacy through high-quality professional development (Moran et al., 2023). By offering peer inspiration and vicarious experiences, collaborative learning communities where educators monitor peers, co-plan classes, and exchange strategies further improve efficacy (Avalos, 2021).

Professional Development and Efficacy Among Public Elementary School Teachers

Nonetheless, a significant gap remains in the literature on implementing ongoing, practical, and introspective professional development programs tailored to local school settings. Teachers find it difficult to maintain self-efficacy, forge a solid professional identity, and successfully adapt to the demands of 21st-century education in the absence of such context-specific techniques, ultimately limiting learner outcomes. This study investigated how context-based, ongoing professional development affects teachers' self-efficacy in public elementary schools, with the aim of closing this gap. It specifically examined how collaborative professional learning fosters tenacity and openness to innovation, how practical professional development practices centered on classroom challenges boost teachers' confidence, and how successful strategies can be designed to be scalable, culturally relevant, and applicable in school environments with limited resources.

In addition to enhancing individual teacher effectiveness, high self-efficacy promotes district-wide and school-wide collective efficacy. Seeing a colleague succeed in comparable situations can encourage the wider adoption of successful strategies. Therefore, professional development must be reflective and context-based, addressing the unique difficulties teachers encounter, such as diverse learner needs and limited technological integration, while offering structured opportunities for reflection and modification informed by learner data (Piper et al., 2021). Teachers' professional identities are strengthened, and their confidence in their ability to meet changing educational needs is bolstered when professional development is ongoing, practical, and aligned with real classroom issues. This ultimately ensures better learning results for children.

The foundation of this research is Albert Bandura's Social Cognitive Theory as cited by Zhai et al. (2023) namely the concept of self-efficacy. The term *self-efficacy* refers to a teacher's confidence in their ability to carry out duties and obligations successfully. According to Bandura, people with high self-efficacy are more driven, self-assured, and better able to overcome obstacles, thereby enhancing their performance. This implies that teachers with high self-efficacy are more likely to provide high-quality instruction, manage classrooms efficiently, and positively impact students' learning outcomes.

The Department of Education (DepEd) in the Philippines highlights the value of professional development in enhancing teachers' competencies and self-efficacy. As guidelines for professional development, the National Competency-Based Teacher Standards (NCBTS) and the Philippine Professional Standards for Teachers (PPST) guarantee that educators consistently advance their knowledge and abilities. In a similar vein, the Results-Based Performance Management System (RPMS) offers a performance evaluation framework that emphasizes professional development as a crucial component of teacher efficacy.

Moreover, DepEd Order No. 001, s. of 2020, the Professional Development Framework for Teachers and School Leaders was introduced. Professional development programs aligned with teachers' career stages, such as seminars, training sessions, workshops, and learning action cells, are institutionalized within this framework. In addition to improving teachers' knowledge and skills, these exercises aim to boost their self-esteem and sense of professional identity. This study is based on the notion that teachers' efficacy is significantly shaped by professional development. Teachers' confidence in their teaching practice increases with the time they spend on relevant, ongoing professional development.

II. METHODOLOGY

This study employed both correlational and causal research designs to comprehensively investigate the relationships between teachers' professional development and their self-efficacy. Correlational research design is a quantitative, non-experimental approach used to examine how variables naturally relate to one another without manipulation. This study determined the degree, strength, and direction of the relationships between the dimensions of professional development, such as participation in School Learning Action Cell (SLAC) sessions, In-Service Training (INSET), and Graduate Education, and teachers' self-efficacy. Correlational research is particularly useful when experimental manipulation is not feasible, as it identifies patterns and associations that can inform further analysis; however, it does not establish causation (Adeyemi & Babajide, 2023).

Complementing this, the causal research design component seeks to examine the extent to which variations in teachers' professional development activities directly influence changes in self-efficacy. This approach assesses how engagement in SLAC sessions, INSET programs, and Graduate Education predicts improvements in instructional strategies, classroom management, and student engagement. Causal research designs are widely employed to identify cause-and-effect relationships by analyzing whether changes in one variable reliably produce changes in another using statistical methods such as regression or predictive modeling. While true experimental manipulation provides the strongest causal evidence, causal research in educational contexts often relies on naturally occurring or quasi-experimental conditions to infer causal effects (Sekaran & Bougie, 2022).

