Effectiveness of Professional Development and Support Interventions and Level of Action Research Writing Skills Among Teachers

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ABSTRACT

This study investigated the effect of professional development and support interventions on the action research writing proficiency of elementary teachers in Dangcagan District, Bukidnon, for SY 2025–2026. Utilizing a descriptive-correlational design with a structured questionnaire administered to selected elementary teachers, data were analyzed using mean, standard deviation, and Pearson r. Results revealed that interventions—including technical training, mentoring, resources, time management, and peer collaboration—were perceived as very highly effective. Consequently, teachers demonstrated high proficiency in research writing, particularly in problem identification. Statistical analysis confirmed a significant positive relationship between support interventions and writing ability, thereby rejecting the null hypothesis. The study concludes that teacher proficiency is a direct result of institutional support, emphasizing that a holistic, multi-pronged environment is vital for transforming practitioners into skilled researchers. Recommendations include institutionalizing administrative relief, providing digital tools, and conducting targeted training on technical literature synthesis to bridge existing academic gaps and foster a sustainable culture of inquiry.

Keywords: Action Research, Professional Development, Institutional Support, Teacher Proficiency, Support Interventions

INTRODUCTION

The ability of elementary teachers to conduct action research is increasingly recognized as a vital skill for promoting reflective teaching and improving classroom practices. However, many teachers struggle with this task due to limited skills, lack of confidence, and insufficient guidance. These challenges can affect not only the teachers' professional growth but also the quality of education delivered to learners. Consequently, enhancing teachers' capacity through targeted professional development and support interventions is essential for addressing these obstacles and ultimately improving student learning outcomes.

Previous studies reveal that many teachers struggle to conduct action research due to gaps in research knowledge and writing skills. For instance, Docallas et al. (2025) highlighted that teachers often lack motivation and face challenges such as insufficient research background and time constraints. Similarly, Tindowen et al. (2019) found that novice teacher researchers struggle with research writing format and managing their time effectively. Other researchers, such as Anzaldo and Cudiamat (2019), have highlighted the importance of training programs that build teachers' capacity to conduct meaningful classroom research.

Despite these insights, a gap remains in research on the effectiveness of specific professional development and support interventions designed to enhance teachers' ability to conduct action research. Most studies identify challenges but seldom systematically test or evaluate concrete intervention strategies. This gap calls for research that not only investigates barriers but also explores how structured capacity-building activities and mentoring can improve teachers' research writing skills and confidence.

Conducting this study is important because it provides empirical evidence on the role of professional development in empowering elementary teachers as action researchers. Such findings can inform education

policymakers, school administrators, and mentors in designing effective support systems that enhance teachers' research competence. Moreover, improving teachers' research skills can lead to enhanced instructional strategies and better learner outcomes, contributing to the overall quality of education.

The ability of elementary teachers to write action research is essential in enhancing teaching practices and student learning outcomes. However, many teachers face challenges such as a lack of skills, confidence, and proper guidance in conducting research. These difficulties hinder their professional growth and may limit the effectiveness of instructional strategies, which ultimately affects learners' academic performance. Therefore, addressing these issues through targeted interventions is necessary to help teachers overcome these barriers for the benefit of both educators and learners.

Previous studies have identified various challenges teachers face when conducting action research. Docallas et al. (2025) found that elementary teachers often lack research skills, struggle with time management, and have limited motivation. Tindowen et al. (2019) emphasized the need for proper training and mentorship to help teachers with research formats and writing. Anzaldo and Cudiamat (2019) further highlighted that the lack of support and resources hampers teachers' research engagement, indicating the importance of professional development programs.

Despite recognizing these challenges, there is a gap in research evaluating the actual impact of professional development and support interventions on teachers' ability to conduct action research. Most existing studies focus on describing the problems rather than testing solutions tailored to teachers' needs. This calls for empirical investigation into how structured interventions can effectively enhance teachers' research skills and confidence.

Conducting this study is important because it will provide valuable insights into the effectiveness of capacity-building programs in improving elementary teachers' research competencies. The results can guide school administrators and policymakers in designing focused training and mentoring systems. Ultimately, enhancing teachers' ability to write action research contributes to their professional empowerment and uplifts the quality of education delivered to students.

