

Teachers' Professional Development Activities and Efficacy



Jasmine B. Antonio¹, Erlinda A. Quirap²

^{1,2}Southern de Oro Philippines College, Cagayan de Oro City, Philippines

ABSTRACT: Engaging in professional development activities is essential for teachers to guarantee that they possess the abilities and understanding needed to deliver high-quality instruction. The study sought to ascertain the profile of the teacher respondents; the level of involvement towards school learning action cell, in-service training, and action research; the level of teachers' efficacy; the relationship between teachers' professional development activities and efficacy; the difference between the teachers' professional development activities and efficacy when group according to their profile; and the teachers' professional development activities singly or in combination affects the teachers' efficacy. The respondents were one hundred thirty-nine (139) teachers. Descriptive correlational and causal research design methods were used. The instruments were self-made questionnaires and the other was adapted. Statistical treatments like Frequency and Percentage, Mean and Standard Deviation, Pearson Product Moment Correlation, F Test Anova and Regression Analysis were utilized. Results showed that most of the respondents were between 31-40 years old, female, Teacher I, and have been teaching for 6-10 years. The level of teachers' efficacy was "very high". Action Research and School Learning Action Cell indicate a weak positive correlation with efficacy, while In-Service Training revealed a weak negative correlation with efficacy. In-service training sessions may be conducted regularly and tailored to teachers' needs to enhance their skills and confidence better and, at the same time, minimize their negative notion of it.

KEYWORDS: efficacy, InSet, LAC, teachers' professional development activities

I. INTRODUCTION

Engaging in professional development activities is essential for teachers to guarantee that they possess the abilities and understanding needed to deliver high-quality instruction. It aims to offer educators opportunities to enhance their knowledge and talents and improve their teaching strategies and performance. Teachers can improve their skills, learn new teaching strategies, and broaden their knowledge with these tasks. Furthermore, because Teachers' Professional Development emphasizes both a teacher's professional practice and personal issues, it must be carefully considered as a means for growth and development.

Professional development activities include peer collaboration, conferences, online courses, and workshops. Through these activities, educators can learn about current research and trends in education and obtain fresh perspectives on effective teaching methods. By participating in professional development events, educators can expand their professional network, discuss best practices, and get feedback on their instruction. Teaching requires a lifetime commitment to study and personal development, according to Bates et al. (2018). Professional development helps teachers refine and create effective practice strategies.

In addition, Misra's (2018) study discovered that while teachers' development refines tactics in connection to teaching practices and learner outcomes, it also has a substantial impact on the environment of curriculum implementation at the classroom level.

Furthermore, according to Sims et al. (2021), professional development initiatives that teach teachers new teaching techniques and question their long-standing habits tend to be the most effective. Additionally, the study by Padillo et al. (2021) conveyed that instructors who participate in professional development activities have become experts in instructional planning, delivery, subject matter competence, building rapport with students, and classroom management.

In particular, research can help improve teaching-learning processes and other domains. It plays a vital role in driving continuous improvement and innovation in education that ultimately benefits learners, educators, policymakers, and society as a whole. It is supported by DepEd Order No. 39, series of 2016, which directs DepEd and its stakeholders in conducting educational

Teachers' Professional Development Activities and Efficacy

research and using research findings to inform the department's planning, policy, and program development in accordance with its vision, mission, and core values. Thus, research across curricula, especially on the hard-to-teach competencies, shall serve as the basis for improving the teaching-learning process (DepEd CDO, Division Education Development Plan, 2023-2028).

Nonetheless, despite the Department of Education's intervention, there are still hurdles to pupils' literacy and numeracy skills. Schedules, topic priority, material preparation, ICT integration in instruction, and finances are all problems that must be addressed during implementation.

Meanwhile, as stated in Section 7 of Republic Act No.10533, the DepEd and the CHED, in collaboration with relevant partners in government, academia, industry, and non-governmental organizations, shall conduct teacher education and training programs known as In-service Training on Content and Pedagogy.

This implies that in order for the current K to 12 curricula to achieve the performance and content requirements, the teachers will need to undergo retraining. In light of this, and in keeping with its mission to give public school learners a high-quality basic education. The Department of Education has consistently provided in-service training for teachers through midyear and year-end seminars, workshops, and conferences. It allows teachers to refresh their knowledge and learn about new breakthroughs in their industry as part of their ongoing professional development.

Additionally, schools hold Learning Action Cells (LACs) sessions, which take place once a month. To enhance teaching and learning, these LAC workshops serve as a school-based approach for ongoing professional development. The LAC session is a group of teachers who work together in collaborative learning sessions led by the school principal or a qualified leader to tackle common problems in the classroom. It will grow into productive, caring, and safe school-based communities of practice. The DepEd Learning Action Cell aims to assist both new and experienced instructors in enhancing their students' cognitive and analytical abilities. The activity's primary goal is to provide professional development for teachers (DepEd Order No. 35, s. 2016).

Thus, the researcher was interested in investigating the teachers' professional development activities and their relationship to the teachers' efficacy. Understanding the issues of teachers' professional development enables educators to design training programs that target specific requirements, resulting to a more successful teaching methods.

This study's foundation was based on the legal and philosophical grounds of Republic Act 10533, known as an act enhancing Philippine Basic Education by strengthening its curriculum, which declares that every student should have the opportunity to receive a high-quality education that is competitive in the global market, built on a curriculum that meets international standards and is pedagogically sound. A comprehensive, sufficient, and integrated education system that is relevant to the needs of the populace, the country, and society at large must be established, maintained, and supported by the state.