By combining correlational and causal designs, this study not only describes the associations between professional development and teachers' efficacy but also identifies which professional development activities are the most influential predictors. Correlational analysis will reveal the strength and direction of relationships among the variables, while causal analysis will identify how participation in specific activities, such as SLAC, INSET, and Graduate Education, contributes to measurable improvements in teachers' confidence, perseverance, and instructional effectiveness. This integrated approach strengthens the

Professional Development and Efficacy Among Public Elementary School Teachers

research by moving beyond simple associations and providing evidence of the factors that most significantly enhance teacher self-efficacy in practical educational settings (Adeyemi & Babajide, 2023; Sekaran & Bougie, 2022).

III. RESULTS AND DISCUSSION

Problem 1. What is the level of professional development of teachers in terms of:

- 1.1 SLAC session;
- 1.2 In-Set; and
- 1.3 graduate education?

Table 1. Summary of Teachers' Professional Development

Variable	Mean	SD	Qualitative Description
SLAC Session	4.08	0.79	High
InSet	3.91	0.80	High
Graduate Education	3.94	0.77	High
Overall	3.98	0.79	High

Note: 4.21 – 5.00 Very High 3.41 – 4.20 High 2.61 – 3.40 Moderate 1.81 – 2.60 Low 1.00 – 1.80 Very Low

Table 1 showcases the summary of teachers' professional development across three key areas: School Learning Action Cell (SLAC) sessions, In-Service Training (INSET), and Graduate Education. As shown, the overall Mean is 3.98 (SD = 0.79) and is qualitatively described as *High*. The data indicate that educators perceive all forms of professional development as beneficial to enhancing their instructional skills and classroom performance. They believed that these various platforms provide essential updates on pedagogical strategies and foster a supportive environment for professional growth.

The SLAC session variable had the highest Mean of 4.08 (SD = 0.79) and a qualitative description of *High*. The data suggest that educators view SLAC as particularly beneficial for collaborative learning, mentoring, and the exchange of instructional resources. This implies that localized, peer-led sessions are highly valued for their immediate applicability and the culture of teamwork they foster within the school. Erfe and Gallego (2025) stated that SLAC improves teaching methods and provides a supportive learning environment among colleagues. The high level of engagement in these sessions provides valuable data for the teacher's continuous improvement. This collaborative teamwork allows them to move beyond individual performance and toward a collective goal of school-wide instructional excellence.

The Graduate Education variable obtained a Mean of 3.94 with SD= 0.77 and is qualitatively described as *High*. The data indicate that teachers perceived advanced academic studies as a vital component of their professional growth and instructional competence. They believed that participating in graduate programs motivates them to take an active role in their own development, fostering critical thinking and research skills necessary for effective teaching. Lopez and Medina (2022) framed graduate education as a deeply humanizing experience that transcends mere academic progression, viewing it instead as a journey of personal and professional transformation. Their study suggested that advanced study allows educators to rediscover their passion for teaching by engaging in high-level scholarly reflection and discussion, providing a necessary pause from the daily demands of the classroom. This academic involvement fosters a growth-centric mindset, in which mastery of research and critical thinking skills empowers educators to lead their school communities with confidence and a lifelong commitment to refining their craft.

Meanwhile, the INSET variable was rated the lowest among the three, with a Mean of 3.91 and SD=0.80, though it was still qualitatively described as *High*. Although it is rated as the lowest, teachers still find structured training programs beneficial for improving instructional techniques, lesson planning, and classroom management. They feel that these programs are not merely procedural requirements but transformative processes that provide proper guidance on selecting activities and using tools. This suggests that while formal training is valued, its impact is viewed alongside the more personalized growth fostered by advanced studies and peer collaboration.

The study by Callo and Quilapio (2022) highlighted that In-Service Training (INSET) serves as a vital bridge between professional requirements and an educator's personal fulfillment. Even when rated lower relative to other variables, these sessions are humanized by teachers who see them as a way to refresh their spirits and gain the confidence needed to handle the daily complexities of the classroom. It emphasizes that this type of professional development strengthens a teacher's ability to

Professional Development and Efficacy Among Public Elementary School Teachers

apply new knowledge effectively, turning abstract strategies into meaningful, real-world interactions that inspire and motivate their learners.

Problem 2. What is the level of teachers' efficacy in terms of:

- 2.1 instructional strategies;
- 2.2 classroom management; and
- 2.3 learner engagement?

