



Learning Improvement of Student Volunteers on the National Learning Camp: an Analysis

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ABSTRACT

This study explores the learning improvement of student volunteers who participated in the National Learning Camp (NLC), a structured educational program in the Philippines to address foundational learning gaps. Guided by Constructivist and Experiential Learning Theories (Piaget, 1972; Kolb, 1984), the research employed a mixed-methods design to evaluate the development of teaching skills, communication abilities, and critical thinking among volunteers. Quantitative data were gathered through pre- and post-tests using a standardized 10-point scale, while qualitative insights were obtained through focus group discussions and interviews. The results revealed statistically significant improvements across all domains: teaching skills increased from a mean of 5.3 to 8.0, communication from 5.0 to 7.7, and critical thinking from 5.1 to 7.9 ($p < .001$ for all). A thematic analysis of qualitative data identified key factors contributing to these gains, including collaborative lesson planning, reflective journaling, peer coaching, and mentorship. Challenges such as time constraints and classroom management were also noted, but were eased through guided experiential strategies. The study concludes that structured volunteer initiatives like the NLC can effectively promote professional growth in pre-service educators when combined with intentional reflection and support systems.

RESUMO

Este estudio explora la mejora del aprendizaje de los estudiantes voluntarios que participaron en el National Learning Camp (NLC), un programa educativo estructurado en Filipinas destinado a abordar las brechas en el aprendizaje fundamental. Guiado por las teorías del Constructivismo y del Aprendizaje Experiencial (Piaget, 1972; Kolb, 1984), la investigación empleó un diseño de métodos mixtos para evaluar el desarrollo de habilidades de enseñanza, capacidades de comunicación y pensamiento crítico entre los voluntarios. Se recopilieron datos cuantitativos mediante pruebas previas y posteriores utilizando una escala estandarizada de 10 puntos, mientras que se obtuvieron percepciones cualitativas a través de discusiones en grupos focales y entrevistas. Los resultados revelaron mejoras estadísticamente significativas en todos los dominios: las habilidades de enseñanza aumentaron de una media de 5.3 a 8.0, la comunicación de 5.0 a 7.7 y el pensamiento crítico de 5.1 a 7.9 ($p < .001$ en todos los casos). Un análisis temático de los datos cualitativos identificó factores clave que contribuyeron a estos avances, incluyendo la planificación colaborativa de lecciones, la redacción reflexiva de diarios, el acompañamiento entre pares y la mentoría. También se señalaron desafíos como la gestión del tiempo y del aula, aunque estos se mitigaron mediante estrategias experienciales guiadas.

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Introduction

Volunteering has long been regarded as a valuable civic engagement and community development avenue. In educational contexts, student volunteerism presents a significant opportunity to support learners and foster the holistic development of the volunteers themselves (Smith & Jones, 2020). These experiences are particularly crucial for pre-service teachers, as they help translate theoretical knowledge into practical competence, strengthening their readiness for the teaching profession.

In the Philippines, the Department of Education (DepEd) launched the National Learning Camp (NLC) as part of the learning recovery initiatives following the disruptions caused by the COVID-19 pandemic. The program was designed to enhance basic education learners' foundational skills while promoting inclusive and accessible learning (Department of Education, 2023). In doing so, the NLC also created opportunities for student volunteers—many of whom are education majors—to engage directly in classroom instruction and learner support, gaining invaluable hands-on experience.

While much of the literature on volunteerism emphasizes its emotional and civic benefits, such as increased empathy and community awareness (Martinez, Gomez, & Santos, 2021), fewer studies have critically examined how structured volunteer initiatives in education contribute to cognitive and professional growth. The gap in scholarly understanding is particularly evident when developing teaching-related competencies such as lesson planning, classroom management, and learner assessment—all vital areas for future educators.