Furthermore, in order to address common issues in the classroom, a group of excellent teachers known as the Learning Action Cell collaborates in learning sessions under the direction of the school principal or another competent leader. It will develop into a safe, caring, and fruitful school-based community of practice. LAC session aims to help teachers, both new and experienced, assist their pupils in enhancing their analytical and cognitive abilities.

With the primary objective of assisting teachers in their professional development, the DepEd Order No. 35, s. 2016, the Learning Action Cell was formed as a school-based ongoing professional development strategy to improve teaching and learning in the K to 12 Basic Education Program. This policy provides the structure and supporting procedures for conducting and administering LACs in schools or clusters if multi-grade schools choose to do so. Its goal is to enhance teachers' knowledge, abilities, and attitudes through the use of defined competencies connected to the K to 12 Curriculum. Through this policy, the Department of Education exhibits its steadfast support for its teaching staff's continued professional development, which is based on the concept of lifelong learning and the agency's commitment to assisting teachers in reaching their maximum potential in order to excel in their profession.

According to Republic Act No. 10533, the DepEd and the CHED will then work with pertinent partners in the government, academia, business, and nonprofit groups to make sure that the upgraded basic education program satisfies the demand for qualified teachers and school administrators. They will carry out the designated teacher education and training programs in addition to providing in-service training on methodology and content.

Albano (2019) revealed that the Learning Action Cell is a school-based continuing professional development method that aims to support Filipino students in developing literacy, numeracy, and lifelong learning attitudes. The commitment of educators and school administrators to attaining the goals of the LAC Sessions for the quality of teaching and learning development that constitutes the basis for reform and improvement is one factor that could impact the efficacy of professional development. It is crucial to emphasize hands-on exercises, group projects, examples, and problem-solving strategies during the LAC session.

Teachers' Professional Development Activities and Efficacy

II. METHODOLOGY

The researcher utilized the descriptive correlational and causal research design to attain the objectives set in this study. Descriptive correlational research is a type of research design that tries to explain the relationship between two or more variables without making any claims about cause and effect. It includes collecting and analyzing data on at least two variables to see if there is a link between them. In descriptive correlational research, researchers collect data to explain the variables of interest and determine how they relate. The main goal is to give a complete account of the variables and how they are related without changing them or assuming that one thing causes another. In descriptive correlational research, researchers do not change any variables or try to find cause-and-effect connections. Instead, they just watch and measure the variables of interest and then look at the patterns and relationships that emerge from the data (Bhat, 2024).

On the other hand, causal research is classified as conclusive research since it attempts to build a cause-and-effect link between two variables. Causal research is also known as explanatory research. It is a type of research that examines if there is a cause-and-effect relationship between two separate events. This would happen if one of the independent variables changed and the dependent variable changed as a result (Villegas, 2024).

The following statistical treatments were utilized to analyze the data of the study. Problem 1 used Frequency and Percentages. Problem 2 used Mean values and Standard Deviations to show the degree of teachers' professional development activities in the West II District. Problem 3 used Frequency and Percentage to indicate the level of teachers' efficacy. While Problem 4 used the Pearson Product Moment Correlation Coefficient to determine a substantial association between teachers' professional development activities and their efficacy levels.

Furthermore, Problem 5 employed the F Test Anova to determine whether there was a significant difference between teachers' professional development activities and efficacy when grouped by profile. It was used to compare the Means of two or more groups to determine if they were significantly different from each other. Finally, Problem 6 used Multiple Linear Regression to model relationships between variables and make predictions.

III. RESULTS AND DISCUSSION

Problem 1. What is the profile of the teacher respondents as to :

- 1.1 age;
- 1.2 sex;
- 1.3 position; and
- 1.4 length of service?

Table 1: Teachers' Profile

Teachers' Profile		
Age	Frequency	Percentage
61 – 65 years old	1	0.72
51 – 60 years old	28	20.14
41 – 50 years old	43	30.94
31 – 40 years old	53	38.13
Less than 30 years old	14	10.07
Sex		
Male	10	7.19
Female	129	92.81
Total	139	100.00
Position		
Teacher I	96	69.06
Teacher II	5	3.60
Teacher III	32	23.02
Master Teacher I	6	4.32
Master Teacher II	0	0.00
Master Teacher III	0	0.00
Length of Service		
31 years and above	8	5.76

Teachers' Professional Development Activities and Efficacy

26 – 30 years	9	6.47
21 – 25 years	10	7.19
16 – 20 years	16	11.51
11 – 15 years	34	24.46
6 – 10 years	42	30.22
5 years and below	20	14.29
Total	139	100.00

Table 1 displays the teachers' profile in terms of age, sex, position, and duration of service. Regarding age, 53 or 38.13% ages from 31 to 40 years old. This particular age is categorized as early adulthood. This implies that the respondents are in the mature age group and have been in government service for quite a number of years. This is consistent with the study of Francisco (2020), which revealed that the demographic traits of teachers were evident in their level of experience. They already have some troubleshooting skills experience. These educators may be kind and understanding, committed to supporting young children's intellectual, social, and emotional growth.

On the other hand, ages 61-65 years old has only 1 or 0.72% was in this study. This suggests that the teacher respondents in this age group are almost done with their teaching careers and are on the verge of retirement. This age group is anticipated to work as teachers for a considerable amount of time and devote the majority of their lives to the profession. Some of these educators arrive late for work or are not employed when they should. Sala (2023) claims that financial constraints and health issues cause teachers to retire early. Teachers had to turn to bank loans in order to improve their financial circumstances and retire early in order to prevent health problems brought on by the stress of teaching. The teacher's early retirement was also the outcome of a long-term strategy based on their interests following many years in the classroom, such as wanting to spend more time with their families, live a long and healthy life, and other reasons.

