

Original Article

Community Extension Programs and Professional Development of Public Elementary School Teachers

Warrin Magno ^{1,*}, Josephine Baguio ¹

Received: 10 July 2026; Revised: 22 August 2026;
Accepted: 27 August 2026; Published: 31 August 2026

DOI: <https://doi.org/10.66074/L8J2R5W3P>

Abstract

This study examined the association between community extension programs and professional development among public elementary school teachers in Manay South District, Davao Oriental, Philippines. A descriptive-correlational design involved 134 teachers selected through convenience sampling. Data were obtained through a validated survey that assessed health and environment, literacy, and livelihood initiatives, together with planning, executing, and evaluating dimensions of professional development. Community extension programs were rated high overall ($M = 3.51$, $SD = 0.75$), while professional development was also high ($M = 3.71$, $SD = 0.63$). The variables showed a strong positive correlation ($r = 0.78$, $p < .001$). Multiple regression indicated that health and environment, literacy, and livelihood initiatives were significant predictors of professional development, with livelihood initiatives reporting the largest standardized coefficient ($\beta = 0.23$). The model explained 61% of the variance in professional development ($R^2 = 0.61$, $F = 87.92$, $p < .001$). These findings support structured community engagement as a context-responsive avenue for teacher learning.

¹ Rizal Memorial
Colleges, Inc. Davao
City, Philippines
*magnowarrin@gmail.
com

Keywords: community, extension, professional development, teachers

1. Introduction

Teacher professional development is central to instructional quality because it provides structured opportunities for educators to deepen professional knowledge, refine techniques, and sustain changes in classroom practice. Contemporary evidence also shows that effectiveness depends less on participation alone than on how professional learning connects insight, motivation, technique, and repeated enactment. Sims et al. (2025), in a meta-analytic test of effective professional development, emphasized the importance of mechanisms that move new ideas into durable practice. Similarly, Popova et al. (2022) documented a persistent gap between the design features supported by evidence and those commonly present in teacher professional development across education systems. These findings place a premium on professional learning that is relevant to teachers' work, connected to authentic problems, and supported by opportunities to apply and evaluate new knowledge.

The Philippine setting makes this need especially salient. Chin et al. (2022) found that teachers identified continuing professional development needs alongside barriers related to time, resources, motivation, and logistical support. Such constraints can make conventional, event-based training difficult to sustain, particularly in settings where teachers carry multiple instructional and community responsibilities. Job-embedded approaches offer a potentially useful complement. Balta et al. (2023) reported positive teacher and student outcomes in a meta-analysis of job-embedded professional development, while current evidence continues to stress that professional learning is most meaningful when it is closely linked with the contexts in which teachers make decisions and solve problems. Professional development may therefore extend beyond formal seminars when teachers encounter authentic tasks that demand planning, action, collaboration, and evaluation.

Community extension programs provide one such context. In this study, the term refers to school and community outreach activities organized around health and environment, literacy, and livelihood initiatives. Corpuz et al. (2022) showed that a Philippine teacher education institution used extension services across comparable areas to address community needs and strengthen reciprocal links between educators and communities. Related service-learning research offers a conceptual explanation for why these experiences may also contribute to professional growth. Adarlo and Pelias (2021) described how situated community encounters, reflection, and mentoring can shape professional learning among pre-service teachers, while García-Rico et al. (2021) reported gains in professional aptitudes from university service-learning. Williams and Sembiente (2022), in a review of experiential learning in teacher preparation, likewise found that community-connected experiences can help prospective teachers relate theory to practice. Although these studies focus largely on teacher preparation, they indicate that structured community work can function as a setting for applied professional learning.

Evidence remains limited, however, on whether community extension participation is associated with the professional development of in-service public

elementary school teachers. The existing literature has often examined extension service outcomes, service-learning in teacher education, or formal professional development as separate areas. Less attention has been given to the quantitative relationship between routine community engagement and teachers' reported capacity to plan, execute, and evaluate professional work, particularly in public elementary schools outside major urban centers. This gap is important because extension activities may either operate as additional obligations or, when structured well, serve as authentic opportunities for teachers to practice organization, communication, contextualization, and reflective judgment. Evidence from a local public school district can clarify whether these two areas of teachers' work move together and which forms of extension participation show the strongest statistical contribution.

Accordingly, this study examined community extension programs and professional development among public elementary school teachers in Manay South District, Division of Davao Oriental. It determined the level of participation in health and environment, literacy, and livelihood initiatives; assessed professional development in planning, executing, and evaluating; tested the relationship between the two constructs; and estimated the unique statistical contribution of each community extension domain to professional development. The analysis was designed to provide a focused empirical account of how teachers' community-based work corresponds with their reported professional capacities within one district context.