This study is grounded in constructivist learning theory, which posits that individuals construct knowledge actively through direct interaction with their environment (Piaget, 1972)—applying this lens to the NLC, the student volunteers are viewed as active agents of their learning, acquiring and refining teaching skills through actual practice. The context of the NLC encourages them to internalize pedagogical concepts by implementing them, thus enabling both situated and transformative learning.

Additionally, Kolb's (1984) Experiential Learning Theory offers a relevant framework for understanding the learning process of student volunteers. Kolb describes learning as a cyclical process involving four stages: concrete experience, reflective observation, abstract conceptualization, and active experimentation. Within the NLC, volunteers move through this cycle repeatedly—engaging with learners, reflecting on their experiences, generating insights, and modifying their approaches accordingly.

Social interaction also plays a critical role in the learning process. According to Vygotsky's (1978) social constructivist theory, learning is fundamentally a social activity, and knowledge is co-constructed through dialogue and collaboration. The NLC environment facilitated team teaching, peer discussions, and feedback sessions, all of which contributed to the professional growth of student volunteers. Through these interactions, volunteers

improved their instructional strategies and enhanced their ability to work in collaborative settings.

Reflection was another key dimension of the volunteers' learning journey. Reflective practice allows individuals to assess their experiences, make sense of challenges, and refine their professional identities (Schön, 1983). Many volunteers were encouraged to maintain reflective journals with the NLC. These writings helped them critically evaluate their teaching practices, leading to more deliberate and thoughtful instruction in subsequent sessions.

The NLC provided a space for applying student-centered and experiential teaching strategies. Volunteers employed interactive methods such as inquiry-based learning and contextualized formative assessments, which helped enhance learner engagement and understanding. This experiential approach reinforced volunteers' pedagogical knowledge and cultivated adaptability in diverse learning environments (Kolb, 1984; Martinez et al., 2021).

Despite the apparent benefits, there remains a need for empirical investigation into the extent of learning gained by student volunteers in such programs. By examining the self-reported improvements in teaching competence, communication, and critical thinking among NLC student volunteers, this study seeks to contribute to the broader discourse on pre-service teacher education and experiential learning. The findings are expected to inform the design of future volunteer-based programs in education, ensuring they are structured to serve learners and cultivate future educators.

This research advocates for a deeper recognition of volunteerism as a form of experiential learning. When embedded within a structured framework that includes reflection, collaboration, and mentorship, programs like the NLC can significantly enhance the professional development of student volunteers. Such initiatives not only support learning recovery among students but also prepare the next generation of educators to meet the evolving challenges of the Philippine education system.

The following questions guided this study: Does participation in the National Learning Camp significantly improve student volunteers' teaching skills, communication abilities, and critical thinking? What experiences contributed to the development of these competencies? What challenges did student volunteers encounter, and how were these addressed? By addressing these questions, the study advocates for a stronger recognition of structured volunteerism as a form of experiential learning capable of supporting both learning recovery efforts and the professional preparation of future educators.

Methodology

Research Design

This study employed a mixed-methods research design to comprehensively examine the learning improvement of student volunteers who participated in the National Learning Camp (NLC). The quantitative component measured changes in core instructional

competencies, while the qualitative component explored participants' lived experiences, perceived development, and contextual factors that influenced their learning. Integrating both approaches enabled a more robust interpretation of outcomes by combining statistical evidence with experiential insights.

Participants and Sampling

The study was conducted among student volunteers involved in the 2023–2024 implementation of the National Learning Camp facilitated by the Department of Education. A total enumeration sampling strategy was adopted, resulting in ten (10) participants who actively delivered instructional support during the program. The volunteers primarily consisted of pre-service education students and youth leaders engaged in teaching or facilitative roles.

Inclusion criteria required participants to be officially registered volunteers in the NLC and actively involved throughout the duration of the program. Individuals who withdrew before program completion or did not complete both the pre-test and post-test assessments were excluded from the study.