In terms of sex, 129 or 92.81%, were females in this study. This implies that females dominated the population of public elementary school teachers of the West II District of the Division of Cagayan de Oro City. As observed, teaching is a feminine job as many females are attached to it. Aside from that perception, females usually love to engage with children and like to mingle with them. Sebastian et al. (2022) showed that elementary teaching is still a female-dominated profession, and learners have only limited encounters with male teachers. Males in the Philippines usually engaged in engineering, technology, agriculture, and criminology-associated courses.

Meanwhile, 10 or 7.19% were males. This implies that teaching has been considered a female profession in the Philippines. Males in the Philippines usually engaged in engineering, technology, agriculture and criminology-associated courses. Preceding results of the study imply that male teachers in the teaching profession are attributed to be significantly low because most of them occupy higher positions in the academe as administrators. Thus, male teachers may not be satisfied or show increased satisfaction with their jobs. The more people in the community see teaching as a low-level profession, the more likely it is for men who are teachers to feel less important about themselves and their position in the society (UNESCO, 2017).

In the teaching position, results show that 96 or 69.06% were Teacher I. This indicates that the majority of responders are either competent teachers or belong to Career Stage 2. They demonstrate skills in organizing, carrying out, and managing learning; they actively participate in collaborative learning with the professional community and other stakeholders for mutual growth and advancement. They are reflective practitioners who continuously consolidate the knowledge, skills, and practices of Career Stage 1 teachers, as well as the Philippine Professional Standards for Teachers. They are professionally independent in the application of skills essential to the teaching and learning process.

Only 6 or 4.32% ranked as Master Teacher 1 which got the lowest frequency. This result suggests that only a few teachers are in a higher position. In addition, many teacher-respondents are still in the lowest rank of a teacher in the government, which indicates that they still need to upgrade themselves by completing the Master's degree and being promoted. Master teachers hold four teaching loads or actual classroom teaching and intensify instructional supervision and provide technical assistance to fellow teachers in adopting the best practices and innovative teaching techniques (DM No. 83, s. 2024).

Additionally, 42 or 30.22%, showed the highest frequency in terms of length of service. This means many respondents have been teaching for 6-10 years already. This implies that teachers have been employed for quite a while and have adequate knowledge of how the program works and how it affects pupils' progress and efficiency. As stipulated in the Philippine Professional Standard for Teachers, this group of teachers has the passion and commitment to stay in the service and belong to Career Stage 2. These are teachers who have moved beyond the initial phase of establishing themselves in the teaching career. They are more experienced and skilled, often taking a leadership role, mentoring newer teachers, and contributing to curriculum development or school improvement initiatives.

Teachers' Professional Development Activities and Efficacy

On the other hand, only 8 teachers or 5.76%, have been teaching for 31 years. This means that only a few aged teachers opt to stay in the service. The relatively low number of teachers who teach for 31 years or more can be attributed to several factors, such as burnout and stress, low compensation, changing educational policies, retirement benefits, health issues, and work-life balance. Many teachers opt to take early retirement for many personal reasons. Some want to enjoy their remaining time with their family and friends. Others want to enjoy the benefits earlier, especially financially able ones. According to Sala (2023), teachers tend to have an early retirement due to financial resources and health problems. This means that these teachers have been in the service for several years. They are the true reflections of commitment and dedication in the teaching profession to render service for a long time.

Problem 2. What is the level of teachers' professional development activities as to:

2.1 Action Research;

2.2 In-Service Training; and

2.3 School Learning Action Cell?

Table 2: Overall Teachers' Professional Development Activities

Variables	Mean	SD	Description	Interpretation
Action Research	3.31	0.54	Always	Very Active
In-Service Training	2.12	0.56	Sometimes	Less Active
School Learning Action Cell	3.54	0.55	Always	Very Active
Overall	2.99	0.55	Most of the Time	Active
Note: 3.25 – 4.00 Very Active 2.50 – 3.24 Active 1.75 – 2.49 Less Active 1.00 – 1.74 Not Active				

Table 2 describes the summary of teachers' professional development activities which reveals an overall Mean of 2.99 with SD=0.55, described as Most of the Time, which is interpreted as Active. This means that teachers frequently participated in these activities. This indicates a high level of engagement and consistent involvement in professional development, suggesting that teachers are regularly taking part in opportunities to improve their skills and knowledge. These include in-service training sessions and workshops that provide updates on new teaching methods and curriculum changes. They engage in SLAC, where they collaborate with colleagues to discuss and solve instructional challenges. Additionally, teachers conduct action research to investigate and address specific issues in their teaching practices. By participating in professional learning communities, they can exchange best practices and conduct group analyses of student data. While mentoring and coaching offer one-on-one feedback and direction, online courses and webinars allow flexible learning opportunities on a wide range of educational topics. Through these activities, teachers stay current with educational trends and continually enhance their professional competence.

According to Muyunda (2023), teachers view professional development as important since it enhances their ability to teach, update their content knowledge, and increase their pedagogical understanding. The predominant professional development practices in schools were workshops, in-service training, and continuing learning.

The variable, *School Learning Action Cell* got the highest Mean of 3.54 with SD=0.55, described as Always, which is interpreted as Very Active. This implies that the School Learning Action Cell was the most engaged and effective professional development. Their high level of activity and engagement indicates strong collaboration, problem-solving abilities, and dedication to their goals. Studies revealed that the school learning action cell was crucial in improving the abilities and expertise of educators. Additionally, Learning Action Cell sessions enhanced the teaching abilities of teachers, which in turn enhanced the academic performance of pupils.

