

Incorporating Action Research in Teacher Education Programs: Opportunities and Limitations

Genalyn P. Lualhati*

College of Teacher Education, Batangas State University,
The National Engineering University, JPLPC Malvar, Malvar, Batangas, Philippines

E-mail: mrsualhati@gmail.com

*Corresponding author

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Abstract

In the rapidly evolving landscape of 21st century education, teacher preparation programs play a significant role in shaping the educators of tomorrow. This qualitative study aims to reveal both the opportunities and limitations of incorporating action research into experiential learning courses within teacher education programs. The researcher conducted a comprehensive thematic analysis to examine and categorize the participants' responses. Through in-depth interviews with 30 senior education students at Batangas State University, The National Engineering University, JPLPC Malvar, Batangas, Philippines, during the academic year 2021-2022, it was revealed that the opportunities arising from action research include enhanced teaching skills and pedagogy, problem-solving and reflective practice, collaborative learning and peer interaction, as well as professional growth and ethical awareness. Moreover, participants also encounter limitations, such as time constraints, resource accessibility, and ethical dilemmas. To address these challenges and capitalize on the opportunities, the study recommends strategies for improved time management, equitable resource access, and ethical training and support within teacher education programs. The study also suggests future research avenues, including longitudinal studies and comparative analyses, to further enhance action research's role in shaping the educators of the future.

Keywords: Action research, Teacher education program, Opportunities and limitation, 21st Century education

Introduction

Education faces a myriad of challenges and opportunities in the 21st century. Central to this are the educators who shape the future of our societies through their commitment to fostering knowledge, critical thinking, and lifelong learning. As the demands on educators continue to evolve, so too must the methods by which they are prepared for their essential roles (Freeman, 1989). Teacher Education Institutions (TEIs) need to nurture the next generation of educators, who ready to face the complex and dynamic landscape of modern education.

In recent years, the integration of action research into teacher education programs has emerged as an avenue for producing educators who are not just proficient but also adaptive and innovative. In the Philippines, Teacher Education Institutions (TEIs) have incorporated action research into experiential learning courses such as Field Studies and Teaching Internship. These courses are stipulated in Commission on Higher Education Memorandum Orders (CMO) No. 74, 75, and 80, series 2017, as essential components of teacher preparation. These year-long engagements support authentic experiential learning through field study and actual classroom immersion for prospective teachers. The process begins with field study experiences involving observation and participation, progressing to teaching internship and guided/mentored classroom teaching. Notably, action research is encouraged to commence during Field Study courses and conclude during the Internship phase. This integration helps future educators apply action research in real classrooms, improving teaching and fostering reflection in teacher education.

McKay (1992) characterized action research as dynamic and reflective in nature. This empowers educators to investigate their own teaching practices, engage in problem-solving, and contribute to a culture of continuous improvement. Its practical orientation and capacity to bridge theory and practice make it an effective tool for teacher preparation. Its essence lies in the belief that educators should not merely be consumers of educational knowledge but active contributors to its creation and evolution. Zuber-Skerrit (1992) said that engaging education students in systematic inquiry and self-reflection could enhance their teaching skills, address classroom challenges proactively, and develop a heightened sense of ethical responsibility towards their students.

While the integration of action research into teacher education programs presents numerous opportunities for educator development as previously discussed, it is equally essential to acknowledge the limitations inherent in this process. Zhou (2013) mentioned that limitations may arise due to lacking sufficient training on action research, potentially affecting the quality of supervision and mentorship, while resistance to change within educational institutions, stemming from deeply ingrained traditional teaching methods and structures, can also hinder the integration and impact of action research. Moreover, teachers are frequently required to engage in responsibilities beyond teaching, such as attending meetings and handling administrative duties (Brown, 2002). As a result, a significant number of educators have found it challenging to carry out action research initiatives within school settings.

With the aim of understanding how action research can empower future educators and enrich teacher education programs, this study investigates the multifaceted dimensions of action research's integration in experiential learning courses through uncovering the opportunities it offers and the limitations it imposes. The researcher, who is handling experiential learning courses, may use the findings of this study to enhance the curriculum design, adapt pedagogical approaches, and implement tailored support mechanisms. These insights can inform actionable recommendations in the college, leading to a more effective and

responsive teacher education program that equips future educators with the necessary research skills and ethical awareness to excel in the ever-evolving field of education.