Table 2 indicates the overall level of teachers' efficacy across three key domains: instructional strategies, learner engagement, and classroom management. As shown, the overall Mean is 4.06 with SD= 0.79 and is qualitatively described as *High*. The data indicate that teachers possess a strong sense of self-efficacy. It is reflected in their confidence in performing their professional roles effectively. They believed that their teaching abilities directly influence the quality of education and learner outcomes.

Padillo et al. (2021) stressed that the process of teaching reflectively is strengthened throughout one's entire life by actively participating in a variety of professional development events, both within and outside of the classroom. The quality of instruction and professional development activities is influenced by teachers' teaching competencies and by their perceptions of the activities, difficulties, and concerns they face in their professional development responsibilities. As an additional benefit, educators who participated in professional development activities demonstrated mastery of classroom management, subject-matter expertise, rapport with students, instructional preparation, and delivery.

Table 2. Summary of Teachers' Efficacy

Variable	Mean	SD	Qualitative Description
Instructional strategies	4.11	0.81	High
Classroom management	3.99	0.78	High
Student Engagement	4.09	0.79	High
Overall	4.06	0.79	High

Note: 4.21 – 5.00 Very High 3.41 – 4.20 High 2.61 – 3.40 Moderate 1.81 – 2.60 Low 1.00 – 1.80 Very Low

In the same table, the Instructional Strategies variable had the highest Mean of 4.11 (SD=0.81) and a qualitative description of *High*. The data suggest that educators feel most empowered when designing and delivering lessons that enhance understanding and promote higher-order thinking skills. This implies that they prioritized their role as knowledge facilitators, using learner-centered approaches to ensure instructional effectiveness. Darling-Hammond et al. (2022) stated that strong pedagogical competence is essential for achieving positive learning outcomes and reflects an educator's ability to adapt to students' academic needs.

The learner engagement variable obtained a Mean of 4.09 with SD= 0.79 and is qualitatively described as *High*. The data indicate that teachers perceived their learners as active participants who are genuinely involved in the learning process. They observed that learners typically participate in discussions, complete classroom tasks with effort, and demonstrate a visible interest in their lessons. This suggests that they are successful in creating a classroom atmosphere that is not only academic but also interactive and motivating.

This high level of perceived engagement is consistent with Reeve's (2022) research, which emphasized that learner engagement is a multidimensional construct involving behavioral, emotional, and cognitive investment. When teachers foster an environment that supports learner autonomy, it leads to greater engagement, in which learners feel empowered to contribute their own ideas and take initiative. This level of engagement is a strong indicator that the teachers' strategies are effectively resonating with the learners' needs and interests.

Meanwhile, Classroom Management was rated the lowest among the three variables, with a Mean of 3.99 and SD=0.78, though it was still qualitatively described as *High*. Although it is rated as the lowest, educators still perceive themselves as capable of maintaining order and managing student behavior. They feel that even with the lower relative mean, they are making a conscious effort to handle disruptions and resolve conflicts to create a conducive learning environment. This suggests that while managing the social dynamics of a classroom is perceived as a more demanding task than lesson delivery, teachers remain committed to fostering a structured and positive atmosphere.

According to Emmer and Sabornie (2022), classroom management is a foundational pillar of effective teaching, focusing on creating an organized and proactive learning environment. High-quality management involves more than just controlling

Professional Development and Efficacy Among Public Elementary School Teachers

behavior. It requires the intentional design of classroom routines and social interactions that minimize disruptions before they occur. They also emphasize that, because classroom dynamics are constantly evolving, continuous professional development is essential to help teachers maintain the confidence and skills needed to handle complex behavioral challenges with empathy and fairness.

Problem 3. Is there a significant relationship between teachers' professional development and their efficacy?

Table 3. Test of Correlation on Teachers' Professional Development and Efficacy

Professional Development	Efficacy				
	r-value	Strength of Correlation	p-value	Decision	Interpretation
Lac session	0.1982	Very Low Positive Correlation	0.006	Reject Ho1	Significant
InSet	0.1966	Very Low Positive Correlation	0.004	Reject Ho1	Significant
Graduate Education	0.3904	Low Positive Correlation	0.001	Reject Ho1	Significant
Overall Correlation	0.2643	Low Positive Correlation	0.008	Reject Ho1	Significant

Note: 0.90 - 1.00 Very High Positive Correlation 0.70 – 0.89 High Positive Correlation
 0.50 – 0.69 Moderate Positive Correlation 0.26 – 0.49 Low Positive Correlation
 0.00 – 0.25 Very Low Positive Correlation Significant when computed p-value <0.05.