The study by Albano (2019) emphasized that the Learning Action Cell, a school-based continuing professional development method, aims to support Filipino students in developing literacy, numeracy, and lifelong learning attitudes. Using diverse reading materials, encouraging reading for pleasure, and integrating writing exercises are strategies to develop literacy. Incorporating real-life Mathematics problems, using manipulatives, and applying interactive teaching methods develop numeracy skills. To foster lifelong attitudes, teachers can promote critical thinking, encourage curiosity and self-directed learning, and create a supportive classroom environment that values continuous improvement and resilience.

While *In-Service Training* got the lowest Mean of 2.12 SD=0.56, described as Sometimes, which is interpreted as Less Active. This means that In-Service Training needs improvement or that the other methods are more effective in achieving their objectives. This suggests that in-service training may be less effective or impactful in achieving its objectives, lacks practical relevance and fails to engage teachers effectively. Many sessions may be too theoretical and not directly applicable to classroom settings, and they lack interactive components, which diminished their impact and do not address the diverse needs of teachers

Teachers' Professional Development Activities and Efficacy

from various subjects and grade levels. Without adequate follow-up and support, teachers struggle to implement new strategies learned during training. Enhancing the relevance, engagement, personalization, support, and convenience of in-service training can make it more effective and beneficial for teachers' professional growth and student outcomes. This indicates that there is a need for reassessment or adjustments in the approach. According to Taylor (2023), professional development can motivate instructors to become active participants in their learning environments, ensuring that both teachers and students are eager to learn. It is by engaging in continuous professional development, such as attending workshops, seminars, and pursuing degrees. Through regular engagement in professional development, teachers not only enhance their own skills and knowledge but also create a more dynamic and enthusiastic learning environment. This active participation fosters a culture of continuous improvement and excitement for learning among both teachers and students.

Problem 3. What is the level of teachers' efficacy in the West II district?

Table 3 on the next page describes the level of efficacy of teachers. It has an overall Mean of 3.58 with SD=0.54, described as Very Efficient, which is interpreted as Very High. It positively means teachers fostering a supportive and motivating learning environment. It leads to higher student engagement, improved academic performance, and better classroom behavior. Teachers with high efficacy are more likely to implement innovative teaching strategies, provide personalized support, and build strong relationships with their learners, which collectively enhance learners' confidence, resilience, and overall educational outcomes.

Table 3: Teachers' Efficacy

Indicators	Mean	SD	Description	Interpretation
<i>Teacher Efficacy is to...</i>				
1. promote learning when there is lack of support from the home.	3.52	0.56	Very Efficient	Very High
2. motivate students with low interest in schoolwork.	3.60	0.53	Very Efficient	Very High
3. prepare instructional materials and equipment needed in class.	3.58	0.54	Very Efficient	Very High
4. establish and maintain a positive and organized learning environment.	3.61	0.53	Very Efficient	Very High
5. find ways to get through to the most difficult students.	3.56	0.55	Very Efficient	Very High
6. extend time to help struggling students.	3.53	0.56	Very Efficient	Very High
7. successfully convey the subject matter and facilitate learning.	3.58	0.54	Very Efficient	Very High
8. engage in ongoing professional development to enhance my skills.	3.59	0.53	Very Efficient	Very High
9. provide constructive feedback and maintain open communication with students and parents.	3.60	0.53	Very Efficient	Very High
10. capture and maintain students interests for active participation in discussions and activities.	3.63	0.51	Very Efficient	Very High
Overall	3.58	0.54	Very Efficient	Very High
Note: 3.25 – 4.00 Very High 2.50 – 3.24 High 1.75 – 2.49 Low 1.00 – 1.74 Very Low				

According to a study by Padillo et al. (2021), instructors have mastered the following skills through professional development activities such as instructional planning, instructional delivery, subject matter competence, developing rapport with students, and classroom management. The findings serve as a positive indicator of the quality of teaching, suggesting that these educators are well-equipped to foster a learning environment that promotes student success and engagement.

Further, indicator 10, *Teachers' efficacy is to capture and maintain students interests for active participation in discussions and activities*, with the highest Mean of 3.63 with SD=0.51, described as Very Efficient, which is interpreted as Very High. The respondents have a strong belief in themselves that pupils' interests and participation are managed and controlled. Maintaining students' interest and participation in discussions and activities can foster a vibrant learning atmosphere that empowers students to develop critical thinking skills and express their ideas confidently. Teachers with higher levels of self-efficacy tend to have better teaching techniques, and students who are motivated to learn, achieve more, and are more satisfied with their jobs. Additionally, it has been discovered that self-efficacy has a favorable impact on teacher-student interactions, the management of students learning, and the evaluation of teaching performance (Okoye, 2023). Teacher with high self-efficacy are more confident in their instructional strategies, which allows them to present material in a more compelling and understanding manner. They are also better at managing classroom behavior, creating a structured yet flexible learning atmosphere where students feel safe to participate and ask questions. This confidence enables teachers to address diverse students' needs effectively, fostering a sense

Teachers' Professional Development Activities and Efficacy

of respect and rapport. Consequently, students are more likely to engage, show interest in the subject matter, and develop a positive attitude towards learning, leading to a more dynamic and interactive educational experience.

While, the indicator 1, *Teachers' efficacy is to promote learning when there is lack of support from the home*, got the lowest Mean of 3.52 with SD=0.56, described as Very Efficient, which is interpreted as Very High. This implies that the respondents still have a strong belief in themselves that they can manage to promote learning even without the support of parents. The scenario underscores the challenges teachers face in bridging educational gaps without external reinforcement. High self-efficacy empowers teachers to implement innovative instructional strategies, provide emotional support, and create a motivating classroom environment that compensates for the lack of home support. Teachers with strong efficacy are more resilient and resourceful, enabling them to maintain high expectations and foster academic achievement even in less-than-ideal circumstances. This resilience ensures that students receive the encouragement and guidance necessary to succeed, highlighting the critical impact of teachers' efficacy in overcoming external challenges.