Objectives of the Study

This study aims to reveal the opportunities and limitations in incorporating action research within teacher education programs among the senior education students in one state university in Batangas, Philippines during the Academic Year 2021-2022. Specifically, it aims to identify the opportunities and limitations of incorporating action research in experiential learning courses within teacher education programs; categorize participant's answers during interview based on essential themes and patterns; and formulate actionable recommendations to enhance the integration of action research in teacher education programs.

Theoretical Framework

The Experiential Learning Theory by Kolb (1984) provides a comprehensive background for understanding the process of learning through experience, which aligns well with the objectives of this study on incorporating action research within teacher education programs.

Kolb's theory emphasizes the importance of concrete experience and reflective observation. By incorporating action research within teacher education programs, senior education students engage in practical teaching experiences (concrete experience) and subsequently reflect on these experiences. This reflective process allows them to identify opportunities and limitations of action research in enhancing their learning. The theory suggests that through this reflective process, students can gain insights into the effectiveness of action research as a tool for professional development in teaching.

Moreover, the theory highlights the four-stage process of experiential learning such as concrete experience, reflective observation, abstract conceptualization, and active experimentation. In the interview proper, the participants' responses can be categorized based on these stages. Their experiences and reflections may correspond to concrete experience and reflective observation stages, while their conceptualizations and proposed actions may align with abstract conceptualization and active experimentation stages. This categorization helps in identifying essential themes and patterns in participants' perceptions and experiences regarding the incorporation of action research in teacher education programs.

This paper also recognizes the importance of active experimentation, where learners test new ideas or concepts in practice. This may involve implementing actionable recommendations derived from the insights gained through the experiential learning process. By aligning recommendations with Kolb's framework, the researcher ensures that they are grounded in the stages of experiential.

Methodology

Research Design

This study utilized a qualitative research approach, as it aims to explore and understand the opportunities and limitations associated with incorporating action research in teacher education programs. Qualitative research allows for in-depth exploration and analysis of participants' experiences and perspectives (Creswell, 2014).

Participants

The study purposively selected 30 teacher education students in one state university in Batangas, Philippines. These participants, at the time of the study, were in the final year of their respective teacher education programs, which included Bachelor of Secondary Education (BSEd), Bachelor of Elementary Education (BEEd), and Bachelor of Physical Education (BPEd). The selection criteria for participants included their successful completion of experiential learning courses, particularly Field Study 1 and 2 and Teaching Internship program, within public schools regulated by the Philippine Department of Education (DepEd).

The choice of participants from the last year of enrolment ensures that they possess a comprehensive background in educational practices, having engaged in both theoretical coursework and practical teaching experiences. This diverse representation across various education programs will provide valuable insights into the opportunities and limitations associated with incorporating action research within teacher education, as these students prepare to enter the field as educators.

Data Gathering Tools and procedure

A formal letter was prepared by the researcher to request permission from the concerned authorities to conduct interviews with participants. This request emphasized the voluntary nature of participants' involvement and the importance of their insights. The purpose of seeking permission was to ensure ethical compliance and obtain official approval for engaging with participants.

The researcher met with participants in three different groups. These groupings were designed to facilitate interviews and discussions efficiently. Each group consisted of 10 education students, with consideration of their program. This grouping approach allowed for a structured and organized data collection process while ensuring that individual voices from diverse program backgrounds were heard.

Prior to participating in the interviews, each participant provided informed consent. The consent process included a thorough explanation of the study's objectives, the voluntary nature of participation, and the assurance of confidentiality. Participants were encouraged to ask questions and seek clarification before granting their consent, ensuring their full understanding and agreement.

In order to gather insightful information regarding the opportunities and limitations of integrating action research into teacher education programs, a set of structured interview questions was employed, aligning closely with the study's specific objective.