This study was anchored in Social Cognitive Theory, developed by Albert Bandura (1986), which emphasizes reciprocal determinism, in which behavior, environmental factors, and personal factors interact. In this study, teachers' ability to write action research is influenced by professional development and support interventions, as well as their self-efficacy. Training, mentoring, and collaboration provide mastery experiences that strengthen teachers' confidence and ability to conduct research.

The study is further supported by Malcolm Knowles's Adult Learning Theory (1980), which highlights that adults learn best through relevant, experience-based activities. Professional development programs aligned with teachers' needs enhance engagement and skill acquisition. In addition, the Social Constructivist Theory of Lev Vygotsky (1978) underscores the role of social interaction, where mentoring and peer collaboration support teachers in developing research skills. Similarly, John Sweller's Cognitive Load Theory (1988) explains that structured support reduces mental burden, enabling teachers to perform complex tasks such as research writing.

The revised Bloom's Taxonomy by Lorin Anderson and David Krathwohl (2001) further explains that action research writing requires higher-order thinking skills, such as analysis and synthesis, which necessitate proper training. Lastly, the Job Demands–Resources Theory by Demerouti et al. (2001) emphasizes that adequate time, resources, and institutional support significantly improve teachers' performance.

Teachers' Ability to Write Action Research is the ultimate behavioral outcome measured in the study. This behavior is considered an indicator of teachers' high research self-efficacy and the successful integration of learning from various professional development and support interventions (Bandura, 1986). A high ability to write reflects that the teacher has not only acquired the necessary cognitive skills (competence) but also the resilience, motivation, and environmental support needed to execute the multi-step process from identifying a classroom problem to disseminating findings demonstrating a successful alignment of personal, environmental, and behavioral factors. Figure 1 presents the schematic diagram of the study.

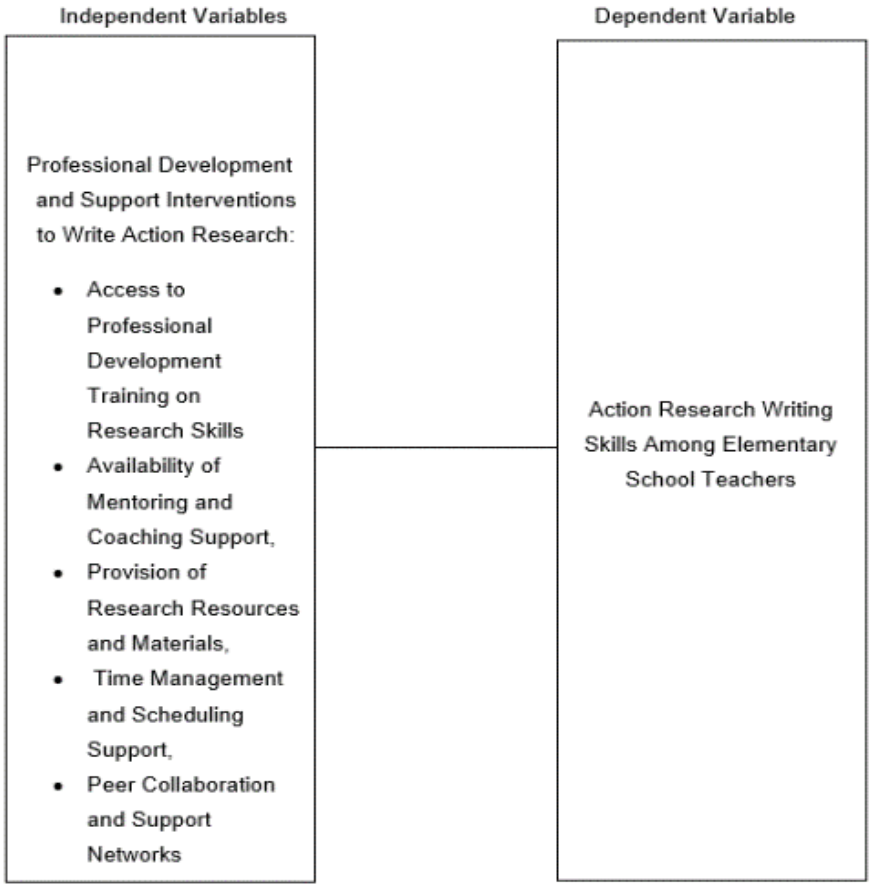

Figure 1. Schematic Diagram showing the Relationship of the Independent and Dependent Variables of the Study

This study examined the effects of professional development and support interventions on elementary teachers' ability to conduct action research in Dangcagan District, Division of Bukidnon, SY 2025-2026.