As defined by Lazarides (2020), teachers' efficacy refers to the teachers' confidence in their capacity to engage and encourage students, even in the face of challenging or unmotivated classmates. It demonstrates that educators who have high levels of self-efficacy are more receptive to novel teaching approaches, set more ambitious objectives for themselves, demonstrate a higher degree of preparation and organization, focus their efforts on problem-solving, ask for help, and modify their pedagogical approaches when faced with challenges.

Problem 4. Is there a significant relationship between the teachers' professional development activities and teachers' efficacy?

Table 4: Test of Correlation on Professional Development Activities and Efficacy

Variables	r-value	p-value	Level of Correlation	Description	Interpretation
Action Research	0.461	0.001	Weak Positive Correlation	Reject Ho	Significant
In-Service Training	-0.468	0.001	Weak Negative Correlation	Reject Ho	Significant
School Learning Action Cell	0.435	0.001	Weak Positive Correlation	Reject Ho	Significant
Note: 1.00 Perfect Positive Correlation			0.70 – 0.99	Strong Positive Correlation	
0.50 – 0.69 Moderate Positive Correlation			0.10 – 0.49	Weak Positive Correlation	
0.00 – 0.09 No Positive Correlation					
<i>Significant when computed p-value < 0.05.</i>					

Table 4 explores the relationship between professional development activities, specifically action research, In-Service Training, and School Learning Action Cell and their efficacy, using correlation analysis. The efficacy is likely measured in terms of improvements in teacher performance, student outcomes, or other educational metrics. The correlation between these variables is quantified by the Pearson Correlation Coefficient (r-value), and the significance of these correlations is tested through p-values. The table indicates that there is a significant correlation between teachers' professional development activities towards efficacy with the rejection of the null hypothesis and the computed p-value lower than 0.05.

In terms of action research, it has a weak positive correlation towards efficacy ($r = 0.461$, $p > 0.001$). This indicates that while there is some tendency for engaging in action research to be associated with increased efficacy, the relationship is not strong. This suggests that while action research has some impact on efficacy, it is not the sole determinant and other factors play significant roles in determining efficacy. Bates et al. (2018) stated that a lifetime commitment to learning and personal development is necessary for teaching. Thus, learning is never-ending. These results underscored the significance of intentional and targeted professional development efforts in fostering growth, innovation, and success.

With regards to In-Service Training, there is a weak negative relationship towards efficacy ($r = -0.468$, $p < 0.001$). This suggests that as the amount or quality of in-service training increases, there is a slight decrease in teacher efficacy. However, because the relationship is weak, the decrease in efficacy is minor and not strongly pronounced. This might suggest that in-service training, as currently implemented, may not be very effective in boosting teachers' confidence or ability to perform their duties and, in some cases, might even slightly undermine it. This could be due to factors such as the quality of the training, its relevance, how it is delivered, or how well it aligns with teachers' needs and professional contexts.

As to the School Learning Action Cell, there is a weak positive relationship towards efficacy ($r = 0.435$, $p < 0.001$). This suggests that as participation in these activities increases, there is a slight increase in their efficacy, but the relationship is not strong. The weak positive correlation means that while there is a positive relationship, it is not strong enough to suggest that increases in these activities will lead to large increases in efficacy. It is possible that the professional development activities

Teachers' Professional Development Activities and Efficacy

provided were not directly addressing the specific needs. Additionally, the efficacy of the respondents may be influenced by external factors such as organizational culture, resources, or support systems, which may not be fully captured. According to Barni et al. (2019), teachers' personal values were shown to be important predictors of teachers' efficacy. Teachers' personal beliefs serve as a guide for their intents and behaviors in the classroom. Additionally, a person's values might reinforce their subjective well-being and sense of self-efficacy.

Problem 5. Which of the teachers' professional development activities, singly or in combination, affects the teachers' efficacy?

Table 5: Regression Analysis on Professional Development Activities and Efficacy

Variables	UC		SC		t-value	Sig. (P-value)	Decision	Interpretation
	B	SE	β					
Constant	0.596	0.576	0.577	6.486	0.001			
Action Research	0.013	0.024	0.035	1.116	0.077	Accept Ho	Not Significant	
In-Service Training	-0.547	-0.597	-0.568	-6.954	0.001	Reject Ho	Significant	
Learning Action Cell	0.234	0.135	0.034	1.137	0.081	Accept Ho	Not Significant	
Model	R	R ²	Adjusted R ²	f-value	Sig.(P-value)	Decision	Interpretation	
	0.446	0.471	0.358	8.135	0.001	Reject Ho	Significant	

Note: UC = Unstandardized Coefficients SC = Standardized Coefficients Dependent Variable = Efficacy
Significant when computed p-value <0.05.

Table 5 on the next page presents the regression analysis of the professional development activities and efficacy. The coefficients of the regression equation for the variables in their original units. The constant is 0.596. The coefficients for action research, In-Service Training, and Learning Action Cell are 0.013, -0.547, and 0.234, respectively. These coefficients represent the change in the dependent variable on efficacy for each unit change in the respective independent variables, assuming all other variables are held constant. While standardized coefficients are the coefficients of the regression equation when all variables are standardized. The standard errors for the coefficients are 0.576, 0.024, -0.597, and 0.135, respectively.