To gain responses on the opportunities of action research integration, these questions were given:

- Can you describe your experiences with action research during your Field Study and Teaching Internship?
- How has the inclusion of action research influenced your understanding of teaching and learning?
- Can you share any specific examples of how action research has benefited your practical teaching experiences?
- Do you think action research has improved your ability to identify and address challenges in the classroom? If so, how?
- Are there any particular teaching strategies or methods that you have developed or refined through action research?"

On the other hand, to elicit responses regarding the limitations of action research integration, the following questions were used:

- What challenges or obstacles have you encountered when conducting action research as part of your teacher education program?
- Have you faced any difficulties in collaborating with peers or instructors on action research projects?
- Are there any ethical considerations or dilemmas you've encountered while conducting action research in educational settings?
- Do you believe there are any limitations in the support or guidance provided to students engaging in action research within your program?
- Can you share any personal or program-related factors that may hinder the successful integration of action research into teacher education?

Participants' responses during the interviews were transcribed verbatim by the researcher. The encoded data accurately represented participants' answers without translation since the interviews were conducted in English, the language used by the participants. To ensure the accuracy and validity of the interview data, a member checking process was conducted. Participants were provided with transcripts of their interviews and invited to review them for accuracy. Any corrections or clarifications suggested by participants were incorporated into the final dataset. This member checking procedure enhanced the credibility of the study's findings by validating participants' perspectives and ensuring their voices were accurately represented.

Data analysis

The data analysis process commenced with thorough data preparation, accurate transcription and organization of interview transcripts. To gain a deep understanding of the content, multiple readings of the transcripts were conducted. Thematic analysis was employed as the primary analytical approach (Braun & Clarke, 2006). During initial coding, preliminary codes were systematically generated to summarize key ideas within the data. These codes were subsequently applied to relevant segments of the transcripts, and thematic categories were formed through the systematic grouping of coded data. These emergent themes underwent further development to ensure that they accurately reflected the essence of the data and aligned with the study's objectives.

Throughout the analysis, a continuous review and improvement process were maintained. Data interpretation was performed in the context of the research objectives, and the significance of each thematic category was thoroughly explored. Findings were presented comprehensively in a research report, which incorporated significant statements and quotes from the interview data to illustrate key points.

Results

The succeeding tables present the opportunities and limitations in incorporating action research in teacher education programs.

Opportunities in Incorporating Action Research in Teacher Education Programs

Table 1 presents the opportunities identified by respondents in their engagement with action research. These opportunities reflect the valuable experiences and benefits senior education students gained from their involvement in action research.

As reflected in the table, participants said that action research played a significant role in their development as educators. They explained that it helped them develop innovative teaching strategies, adapt their methods based on research findings, and deepen their understanding of effective pedagogy. These responses indicate that action research is a valuable tool for enhancing teaching skills and pedagogical knowledge. It encourages educators to be proactive in seeking improvement, experiment with new approaches, and reflect on their teaching practices. This implies that the college can benefit from incorporating action research as a fundamental component of the program. Providing students with opportunities to engage in action research can lead to more effective teaching strategies, greater adaptability in response to student needs, and a deeper understanding of the art and science of pedagogy.

Moreover, the college may recognize the value of action research as a means of equipping future educators with problem-solving skills and a reflective mindset. Encouraging educators to proactively identify and address classroom challenges can lead to more effective teaching and improved learning outcomes. These implications are drawn from the participants' answers stating that problem-solving aspects of action research empowered them to identify and address challenges in their classrooms. They also emphasized the enlightening effect of reflecting on their teaching practices through action research. These data suggest that action research promotes a proactive approach to problem-solving and encourages educators to critically examine their teaching practices. It fosters a culture of self-reflection, which is essential for continuous improvement.