Specifically, this study answered the following questions:

1. What is the level of effectiveness of professional development and support interventions on elementary teachers' ability to write action research in terms of a. access to professional development training on research skills to write action research, b. availability of mentoring and coaching support, c. provision of research resources and materials, d. time management and scheduling support, and e. peer collaboration and support networks?
2. What is the level of elementary teachers' skills to write action research?
3. Is there a significant relationship between the effect of professional development and support interventions on elementary teachers' ability to write action research and the elementary teachers' ability to write action research in Dangcagan District, Division of Bukidnon, SY 2025-2026?

Hypothesis of the Study

The hypothesis was tested at a 0.05 level of significance.

Ho: There is no significant relationship between the effect of professional development and support interventions on elementary teachers' ability to write action research and the elementary teachers' ability to write action research in Dangcagan District, Division of Bukidnon, SY 2025-2026.

Delimitation of the Study

This study was delimited to the examination of five independent variables related to professional development and support interventions: access to professional development training on research skills, availability of

mentoring and coaching support, provision of research resources and materials, time management and scheduling support, and peer collaboration and support networks. The study focused solely on their effect on the dependent variable: elementary teachers' ability to write action research.

The research instrument employed was a structured questionnaire that assessed teachers' perceptions of the interventions and the rubrics used to evaluate the quality of their written action research outputs. Only elementary teachers currently teaching in selected schools within the study area during the School Year 2025–2026 were included as participants. The data were analyzed using descriptive statistics, including mean, standard deviation, and Pearson's r (Product-Moment Correlation Coefficient).

METHODS

This chapter presents the research methodology employed in the study. It includes the research design, research locale, study respondents, sampling procedure, research instrument, data-gathering procedure, scoring procedure, statistical treatment of data, and ethical considerations.

Research Design

This study employed a quantitative descriptive–correlational research design to examine the factors affecting elementary teachers' ability to write action research and their level of research productivity and engagement during the School Year 2024–2025. Specifically, the study assessed the extent to which variables such as time availability, research writing skills, access to resources, training and professional development, and attitudes toward research influence teachers' competence in action research writing.

A researcher-developed questionnaire was used to collect data, which were analyzed using means, standard deviations, and Pearson Product–Moment Correlation Coefficient (Pearson r) to determine relationships between variables.

Research Locale

The study was conducted in Dangcagan District, Division of Bukidnon, Philippines, during the School Year 2025–2026. Dangcagan is a third-class municipality located in Northern Mindanao (Region X), characterized by a basic economy and a population of 26,076 distributed across 14 barangays.

The district includes several public elementary schools under the Department of Education (DepEd), serving communities where educational outcomes are closely linked to socio-economic conditions. This setting provides a relevant context for examining teachers' engagement in action research, particularly in addressing localized educational challenges.

Participants of the Study

The respondents in the study comprised 172 public elementary school teachers currently employed in Dangcagan District. These teachers were selected as participants due to their direct involvement in conducting action research as part of their professional responsibilities.

Complete enumeration was used to ensure that all teachers in the district were included in the study.

Research Instrument

Data were gathered using a researcher-developed survey questionnaire composed of two parts:

- Part I measured the effect of professional development and support interventions on teachers' ability to write action research.
- Part II assessed teachers' level of competence in writing action research.

Responses were measured on a five-point Likert scale, enabling quantification of perceptions and competencies.

Validity and Reliability of the Instrument

The instrument underwent content and face validation by experts to ensure clarity, relevance, and alignment with the study objectives. A pilot test was conducted with at least 30 teachers from another district.

Reliability analysis using Cronbach's Alpha yielded a coefficient of 0.977, indicating very high internal consistency and confirming the instrument's reliability.

Data Gathering Procedure

The researcher followed a systematic procedure in collecting data. Approval and endorsement were first secured from the Graduate School, followed by permission from the Schools Division Superintendent of Bukidnon. Authorization was then obtained from the Public Schools District Supervisor and school heads.

After securing all necessary approvals, the questionnaires were distributed to the respondents and retrieved upon completion. The collected data were then organized, coded, and prepared for statistical analysis.

Scoring Procedure

The responses were interpreted using a five-point Likert scale. The following tables present the corresponding scale ranges, qualitative descriptions, and interpretations.