However, the t-values for the coefficients are 6.486, 1.116, -6.954, and 1.137, respectively. These values are used to determine the p-values. The p-values for the coefficients are 0.001, 0.077, 0.001, and 0.081, respectively. The p-value for in-service training and the constant is less than 0.05, indicating that these variables significantly affect efficacy. However, the p-values for learning action cell and action research are greater than 0.05, indicating that these variables do not significantly affect efficacy. The null hypothesis for learning action cells and action research, which indicated a non-significant effect, was accepted. The hypothesis for constant and in-service training, which indicated a significant effect, was rejected based on the p-values.

The efficacy is greatly impacted by ongoing and In-Service Training inversely while Learning Action Cell and action research does not. This indicates that in-service training equips teachers with current skills and knowledge, enhances their problem-solving abilities, and ensures consistency in processes. It also boosts motivation and engagement by showing that the organization values employee development. Thus, school administrators and training organizers may create activities that will enhance teachers' efficacy positively. This comprehensive approach leads to higher confidence, competence, and adaptability, resulting in more effective and efficient performance. According to Gutierrez (2022), In-Service Training has five goals: to encourage the staff of the school system to improve their professional skills continuously; to engage in participatory and collaborative learning in the teaching profession to keep professionals up to date on new knowledge; to spark creative activities; and to provide the much-needed support to teachers who are taking on new responsibilities or entering a new line of work, particularly new teachers.

The R, R² Adjusted R²: These values measure the goodness of fit of the regression model. An R² of 0.471 and an adjusted R² of 0.358 indicate that approximately 35.8% of the variance in Efficacy can be explained by the model. The F-value of 8.135 and the model p-value of 0.001 indicate that the regression model significantly predicts efficacy.

IV. CONCLUSIONS

On the basis of the aforementioned findings, the following conclusions were made:

1. Teachers' age range represents a period of career stability. Teaching profession was viewed as a female work and a nurturing role. But, eventually, promotion opportunities were limited to teachers who had reached the requirements.

Teachers' Professional Development Activities and Efficacy

2. Teachers were actively participating in professional development activities such as action research and School Learning Action Cell. They were collaboratively learning and sharing strategies to enhance their teaching skills and knowledge to meet the learners' diverse needs.
3. Teachers had a strong belief in their ability to capture and maintain learners' interests for active participation in discussions and activities.
4. Teachers' participation in school learning action cell and action research enhances the sense of efficacy, but the effect is relatively small.
5. Teachers' professional development activities provide practical skill development, give an update on the latest educational trends and practices, foster a collaborative learning environment and make teachers' outlook towards positive ways.

V. RECOMMENDATIONS

Based on the findings and conclusions generated from this study, the researcher has formulated the following recommendations:

1. Teachers may pursue further education, like seminars and related trainings, to uplift instruction.
2. Teachers need to be given sufficient information and resources during In-Service Trainings to further enhance their knowledge and ensure that they effectively implement new strategies and improve their teaching methods.
3. Teachers continue to focus on school activities by efficiently managing their workload and utilizing effective educational strategies.
4. In-Service Training needs additional strategies and support mechanisms to strengthen professional confidence and suffice the needs of the teachers in terms of instructions and classroom management skills.
5. In-Service Training sessions may be conducted regularly and tailored to teachers' needs to better enhance their skills and confidence and, at the same time, minimize their negative notion of it.

REFERENCES

- 1) Agyei, D. (2020) The Impact of Educational Technology Initiatives on Student Learning Outcomes: Perspectives of Sub-Saharan Africa. *International Journal of Education, Learning and Development*.
Doi: <https://doi.org/10.37745/ijeld.2013>
- 2) Albano, H. (2019) The Implementation of Learning Action Cell (LAC) Sessions in Schools Division of Iriga City: Basis for a School-Based Continuing Professional Development Guide. *Ascendens Asia Journal of Multidisciplinary Research Abstracts/Articles*, Vol 3 no. 25
- 3) Alfaidi, S.D.A. Elhassan, F.A.M. (2020) The Role of In-Service Training Programs in Teachers Development. *International Journal of Learning and Teaching* 6 (3), 191-195, 2020, ijlt.org
- 4) Ancho, I. Arrieta, G. (2021) Filipino Teacher Professional Development in the New Normal. *Educ. Self Dev* 16 (3), 25-43, 2021. DOI: 10.26907/esd.16.3.04
- 5) Ajani, O.A. (2018) Needs for In-Service Professional Development of Teachers to Improve Students' Academic Performance in Sub-Saharan Africa. *Arts Social Sci J* 9 (330), 2, 2018 <https://doi.org/10.4172/215-6200.1000330>
- 6) Ajani, O.A. Maluleke, N. Govender, S. (2018) Teachers' in-service professional Development: gateway to improved classroom practices in Nigerian schools. *African Journal of Gender, Society and Development* 7 (3), 21-40, 2018.
<https://doi.org/10.31920/2050-4284/2018/V7n3a2>
- 7) Bajar, J.T. Bajar, M.A. Alarcon, E. (2021) School Learning Action Cell as a Remedy to Out- of - Field Teaching: A Case in One Rural School in Southern Philippines. *International Journal of Educational Management and Innovation* 2 (3) 249-260, 2021 Doi: 10.i2928/ijemi. v2i3.3667
- 8) Bandura, (2014) Bandura's Instrument Teacher Self-Efficacy.
<https://cpb-us-w2.wpmucdn.com/u.osu.edu/dist/2/5604/files/2014/09>
- 9) Barni, D. Danioni, F. Benevene, P. (2019). Teachers Self-Efficacy: The role of Personal Values and Motivations for Teaching. <https://doi.org/10.3389/fpsyg.2019.01645>
- 10) Bates, C. Morgan, D. (2018). Seven Elements of Effective Professional Development. *International Literacy Association*.
<https://doi.org/10.1002/trtr.1674>
- 11) Beyu, A. Abebe, D. (2018) Action Research: Improving Academic Achievement Through Effective Peer Learning. *Journal of Education and Practice*. Vol. 9, no.34, 2018
- 12) Bhat, A. (2024) Descriptive Correlational: Descriptive vs. Correlational Research. www.questionpro.com.
- 13) Culajara, CJ (2023) Improving Teachers' Professional Development through School Learning Action Cell (SLAC). *Journal of Research, Policy and Practice of Teachers and Teacher education* 13 (1), 76-88, 2023