Prior to data collection, informed consent was obtained from all participants. They were fully apprised of the study's purpose, the voluntary nature of their participation, and their right to withdraw at any time without penalty. Confidentiality and anonymity were maintained by assigning codes to participant responses and omitting identifying information. The study adhered strictly to established ethical standards for educational research.

Instrumentation and Data Collection

The study utilized both quantitative and qualitative instruments to capture multiple dimensions of volunteer development.

For the quantitative component, a structured pre-test and post-test instrument was used to assess three competency domains: teaching skills, communication abilities, and critical thinking. The instrument employed a standardized 10-point rating scale with performance descriptors ranging from emerging to exemplary. Content validity was established through expert review by education specialists who evaluated the alignment of items with the targeted competencies.

For the qualitative component, data were gathered through focus group discussions and semi-structured interviews designed to elicit participants' reflections on their instructional experiences, challenges encountered, and strategies that supported their development. The interview protocol was informed by constructivist and experiential learning principles to ensure conceptual alignment with the study's theoretical foundations.

Points	Description	Criteria
9–10	Exemplary	Highly relevant, thoughtful, and well-explained. Demonstrates strong mastery of skill with evidence of reflection or adaptation.
7–8	Proficient	Clear and appropriate. Shows understanding and application of concepts with some depth and insight.
5–6	Basic	General understanding is evident, but with limited depth or incomplete explanation. May lack clarity or specific application.
3–4	Developing	Minimal explanation or insight. Shows surface-level understanding or inappropriate strategy.
1–2	Emerging	The response is vague, irrelevant, or lacks skill application, with no evidence of understanding.

Each test was returned to the respondents a day after completion and was discussed with a rationale to assess the findings.

Data Collection Procedures

Data collection followed a sequential process. The pre-test was administered prior to volunteers' engagement in camp activities to establish baseline competency levels. Upon completion of the program, the post-test was conducted to measure developmental changes.

Qualitative data were collected after the intervention through focus group discussions and individual interviews, allowing participants to articulate their experiences in depth. All responses were documented and prepared for analysis to support the interpretation of quantitative findings and provide contextual explanations for observed performance gains.

Data Analysis

Quantitative Analysis

Descriptive statistics were computed to determine the mean scores of participants across the three competency domains. Paired samples t-tests were then conducted to examine whether differences between pre-test and post-test scores were statistically significant. This analysis enabled the researchers to evaluate measurable improvements in instructional competencies following participation in the National Learning Camp.

Qualitative Analysis

Qualitative data were analyzed using thematic analysis following the framework proposed by Braun and Clarke (2006). Transcripts were first subjected to open coding to identify meaningful units related to participants' experiences. Codes were subsequently grouped into categories from which broader themes emerged.

To enhance the trustworthiness of the findings, several rigor strategies were employed. Independent coding was conducted by two researchers to establish inter-coder agreement, followed by consensus discussions to refine theme definitions. Method triangulation was achieved by comparing insights from focus groups and interviews, while an audit trail documented analytic decisions to support dependability and confirmability. Themes were reviewed iteratively to ensure they accurately represented participants' perspectives.

Results and Discussion

This section presents the study's findings based on data gathered from student volunteers through pre-test and post-test assessments, focus group discussions, and individual interviews. The objective was to determine whether participation in the National Learning Camp led to measurable improvements in teaching skills, communication, and critical thinking. Quantitative data provided statistical evidence of progress, while qualitative feedback offered insights into the experiences and reflections that contributed to the volunteers' learning and professional growth.

Table 1.