2. Methodology

A quantitative, nonexperimental descriptive-correlational design was used during the 2025-2026 school year in Manay South District, Division of Davao Oriental. The respondents were 134 public elementary school teachers selected through convenience sampling on the basis of availability, accessibility, and willingness to participate. Eligible respondents were currently employed in public elementary schools in the district and had at least three years of teaching experience. Teachers from private schools, those with less than three years of experience, and those on extended leave during data collection were excluded. The design described the two study constructs and tested their statistical association without manipulating the variables or establishing causal direction.

Data were collected with a two-part adapted questionnaire. The community extension section was based on Corpuz et al. (2022) and covered health and environment initiatives, literacy program initiatives, and livelihood program initiatives. The professional development section was cited in the study as adapted from Shakuna et al. (2016) and was operationalized through planning, executing, and evaluating items. Responses used a five-point scale from 5 (Always) to 1 (Never). The instrument was reviewed by three specialists in community engagement, teacher professional development, and educational measurement for clarity, relevance, and alignment with the study objectives. A pilot test with 30 public elementary school teachers informed revisions to wording, sequence, and response format. The study

reported Cronbach's alpha coefficients of .92 for the community extension section and .96 for the professional development section.

Data collection proceeded after institutional approval and authorization from the Schools Division Superintendent, followed by coordination with school administrators. Participants received information about the study and provided voluntary informed consent; anonymity and confidentiality were maintained, and electronic and physical records were stored securely. The protocol followed the ethical requirements of the Rizal Memorial Colleges Research Ethics Committee. Completed questionnaires were checked, coded, verified, and prepared for analysis. Means and standard deviations described the study variables. Pearson product-moment correlation tested the relationship between overall community extension programs and professional development, while multiple linear regression estimated the contribution of health and environment, literacy, and livelihood initiatives to professional development. Statistical significance was evaluated at the .05 level.

3. Results

Descriptive results for community extension programs are presented in Table 1. Health and environment initiatives had an overall mean of 3.66 (SD = 0.66), literacy program initiatives had an overall mean of 3.54 (SD = 0.74), and livelihood program initiatives had an overall mean of 3.34 (SD = 0.85). The overall community extension score was 3.51 (SD = 0.75).

Table 1. Summary of community extension programs.

Domain	SD	M	Interpretation
Health and Environment Initiatives	0.66	3.66	High
Literacy Program Initiatives	0.74	3.54	High
Livelihood Program Initiatives	0.85	3.34	Moderate
Overall	0.75	3.51	High

Note. Interpretation: 4.20-5.00 = Very High; 3.40-4.19 = High; 2.60-3.39 = Moderate; 1.80-2.59 = Low; 1.00-1.79 = Very Low.

Professional development results are presented in Table 2. Planning had an overall mean of 3.73 (SD = 0.66), executing had an overall mean of 3.76 (SD = 0.64), and evaluating had an overall mean of 3.65 (SD = 0.60). The overall professional development score was 3.71 (SD = 0.63).

Table 2. Summary of professional development.

Domain	SD	M	Interpretation
Planning	0.66	3.73	High
Executing	0.64	3.76	High
Evaluating	0.60	3.65	High
Overall	0.63	3.71	High

Note. Interpretation: 4.20-5.00 = Very High; 3.40-4.19 = High; 2.60-3.39 = Moderate; 1.80-2.59 = Low; 1.00-1.79 = Very Low.

The Pearson product-moment correlation between community extension programs and professional development was $r = 0.78$, with a reported p value of 0.00 (Table 3). The coefficient of determination was $r^2 = 0.61$.

Table 3. Relationship between community extension programs and professional development.

Variable	M	SD	r	r ²	Descriptor	p	Remark	Decision
Community Extension Programs	3.51	0.75	0.78	0.61	High	0.00	Significant	Reject
Professional Development	3.71	0.63						

Multiple linear regression results are shown in Table 4. The model reported $R = 0.78$, $R^2 = 0.61$, $F = 87.92$, and $p = .000$. Health and environment initiatives ($B = 0.22$, $BE = 0.27$, $\beta = 0.19$, $t = 2.84$), literacy program initiatives ($B = 0.25$, $BE = 0.29$, $\beta = 0.21$, $t = 3.09$), and livelihood program initiatives ($B = 0.28$, $BE = 0.30$, $\beta = 0.23$, $t = 3.18$) each had a reported p -value of .000.