Teachers' Professional Development Activities and Efficacy

<https://doi.org/10.37134/jrpptte.vol13.1.6.2023>

- 14) Deng, W. (2023) Professional Development for Teachers. Future Educators, future. educators. DepEd CDO, (2024) Division Memorandum no. 83, s. 2024. Task and Responsibilities of Master Teachers.
- 15) DepEd Order No. 32, s. 2011. Policies and Guidelines on Training and Development (T&D) Programs and Activities. <https://www.deped.gov.ph/2011/03/31/do-32-s-2011>
- 16) DepEd Order No. 35, s. 2016. The Learning Action Cell as a K to 12 Basic Education Program School-Based Continuing Professional Development Strategy for the Improvement of Teaching and Learning. <https://www.deped.gov.ph/2016/06/07/>
- 17) DepEd Order No. 39, s. 2016. Adoption of the Basic Education Research Agenda. <https://www.deped.gov.ph/2016/06/10/>
- 18) DepEd Order No. 42, s. 2017. National Adoption and Implementation of the Philippine Professional Standards for Teachers. <https://www.deped.gov.ph/2017/08/11/>
- 19) Division Education Development Plan (2023-2028). DEDP –Cagayan de Oro City Division. DepEd CDO
- 20) Durgumahanthi, S (2024) Storytelling in Presentations: Strategies for Researchers. <https://researcher.life/blog/articles>
- 21) Ezenwagu, S.A. (2023) Perceived Influence of in-Service Training of Teachers on the Students' Academic Performance in Nkanu west Local Government area of Enugu State. SK Educational Research Journal Int'l. <https://journals.skeduconsult.com>
- 22) Francisco A.R. (2020) Teachers' Personal and Professional Demographic Characteristics as Predictors of Students' Academic Performance in English. International Journal of Management, Technology, and Social Sciences (IJMTS),5 (2), 80-91. <https://doi.org/10.5281/zenodo.3997430>
- 23) Gacutno, M.P. (2019) Learning Action Cell (LAC) in Reading: Its Influence on Academic Performance of Grade 2 Pupils in Pagatpat Elementary School.
- 24) Ascendens Asia Journal of Multidisciplinary Research Abstracts 3 (2F), 2019
- 25) Gutierrez, F.R. (2022) The Importance of In-service Training to Teachers in Our School System. <https://diyaryomilenyonews.com/2022/05/26>
- 26) Graham L. White, S. Cologon, K. Pianta, R. (2020) Do teachers' years of Experience make a difference in the quality of teaching? Teaching and Teacher Education. www.elsevier.com/locate/tate
- 27) Hussain, M.D. Khan, S.A. (2022) Self-efficacy of Teachers: A Review of the Literature. <https://www.researchgate.net/profile/Md-Hussain-15/publication>
- 28) Ismail, R.A. Arshad, R. Abads, Z. (2018) Can Teachers' Age and Experience influence Teacher Effectiveness in HOTS? International Journal of Advanced studies in Social Science and Innovation (IJASSI) Vol. 2, No.1 <https://dx.doi.org/10.30690/ijassi.21.11>
- 29) IvyPanda (2023). Descriptive Correlational Design in Research. <https://ivypanda.com/essays/descriptive-statistics-and-correlational-design>
- 30) Jakhaia, N. (2018) L2 Teachers' Efficacy, The Impact of Professional Development <https://egrove.olemiss.edu/cgi/viewcontent.cgi?article=1494&context=etd>
- 31) Kovács, E. (2019) The Effects of Gender on the Teachers Competences and Effectiveness. Global Education in Practice: Teaching, Researching Citizenship. <https://eric.ed.gov/?id=ED596945>
- 32) Lari, P. Rose, A. Ernst, J. Clark, A. Deluca, W. (2019) Premiere PD. Action Research. Technology and Empowering Teacher, ERIC-EJ1230947, v79n2 p. 23-27
- 33) Lazadires, R. Warner, L.M. (2020) Teacher Efficacy [Researchgate.net/publication/341820839](https://www.researchgate.net/publication/341820839).
Doi: 10.1093/acrefore/9780190264093.013.890
- 34) Li, S. Yamaguchi, S. Sukhbastar, J. Takada, J. (2019) The Influence of teachers' Professional Development Activities on the Factors Promoting ICT Integration in Primary Schools in Mongolia. Educational Technologies, Teacher Training and Competencies Development Based on Innovative Emerging Pedagogies. <https://doi.org/10.3390/educsci9020078>
- 35) Misra, P.K. (2018) MOOCs for Teacher Professional Development: Reflections, and Suggested Actions. DOI:10.5944/openpraxis.10.1.780
- 36) Muyunda, G. yue, L. Oranga, J. (2023). Teachers' Professional Development in Zambia. International Journal of Social Learning. Doi: <https://doi.org/10.47134/ijsl.v3i2.177>
- 37) Norwood, B. (2023) Job Training vs Professional Development: The Differences Explained. VTR Learning. <https://utrpro.com/Blog>