Professional Development and Support Interventions

Scale	Range	Qualitative Description	Qualifying Statement
5	4.20–5.00	Very Highly Effective	The effect is experienced 9–10 times out of ten situations
4	3.40–4.19	Highly Effective	The effect is experienced 7–8 times out of ten situations
3	2.60–3.39	Moderately Effective	The effect is experienced 5–6 times out of ten situations
2	1.80–2.59	Less Effective	The effect is experienced 3–4 times out of ten situations
1	1.00–1.79	Not Effective at All	The effect is experienced 0–2 times out of ten situations

Teachers' Ability to Write Action Research

Scale	Range	Qualitative Description	Qualifying Statement
5	4.20–5.00	Exemplary (E)	Fully confident; able to mentor or lead others in performing the task effectively
4	3.40–4.19	Highly Proficient (HP)	Confident and competent in performing the task independently and effectively
3	2.60–3.39	Proficient (P)	Generally competent; can perform the task with minimal guidance
2	1.80–2.59	Developing (D)	Can perform parts of the task but needs significant guidance or training
1	1.00–1.79	Beginner (B)	Lacks necessary knowledge and skills; requires intensive training

Statistical Treatment of Data

The following statistical tools were employed:

- Mean and standard deviation to determine the extent of professional development and teachers' ability to write action research.
- Pearson Product–Moment Correlation Coefficient (Pearson r) to determine the significant relationship between professional development and teachers' research writing ability.

Ethical Considerations

Ethical principles were strictly observed throughout the study. Participation was voluntary, and informed consent was obtained from all respondents. Confidentiality and anonymity were ensured by using coding systems and secure data storage.

All data were used solely for research purposes, and participants were assured of their right to withdraw at any time without any consequences.

RESULTS AND DISCUSSION

Level of Effectiveness of Professional Development and Support Interventions

Table 1. Summary of the Level of Effectiveness of Professional Development and Support Interventions

Variable	Mean	SD	Interpretation
Access to Professional Development Training	4.46	0.588	Very Highly Effective
Mentoring and Coaching Support	4.41	0.632	Very Highly Effective
Research Resources and Materials	4.42	0.560	Very Highly Effective
Time Management and Scheduling Support	4.42	0.563	Very Highly Effective
Peer Collaboration and Support Networks	4.43	0.549	Very Highly Effective
Overall	**4.43**	**0.578**	**Very Highly Effective**

The findings reveal that professional development and support interventions were perceived as very highly effective (M = 4.43, SD = 0.578). Among the indicators, access to professional development training had the highest mean, while mentoring and coaching support had the lowest, although both were still within the same interpretation range.

These results suggest that structured training programs significantly enhance teachers' competencies in action research writing. This supports the principles of Adult Learning Theory by Malcolm Knowles, which posits that adults learn best when training is relevant, problem-centered, and directly applicable to their professional roles. The strong effectiveness of training indicates that teachers benefit from learning experiences aligned with their classroom realities.

However, the relatively low mean for mentoring suggests that, while support systems exist, their accessibility or consistency may be limited. This aligns with the findings of Steve Borg (2015), who emphasized that sustained mentoring is critical in bridging the gap between theoretical knowledge and practical research application.

Furthermore, the results are supported by Lev Vygotsky's Social Constructivist Theory, which highlights the importance of collaboration and guided learning. Peer collaboration and coaching allow teachers to operate within their "zone of proximal development," enhancing their ability to perform complex research tasks.

Additionally, John Sweller's Cognitive Load Theory explains that structured support systems reduce mental burden, enabling teachers to focus on higher-order tasks such as research writing. This reinforces the need for balanced interventions that include training, mentoring, and resource provision.

Level of Elementary Teachers' Skills in Writing Action Research

Table 2. Level of Elementary Teachers' Skills in Writing Action Research

Indicator	Mean	SD	Interpretation
Define the research problem	4.20	0.807	Exemplary
Dissemination planning	4.19	0.922	Highly Proficient
Writing conclusions and recommendations	4.18	0.833	Highly Proficient
Writing methodology	4.17	0.879	Highly Proficient

Ethical considerations	4.17	0.898	Highly Proficient
Citation and referencing	4.17	0.924	Highly Proficient
Designing research tools	4.15	0.843	Highly Proficient
Literature review writing	4.14	0.817	Highly Proficient
Presenting findings and discussion	4.14	0.845	Highly Proficient
Formulating research questions	4.14	0.854	Highly Proficient
Overall	**4.17**	**0.768**	**Highly Proficient**

The findings indicate that teachers demonstrated highly proficient action research writing skills (M = 4.17, SD = 0.768). Teachers excelled most in defining research problems, while they showed relatively lower proficiency in literature review writing and data presentation.