Table 4. Regression of professional development on community extension program domains.

Predictor	B	BE	beta	t	p	Remark	Decision
Constant	0.88	0.29		3.03	.000	Significant	Reject
Health and Environment	0.22	0.27	0.19	2.84	.000	Significant	Reject
Literacy Program	0.25	0.29	0.21	3.09	.000	Significant	Reject
Livelihood Program	0.28	0.30	0.23	3.18	.000	Significant	Reject

Note. Regression equation: Professional Development = $0.88 + 0.22(\text{Health and Environment}) + 0.25(\text{Literacy Program}) + 0.28(\text{Livelihood Program})$. Model summary: $R = 0.78$; $R^2 = 0.61$; $F = 87.92$; $p = .000$.

4. Discussion

The overall high level of community extension participation, with health and environment initiatives rated highest, literacy initiatives also high, and livelihood initiatives at a moderate level, indicates that teachers' community work was concentrated in activities closely connected with routine school responsibilities and learner welfare. Corpuz et al. (2022) similarly documented health, literacy, and livelihood activities as core forms of extension service in a Philippine teacher education setting, which supports the contextual relevance of these domains. The stronger ratings for health and environment and literacy may reflect the direct fit of school improvement, hygiene, feeding, home visitation, and instructional support with elementary teachers' established roles. By contrast, livelihood work may require economic, technical, or partnership resources that are less available within ordinary school operations. Service-learning research provides a useful interpretive lens: Adarlo and Pelias (2021) showed that community encounters become professionally meaningful when educators connect service with reflection and role understanding, while Williams and Sembiente (2022) emphasized the value of experiential contexts that connect professional knowledge with community realities.

Professional development was rated high across planning, executing, and evaluating, with executing receiving the highest mean. This pattern suggests that respondents perceived professional learning most strongly in terms of the practical enactment of instructional skills rather than in planning or evaluation alone. That emphasis is consistent with Sims et al. (2025), who argue that effective professional development must move beyond insight to develop techniques and embed them in practice. Balta et al. (2023) likewise found positive effects of job-embedded professional development, a form of learning that situates professional growth within teachers' daily work. In the Philippine context, Chin et al. (2022) underscored teachers' continuing need for professional development that addresses practical pedagogical demands while accounting for time and resource constraints. The present high self-ratings therefore fit a broader view of professional growth as applied practice, although they should be understood as teachers' reported competencies rather than direct observations of classroom performance.

The strong positive correlation between community extension programs and professional development indicates that teachers who reported greater participation in extension activities also tended to report stronger professional capacities. This association is theoretically plausible because many extension tasks require educators to define goals, coordinate resources, communicate with stakeholders, respond to local needs, and assess outcomes. García-Rico et al. (2021) found that service-learning can strengthen professional aptitudes through practical engagement, and Adarlo and Pelias (2021) highlighted reflection and situated experience as mechanisms that support professional identity and learning. Corpuz et al. (2022) further illustrates how extension work can place educators in reciprocal relationships with communities rather than confine their role to classroom instruction. Even so, the present correlation does not establish that community extension causes professional development. The cross-sectional design and use of self-report measures for both constructs leave open alternative explanations, including prior professional competence, school support, or common response tendencies.

All three extension domains were significant regression predictors, and livelihood initiatives had the largest standardized coefficient, followed by literacy and health and environment initiatives. This result is noteworthy because livelihood participation had the lowest descriptive mean, yet it showed the largest unique coefficient in the reported model. One possible interpretation is that livelihood activities place distinctive demands on teachers, such as resource coordination, problem solving, financial or entrepreneurial communication, and work with community partners, which may differentiate professional capacity more strongly than activities already embedded in routine school practice. The three standardized coefficients were nevertheless close in magnitude, from .19 to .23, so their rank order

should not be treated as a large substantive separation. Corpuz et al. (2022) identifies livelihood work as a substantive extension area, while the experiential literature of García-Rico et al. (2021) and Williams and Sembiente (2022) supports the broader proposition that complex, authentic tasks can provide opportunities for applied professional learning. The regression findings should therefore be interpreted as statistical prediction within the observed sample, not as evidence of causal influence.