Table 3 showcases the correlation between teachers' professional development and efficacy. The overall correlation showed a low but significant positive association ($r = 0.2643$, $p < 0.05$) between professional development and teacher efficacy. Thus, the null hypothesis is rejected. Professional development contributes to the teachers' progress in self-efficacy. This is because it provides them with opportunities to learn something new and upgrade their teaching skills, strategies, and techniques. They also become more confident in handling their classes and in dealing with their learners. Nasadoski (2025) claimed that professional development provides advantages to teachers, such as the opportunity to upskill and even accumulate documents that can be used when applying for promotions. Professional development is important for the teachers' self-efficacy. It builds their confidence and strength in performing their tasks and solving challenges.

For LAC sessions, the result shows a weak positive correlation ($r = 0.1982$) with a p-value of 0.006, which is less than 0.05, indicating a significant relationship. This means that participation in LAC sessions is associated with a slight increase in teachers' efficacy. Although the relationship is weak, it suggests that collaborative learning, peer mentoring, and shared teaching practices contribute to improving teachers' professional competence. Through LAC sessions, teachers can share their successes and challenges and gain ideas from colleagues who may have experienced the same. Darling-Hammond et al. (2022) stated that LAC sessions have been shown to be an effective way to collaborate with teachers. It provides an avenue for meaningful, fruitful discussions. It also helps the teachers to bond with each other. Truly, professional learning communities enhance teacher effectiveness through continuous reflection and collaboration.

For INSET, the correlation is also weakly positive ($r = 0.1966$) with a p-value of 0.004, indicating a statistically significant relationship. This implies that attending in-service training programs enhances teachers' knowledge and instructional skills, thereby improving their teaching efficacy. However, the weak strength of the relationship suggests that the effectiveness of INSET depends on its relevance, quality, and actual classroom application. Thus, InSet activities nowadays are well taken care of in terms of preparation, topic selection, and even during implementation to ensure that their purpose is effectively delivered.

Studies by OECD (2022) and Desimone and Garet (2021) showed that professional development has a greater impact when it is sustained, content-focused, and practice-based. Teachers value the techniques and strategies presented to them so they can immediately apply them to their activities with their learners. Teachers would even spend their own money if they find a certain training is essential to them.

For graduate education, the result shows the highest correlation among the variables ($r = 0.3904$) with a p-value of 0.001, which is significant. Although still categorized as a weak positive correlation, it is stronger than the correlations with LAC sessions and INSET. This indicates that pursuing advanced studies has a greater influence on improving teachers' efficacy, as it develops deeper content knowledge, research skills, and critical thinking abilities. Moreover, they believe that having a master's or doctoral degree is an advantage both in performing their tasks and in other opportunities, such as promotions and part-time jobs.

Professional Development and Efficacy Among Public Elementary School Teachers

Hattie (2023) stated that graduate education also encourages reflective practice and professional development, both of which are necessary for improving teaching performance. It allows teachers to reflect on their practices and evaluate what needs to be done to improve. In this way, they become more effective and efficient.

Problem 4. Which of the independent variables singly or in combination predicts teachers' efficacy?

Table 4. Simple Regression Analysis on Teachers' Professional Development and Efficacy

	UC		SC	t-value	Sig. (P-value)	Decision	Interpretation
	B	SE	β				
Constant	0.225	0.354	0.246				
Professional Development	0.237	0.362	0.252	8.634	0.010	Reject Ho2	Significant
	R	R²	Adjusted R²	f-value	Sig. (P-value)	Decision	Interpretation
Model	0.252	0.163	0.154	16.892	0.011	Reject Ho2	Significant

Note: Significant when computed p-value <0.05.

Table 4 reveals a simple regression analysis of whether teachers' professional development predicts their self-efficacy. Results show that 16.3% of the variance is explained by the predictor, $F = 16.892$, $p < .001$. The regression analysis confirmed that the model is statistically significant, indicating that professional development variables collectively contribute to the prediction of teachers' self-efficacy. Thus, the null hypothesis is rejected.

The regression analysis showed that professional development is a significant predictor of teachers' efficacy, as indicated by the positive coefficient ($\beta = 0.237$) and the p-value of 0.010, which is below the 0.05 threshold. This means that higher participation in professional development activities is associated with increased levels of self-efficacy among teachers. The overall regression model is also statistically significant ($R^2 = 0.163$, $f = 16.892$, $p = 0.011$), demonstrating that professional development explains a meaningful portion of the variance in teachers' efficacy.