Teachers' Professional Development Activities and Efficacy

- 38) NMSI Blog (2023) The Challenges of Implementing High-Quality Instructional Materials. National Math and Science Initiative. nms.org.
- 39) Oakley, G. King, R. Scarparolo, G. (2018). An Evaluation of ELLN Digital: Technology-Supported Teacher Professional Development on Early Language, Literacy, and Numeracy for K-3 Teachers. Digital Learning for Development. <https://dl4d.org/wp-content/uploads/2019/03/ELLN>
- 40) Okoye, MC (2023). Teachers Teaching Efficacy as a Predictor of Teachers Effectiveness in Nigeria: A Literature Review. American Journal of Humanities and Social Sciences Research. <https://www.researchgate.net/publication/374451469>
- 41) Osmanović (2021) The Role of Action Research in Teachers' Professional Development. International Journal of Cognitive Research in Science, Engineering and Education (IJCRSEE), 9(3), 301-317. doi: 10.23947/2334-8496-2021-9-3-301-317
- 42) Overby, A. (2019) How Action Research Can Improve Your Teaching. The Art of Education University. <https://theartofeducation.edu>
- 43) Padillo, G. Manguilimotan, R. Capuno, G. Espina, R. (2021) Professional Development Activities and Teacher Performance. International Journal of education and Practice. <https://doi.org/10.18488>
- 44) Panda, I. (2023) Benefits of Action Research in Education. <https://ivypanda.com/essays/action-research/>
- 45) Quilapio, M. P., & Callo, E. C. (2022). The effect of In-Service training programs on the professional development of public elementary school teachers. International Journal of Research Publications, 107(1). <https://doi.org/10.47119/ijrp1001071820223799>
- 46) Rachmawati, D.L. (2020). Teachers' Sense of Self-Efficacy, English Proficiency, and Teaching Ability in EFL Setting: A Case Study in Tertiary Level. <https://journal.unismuh.ac.id/index.php/exposure>
- 47) Republic Act No. 10533. An Act Enhancing the Philippine Basic Education System by Strengthening its Curriculum and Increasing the Number of Years for Basic Education, Appropriating Funds therefor and For Other Purposes. Retrieved from <https://www.officialgazette.gov.ph/2013/05/15>
- 48) Sala, J. Quines, L. (2023) "When the Public School Teachers Early Retire: A Multiple Case Study. International Journal of Innovative Science and Research Technology, ISSN no. 2456-2165, vol. 8, issue 2.
- 49) Schwartz, S. (2023) Teacher Professional Development, Explained. Education Week. <https://www.edweek.org>
- 50) Schweig, J. (2019). Measuring Teacher Effectiveness: Understanding Common, Uncommon, and Combined Methods, RAND Corporation. United States. Retrieved from <https://policycommons.net/artifacts/4835700/measuring-teacher-effectiveness/5672472/> on 08 Jun 2024. CID: 20.500.12592/xrnqr3
- 51) Sebastian, M. Banate, R. Saguin, M. (2022) Gender Roles Among Public Elementary Teachers: Basis for Gender - Responsive Intervention Activities. International Online Journal of Primary Education (IOJPE), 11 (2), 401-411
- 52) Sims, S. Wood, F. (2020) Identifying the characteristics of effective teacher professional development: a critical review. <https://doi.org/10.1080/09243453.2020.1772841>
- 53) Sreekumar, D. (2023) What are Research Objectives and How to Write Them (With Examples) <https://researcher.life/blog/article/what-are-research-objectives-how-to-write-them-with-example>
- 54) Stewart, L. (2023) Descriptive Research and How it is Used?
- 55) Taylor, L. (2023) The Impact of Professional Development on Teachers' Performance. International Teaching Blog, Asian College of Teachers
- 56) Tuncel, Z.A. (2018) In-service Teacher Training: Problems of the Teachers as Learners. International Journal of Instruction October 2018. Vol.11, No.4e-ISSN: 1308-1470. www.e-iji.net
- 57) Ulla, M. (2018) Benefits and Challenges of doing research: Experiences from Philippine Public School Teachers. Issues in Educational Research, 28 (3),20
- 58) Verbo, R.J. (2020) Learning Action Cell (LAC) as a School-Based Continuing Profession Development Program. Proceeding 25th Asian Technology Conference Mathematics, ATCM, 2020
- 59) Vinay, A. (2020) Action Research in Education: Effectiveness of Flipped Classroom on Academic Performance of Pupils. Flipped Classroom and Academic Performance. <https://files.eric.ed.gov/fulltext/ED607521.pdf>
- 60) Villegas, F. (2024) Casual Research: What it is, Tips and Example. <https://www.questionpro.com/blog/causal-research/>
- 61) Washington, B. (2019) The Importance of Professional Development in the 21st Century. Graduate Programs for Educators. Educators Blog.
- 62) Yoon (2022) Dynamic patterns of teachers' professional development participation and their relations with socio-demographic characteristics, teacher self-efficacy, and job satisfaction. <https://doi.org/10.1016/j.tate.2021.103565>

Teachers' Professional Development Activities and Efficacy

- 63) Zajić, J. Mamutovic, A. Maksimovic, J. (2021) The Role of Action Research in Teachers' Professional Development. International Journal of Cognitive Research in Science, Engineering and Education (IJCRSEE), 9 (3), 301-317 Doi: 10.2394/2334-8496-2021-9-3-301-317



There is an Open Access article, distributed under the term of the Creative Commons Attribution – Non Commercial 4.0 International (CC BY-NC 4.0) (<https://creativecommons.org/licenses/by-nc/4.0/>), which permits remixing, adapting and building upon the work for non-commercial use, provided the original work is properly cited.