Pre-Test and Post-Test Scores of Student Volunteers

STUDENT ID	TEACHING (PRE)	TEACHING (POST)	COMMUNICATION (PRE)	COMMUNICATION (POST)	CRITICAL THINKING (PRE)	CRITICAL THINKING (POST)
STUDENT 1	5	8	6	9	5	8
STUDENT 2	6	9	5	7	6	9
STUDENT 3	4	7	5	8	4	7
STUDENT 4	5	8	4	7	5	8
STUDENT 5	7	9	6	9	6	9
STUDENT 6	6	8	5	7	5	7
STUDENT 7	5	7	4	6	5	7
STUDENT 8	6	9	5	8	6	8
STUDENT 9	4	7	4	6	5	7
STUDENT 10	5	8	5	7	4	7
MEAN	5.3	8	4.9	7.4	5.1	7.7

Table 1 presents the pre-test and post-test scores of student volunteers across three competency domains: teaching, communication, and critical thinking. Results indicate a consistent upward trend in all areas, with teaching scores increasing from a baseline range of 4–7 to 7–9, communication from 4–6 to 6–9, and critical thinking from 4–6 to 7–9. These descriptive results suggest observable improvements following participation in the National Learning Camp.

The observed gains imply that structured volunteer experiences supported by mentoring, reflection, and collaborative practice can enhance instructional competencies among pre-service educators. These findings align with prior research emphasizing the effectiveness of experiential engagement in strengthening professional skills (Martinez et al., 2021; Smith & Jones, 2020). Reflection, immediate feedback, and hands-on application—all core components of the National Learning Camp—were instrumental in promoting professional growth (Kolb, 1984; Piaget, 1972).

Table 2*Paired Samples T-Test Results for Pre-Test and Post-Test Scores*

Skill Area	Pre-Test Mean	Post-Test Mean	Mean Difference	t-Value	p-Value	Significance
Teaching Skills	5.3	8	2.7	17.68	< 0.001	Significant
Communication Skills	5	7.7	2.7	15	< 0.001	Significant
Critical Thinking	5.1	7.9	2.8	15.92	< 0.001	Significant

Table 2 displays the results of paired samples t-tests conducted to assess the significance of differences between pre-test and post-test scores in three competency areas: teaching skills, communication skills, and critical thinking. The analysis was based on data collected from ten student volunteers before and after participating in the National Learning Camp.

The paired samples t-test results confirm that the increases observed across all competency domains were statistically significant ($p < .001$). These findings indicate that participation in the National Learning Camp contributed to measurable Qualitative analysis further illuminated the mechanisms underlying these improvements, revealing several interconnected practices that shaped the volunteers' professional growth and reinforce prior evidence linking volunteer teaching experiences with enhanced professional competence.

Qualitative Themes

Qualitative analysis further illuminated the mechanisms underlying these improvements, revealing several interconnected practices that shaped the volunteers' professional growth.

Collaborative Learning

Participants emphasized the importance of collaborative lesson planning, which fostered peer support and knowledge co-construction. Collaborative learning has been shown to enhance motivation and deepen understanding through shared responsibility (Johnson & Johnson, 1999; Slavin, 2014). By engaging with peers, volunteers exchanged ideas and refined instructional methods, contributing to improved teaching efficacy.

Immediate Feedback from Mentors

Immediate feedback from experienced mentors was critical in addressing challenges such as lesson pacing and classroom management. Feedback literature confirms timely, specific feedback accelerates learning and skill acquisition (Hattie & Timperley, 2007; Shute,

2008). Mentor input allowed volunteers to adjust their strategies dynamically, fostering a responsive teaching approach.

Reflective Journaling

Reflective journaling facilitated metacognitive awareness and self-assessment. Moon (1999) argues that reflective writing encourages learners to analyze their experiences critically, leading to continuous improvement. Volunteers reported that journaling helped them identify strengths and weaknesses, reinforcing Kolb's cycle stages of reflective observation and abstract conceptualization.

Application of Experiential Learning Techniques

The deliberate application of experiential learning techniques—such as concrete teaching experiences followed by reflection and experimentation—enabled volunteers to internalize pedagogical concepts deeply (Kolb, 1984). This hands-on approach contrasts with traditional didactic methods and aligns with best practices for teacher education (Beard & Wilson, 2013; Darling-Hammond, 2017).