Professional development is linked with the teachers' efficacy. It enables them to feel that they can perform their task effectively and efficiently. It helps teachers think and feel confident by keeping them up to date with the necessary information, knowledge, and skills for the changes being implemented at their workplace. All they need is an open mind and a lot of motivation to adapt to change.

Professional development refers to the formal and informal activities that enhance teachers' knowledge, skills, and professional growth, enabling them to improve instructional practices and overall classroom effectiveness. This includes activities such as attending LAC sessions, participating in INSET programs, and pursuing graduate education, all of which aim to deepen teachers' content knowledge, pedagogical skills, and reflective practice (Desimone & Garet, 2021). Through professional development, teachers become better equipped to implement learner-centered strategies, manage classrooms effectively, and engage students in meaningful ways.

Table 5. Multiple Regression Analysis on Professional Development and Efficacy

Dimensions	UC		SC	t-value	Sig. (P-value)	Interpretation
	B	SE	B			
Constant	0.387	0.377	0.384			
SLAC Session	0.064	0.062	0.009	0.104	0.918	Not Significant
In-Set	0.352	0.372	0.256	8.623	0.001	Significant
Graduate Education	0.295	0.412	0.177	7.218	0.001	Significant
	R	R²	Adjusted R²	f-value	Sig. (P-value)	Interpretation
Model	0.396	0.257	0.232	16.891	0.001	Significant

Note: Significant when computed p-value <0.05.

The multiple regression analysis shows that among the professional development variables, in service training has a significant positive effect on teachers' efficacy ($B = 0.352$, $\beta = 0.256$, $t = 8.623$, $p = 0.001$), and graduate education has a significant positive effect on teachers' efficacy ($B = 0.295$, $\beta = 0.177$, $t = 7.218$, $p = 0.001$), indicating that teachers who participates in well planned and organized trainings as well as pursue advanced studies are more likely to improve their teaching effectiveness. In

Professional Development and Efficacy Among Public Elementary School Teachers

contrast, SLAC sessions ($B = 0.064$, $\beta = 0.009$, $t = 0.104$, $p = 0.918$) were not significant predictors of efficacy.

This suggests that while general professional development activities may contribute to teacher growth, their direct impact on efficacy is limited unless they involve more intensive or advanced training, such as in-service training and graduate education. The overall model is significant ($R = 0.396$, $R^2 = 0.257$, adjusted $R^2 = 0.232$, $F = 16.891$, $p = 0.001$), indicating that approximately 23.2% of the variance in teachers' efficacy can be explained by the combination of professional development variables.

The results imply that professional development influences teachers' efficacy, but graduate education is the primary driver of this effect. This can be attributed to the fact that earning a master's or doctoral degree has lasting benefits for teachers. The knowledge and skills they gain from further study will be used in their work and even in their personal endeavors. It helps them become more confident and knowledgeable about what they do.

The findings can be summarized with the following regression equation:

$$Y = 0.352X_1 + 0.295X_2 + 0.387$$

Where: 0.337 = Constant

Y = Efficacy

X_1 = In-Service Training

X_2 = Graduate Education

This aligns with research findings emphasizing that advanced studies enhance teachers' knowledge, pedagogical skills, and confidence, making them more effective in the classroom. Although it is expensive and time-consuming, its benefits outweigh the sacrifices made in achieving it. Teachers should be encouraged to pursue further studies to better understand their profession and the workplace they work in. It is also advantageous for their future endeavors (Darling-Hammond et al, 2022).

IV. CONCLUSIONS

Based on the findings of the study, the following conclusions are drawn:

1. Teachers consistently participated in professional development activities.
2. Teachers are considered fully exposed to various forms of professional development.
3. Better professional development leads to stronger teachers' efficacy.
4. In-service training and graduate education were found to significantly enhance teachers' efficacy and serve as the strongest predictors of it.

V. RECOMMENDATIONS

Based on the findings and conclusions of the study, the following are recommended:

1. School administrators and teachers may continue to strengthen professional development programs for upskilling teachers' teaching skills.
2. Teachers may sustain their high efficacy level or improve it to a much higher level.
3. Teachers may continue to participate in any professional development activities in and out of the school.
4. Teachers shall be encouraged to pursue their graduate studies to enhance their educational qualifications.

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Professional Development and Efficacy Among Public Elementary School Teachers

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Professional Development and Efficacy Among Public Elementary School Teachers

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