This suggests that teachers are strong in practice-based competencies but encounter challenges in academic writing tasks that require synthesis and critical analysis. This observation aligns with the study of Baconga and Guno (2025), which found that teachers often possess strong experiential knowledge but struggle with formal scholarly writing.

The findings are further supported by Donald Schön's Reflective Practice Theory, which explains that teachers naturally develop expertise through reflection on classroom experiences. This explains their strength in identifying research problems rooted in real teaching situations.

However, difficulties in literature review and academic writing reflect higher-order cognitive demands. This aligns with Lorin Anderson and David Krathwohl's revision of Bloom's Taxonomy, which emphasizes that skills such as analysis, synthesis, and evaluation require deeper training and structured learning support.

Additionally, the findings support those of Tindowen et al. (2019), who noted that teachers often struggle with formatting, organization, and the technical aspects of research writing. This highlights the need for targeted interventions focusing on academic writing and literature synthesis.

Significant Relationship Between Professional Development and Research Writing Ability

Table 3. Test of Significant Relationship Between Professional Development and Teachers' Ability to Write Action Research

Variable	**r-value**	**p-value**	**Interpretation**
Professional Development Training	.463	.000	Significant
Mentoring and Coaching Support	.409	.000	Significant
Research Resources and Materials	.454	.000	Significant
Time Management and Scheduling	.498	.000	Significant
Peer Collaboration	.427	.000	Significant
Overall	**.499**	**.000**	**Significant**

Table 3 presents the test of the significant relationship between professional development and support interventions and teachers' ability to write action research. The results reveal that all variables have p-values of .000, indicating a significant relationship. The results revealed a significant moderate positive relationship (r = .499, p = .000) between professional development and teachers' ability to write action research.

Among the variables, time management and scheduling support showed the highest correlation, indicating that time availability is a critical factor in research productivity. This supports Tarraya (2023, 2025), who identified time constraints as a primary barrier to teacher research engagement.

This finding is also explained by the Job Demands–Resources Theory, which posits that reducing workload and increasing access to resources enhances employee performance. Teachers who are given sufficient time and institutional support are more likely to complete complex academic tasks such as research writing.

Moreover, the results are consistent with Corpuz (2023) and Tanate and Llorente (2025), who emphasized that professional development, access to resources, and collaboration significantly improve teachers' research competence.

The significant relationship confirms that teacher proficiency is not solely based on individual capability but is strongly influenced by institutional support systems. This reinforces the concept of reciprocal determinism in Albert Bandura's Social Cognitive Theory, where behavior, environment, and personal factors interact to influence performance outcomes.

CONCLUSION

The findings demonstrate that professional development and support interventions play a critical role in enhancing teachers' action research writing skills. Teachers exhibit strong competence in identifying research problems, reflecting their experiential knowledge; however, they require further development in technical academic writing and literature synthesis.

The study confirms that institutional support, particularly training, time allocation, mentoring, and resources, is a key determinant of teacher proficiency. Furthermore, the significant relationship between support interventions and research-writing ability underscores the importance of a holistic support system in fostering a sustainable research culture among teachers.

RECOMMENDATIONS

Based on the findings and conclusions, the following recommendations are hereby put forth:

Teachers are strongly encouraged to actively participate in all available training and utilize the provided resources to maximize their research output. By engaging with mentors and collaborating with peers, they can simplify complex data tasks and overcome writing blocks. Consistently applying these supports allows teachers to refine their technical skills and sustain the motivation needed to complete impactful, evidence-based classroom inquiries.

Teachers may leverage their strong proficiency in problem identification to focus on mastering more technical aspects of research. They may engage in targeted exercises for literature synthesis and academic writing to bridge existing gaps. By prioritizing these advanced skills, teachers can transition from basic competency to full scholarly independence and more rigorous evidence-based practice.

School heads are strongly encouraged to institutionalize structured research support by prioritizing administrative relief and providing necessary digital tools. Since interventions directly drive proficiency, leaders may ensure that dedicated time and consistent mentoring are available. By formalizing these support systems, school heads can sustain a culture of inquiry that significantly boosts the quality and volume of teachers' academic research output.

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