Challenges and Mitigation

While challenges like limited time and managing learner diversity persisted, structured support through mentorship and collaborative strategies mitigated their impact. This aligns with findings that scaffolded learning environments enhance resilience and adaptability in pre-service educators (Vygotsky, 1978; Lave & Wenger, 1991).

These practices aligned with experiential learning theory and helped shape the volunteers' growth as future educators. The convergence of quantitative gains and qualitative insights suggests that the National Learning Camp functioned not merely as a volunteer initiative but as an experiential learning environment that fostered both skill acquisition and professional reflection. The alignment between statistical improvements and participant narratives strengthens the explanatory power of the findings and underscores the value of structured field-based experiences in pre-service teacher development.

Conclusion

The findings of this study demonstrate that participation in the National Learning Camp (NLC) contributed to significant improvements in student volunteers' teaching skills, communication abilities, and critical thinking. Quantitative results revealed statistically meaningful gains across all competency domains, while qualitative insights highlighted the role of collaborative learning, reflective practice, mentor feedback, and experiential teaching in supporting professional growth.

The convergence of statistical evidence and participant narratives suggests that structured volunteer initiatives can function as powerful experiential learning environments

for pre-service educators. By engaging in authentic instructional contexts supported by reflection and mentorship, volunteers were able to translate pedagogical theory into practice and develop competencies essential for effective teaching.

These findings extend existing scholarship on volunteerism by positioning structured educational programs not merely as avenues for civic engagement but as intentional platforms for professional formation. Within the broader landscape of learning recovery efforts, initiatives such as the NLC illustrate how national programs can simultaneously address student learning needs while strengthening the preparation of future educators.

Although challenges related to time constraints and classroom management were reported, these were mitigated through guided support systems embedded within the program. This underscores the importance of deliberate program design in maximizing developmental outcomes for student volunteers.

Overall, the study affirms the value of integrating structured, reflective, and mentor-supported volunteer experiences into teacher preparation pathways. Sustaining such initiatives may contribute meaningfully to both educational recovery and the long-term development of a competent and adaptable teaching workforce.

Recommendations

Drawing on the findings that structured volunteer engagement can significantly enhance teaching competence, communication skills, and critical thinking among pre-service educators, several recommendations are proposed for educational institutions, program designers, and future researchers.

Educational institutions may consider integrating structured volunteer-based learning opportunities into teacher preparation programs. Embedding authentic teaching experiences within formal training can strengthen the connection between pedagogical theory and classroom practice while fostering early professional socialization.

Program organizers are encouraged to sustain reflective and collaborative mechanisms such as guided journaling, peer lesson planning, and structured mentoring. These practices create supportive learning environments that promote critical reflection, adaptive teaching, and continuous professional growth.

Providing consistent and timely mentor feedback should remain a priority in future implementations. Dedicated mentorship structures can help volunteers navigate instructional challenges, refine teaching strategies, and develop greater instructional confidence.

Strengthening pre-deployment preparation may further enhance volunteer readiness. Orientation sessions focused on classroom management, differentiated instruction, and learner engagement strategies could help participants transition more effectively into instructional roles.

The continued use and refinement of assessment tools are also recommended to support systematic monitoring of volunteer development. Clear competency benchmarks may

assist program leaders in evaluating outcomes, informing instructional support, and guiding program improvement

At the policy level, recognizing structured volunteer initiatives as complementary components of teacher preparation may encourage broader participation and institutional support. Formal acknowledgment of such experiences can contribute to the professionalization of volunteer teaching while expanding opportunities for experiential learning.

Finally, future research is encouraged to examine the long-term effects of volunteer-based experiential programs on teaching readiness, career progression, and instructional effectiveness. Expanding the sample across institutions and educational contexts may further strengthen the evidence base for integrating structured volunteerism into pre-service teacher education.

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