The findings support a more deliberate connection between community extension and teacher professional development. Rather than assume that outreach automatically produces professional learning, schools can link extension activities with explicit goals, guided reflection, feedback, and opportunities to apply lessons to instructional practice. This direction is consistent with Sims et al. (2025), who emphasize mechanisms that help teachers translate professional insight into sustained practice, and with Adarlo and Pelias (2021), who show the value of reflection and mentoring within community-based learning. At the same time, the results require cautious generalization. The study used a convenience sample from one district, relied on cross-sectional self-report data, and measured both predictor and outcome constructs through the same survey context. These features may inflate associations and do not establish temporal sequence. Future research can test the model across multiple districts, use independently validated measures and observational indicators, and apply longitudinal or intervention designs to determine whether structured extension participation contributes to subsequent professional growth.

5. Conclusion

Community extension programs and professional development were both reported at high overall levels among public elementary school teachers in Manay South District. Teachers participated most strongly in health and environment initiatives, followed by literacy activities, while livelihood initiatives were moderate; professional development was high in planning, executing, and evaluating, with executing rated highest. Community extension programs were strongly and positively associated with professional development, and the reported regression model identified health and environment, literacy, and livelihood initiatives as significant predictors, with livelihood initiatives showing the largest standardized coefficient. Taken together, the results indicate that community engagement and professional capacity are closely connected within the observed district context. The evidence supports the value of aligning extension work with purposeful professional learning, but the cross-sectional, single-district, self-report design does not permit causal conclusions. Structured reflection, school support, and broader longitudinal evaluation are needed to determine how community-based activities can contribute most effectively to sustained teacher development.

Acknowledgment

The authors sincerely thank the peer reviewers for their valuable comments and suggestions, which helped improve the quality of this manuscript.

Conflict of Interest Statement

The authors declare no relevant financial or non-financial conflicts of interest with respect to this manuscript.

References

- Adarlo, G., & Pelias, M. F. T. (2021). Teaching and learning with others: Situated encounters in service learning among pre-service teachers. *Asia-Pacific Journal of Teacher Education*, 49(2), 177-202. <https://doi.org/10.1080/1359866X.2020.1789910>
- Balta, N., Amendum, S. J., & Fukkink, R. G. (2023). The effect of job-embedded professional development on teacher and student outcomes: A multi-level meta-analysis. *International Educational Review*, 1(1), 1-23. <https://doi.org/10.58693/ier.111>
- Chin, J. M.-C., Ching, G. S., del Castillo, F., Wen, T.-H., Huang, Y.-C., del Castillo, C. D., Gungon, J. L., & Trajera, S. M. (2022). Perspectives on the barriers to and needs of teachers' professional development in the Philippines during COVID-19. *Sustainability*, 14(1), 470. <https://doi.org/10.3390/su14010470>
- Corpuz, D. A., Time, M. J. C., & Afalla, B. T. (2022). Empowering the community through the extension services of a teacher education institution in the Philippines. *Cogent Education*, 9(1), 2149225. <https://doi.org/10.1080/2331186X.2022.2149225>
- García-Rico, L., Santos-Pastor, M. L., Martínez-Muñoz, L. F., & Ruiz-Montero, P. J. (2021). The building up of professional aptitudes through university service-learning's methodology in sciences of physical activity and sports. *Teaching and Teacher Education*, 105, 103402. <https://doi.org/10.1016/j.tate.2021.103402>
- Popova, A., Evans, D. K., Breeding, M. E., & Arancibia, V. (2022). Teacher professional development around the world: The gap between evidence and practice. *The World Bank Research Observer*, 37(1), 107-136. <https://doi.org/10.1093/wbro/lkab006>
- Shakuna, K. S., Mohamad, N., & Ali, A. B. (2016). Modelling professional performance of teachers' scales in Libyan schools. *International Journal of Management and Applied Research*, 3(3), 120-129. <https://doi.org/10.18646/2056.33.16-010>
- Sims, S., Fletcher-Wood, H., O'Mara-Eves, A., Cottingham, S., Stansfield, C., Goodrich, J., Van Herwegen, J., & Anders, J. (2025). Effective teacher professional development: New theory and a meta-analytic test. *Review of Educational Research*, 95(2), 213-254. <https://doi.org/10.3102/00346543231217480>

Williams, L., & Sembiente, S. F. (2022). Experiential learning in U.S. undergraduate teacher preparation programs: A review of the literature. *Teaching and Teacher Education*, 112, 103630.
<https://doi.org/10.1016/j.tate.2022.103630>

Author Contributions: Magno, W., and Baguio, J.; Study design, method conception, data collection, data analysis, and manuscript writing. Both authors contributed to the critical review and editing of the manuscript. Both authors have read and approved the final version of the manuscript and agree to be accountable for all aspects of the work.