Table 1 Opportunities

Themes	Significant Statements	Researcher's Commentary
Enhanced Teaching Skills and Pedagogy	<p><i>"Action research helped me develop innovative teaching strategies."</i></p> <p><i>"I learned to adapt my teaching methods based on my action research findings."</i></p> <p><i>"Through action research, I gained a deeper understanding of effective pedagogy."</i></p>	Action research helps senior education students improve their teaching skills and methods by encouraging them to try new strategies, adapt their teaching, and gain a better understanding of effective pedagogy.
Problem-Solving and Reflective Practice	<p><i>"Through action research, I identified a challenge in my classroom and found a solution."</i></p> <p><i>"Reflecting on my teaching practices through action research has been enlightening."</i></p> <p><i>"Action research empowered me to address classroom issues proactively."</i></p>	Action research empowers senior education students to proactively address classroom challenges, fosters continuous improvement through self-reflection, and enhances teaching quality by promoting problem-solving abilities and a culture of ongoing improvement.
Collaborative Learning and Peer Interaction	<p><i>"Collaborating with peers on action research projects enriched my learning experience."</i></p> <p><i>"Working with instructors allowed me to gain valuable guidance and feedback."</i></p> <p><i>"Peer discussions during action research enhanced my understanding of educational concepts."</i></p>	Action research offers opportunities for collaborative learning and peer interaction, enriching the learning experience, providing mentorship from instructors, and deepening understanding of educational concepts to improve overall learning outcomes.
Professional Growth and Ethical Awareness	<p><i>"Action research helped me become more aware of ethical considerations in education."</i></p> <p><i>"I feel a stronger sense of responsibility towards my students through action research."</i></p> <p><i>"Engaging in action research has inspired me to pursue lifelong learning in education."</i></p>	Participating in action research promotes ethical awareness, responsible teaching, and a dedication to high-quality education while inspiring lifelong learning and professional growth in education.

The table also shows that through action research the participants experience to collaborate with peers and seek guidance from supervising instructors. They also noted that peer discussions deepened their understanding of educational concepts. These indicate that action research provides a platform for sharing insights, receiving mentorship, and gaining a deeper understanding of educational theories and practices. This offers valuable opportunities for collaborative learning and peer interaction. These data imply that faculty may actively promote and facilitate action research because this can lead to a more enriched and effective

learning environment, where students and faculty can benefit from shared insights and continuous professional growth.

In addition, incorporating action research into teacher education programs can be a powerful way to equip future educators with the skills, mindset, and ethical awareness necessary for effective and responsible teaching. These findings underscore the value of action research as a transformative learning experience for senior education students. They revealed that this heightened their awareness of ethical considerations in education, instilled a stronger sense of responsibility towards students, and inspired them to pursue lifelong learning in education. Hence, it can be deduced that engaging in action research goes beyond skill development; it also contributes to personal and professional growth. It fosters ethical awareness, a commitment to responsible teaching, and a dedication to continuous professional development.

Limitations in Incorporating Action Research in Teacher Education Programs

Table 2 presents the limitations encountered by senior education students in doing action research. These limitations encompass challenges related to time constraints, resource accessibility, and ethical considerations.

Table 2 Limitations

Themes	Significant Statements	Researcher's Commentary
Time Constraints	<i>"Limited time for conducting action research due to coursework demands."</i> <i>"Scheduling conflicts with fieldwork and research activities."</i>	Balancing research commitments with coursework and fieldwork posed challenges, often resulting in time-related pressures that affected the quality of research processes and outcomes.
Resource Accessibility	<i>"Limited access to research resources and databases."</i> <i>"Inadequate funding for research materials and tools."</i> <i>"Availability of research materials varied among participants."</i>	Participants faced challenges due to resource constraints, impacting research accessibility and consistency.
Ethical Considerations	<i>"Ethical approval processes was difficult."</i> <i>"Maintaining student confidentiality presented challenges."</i> <i>"Balancing research ethics and classroom needs were complex."</i>	Ethical dilemmas arose, complicating the research process, particularly in ethical approval, confidentiality, and classroom ethics.

The table highlights the challenges the participants face in making their action research. These limitations can significantly impact the research process and outcomes, which, in turn, can affect the quality of action research they need to submit as requirement in the experiential learning courses. It is clear that the constraints related to time primarily stem from the demanding nature of coursework and the need to manage concurrent commitments, including

fieldwork, internship and research activities. The observed pressures on time can compromise the depth and thoroughness of action research, potentially limiting the scope of inquiry.

Another limitation discussed by the participants is accessing research resources, including databases, materials, and funding. These constraints can affect the comprehensiveness of research, as participants may have unequal access to essential tools and information. Moreover, ethical dilemmas add complexity to the research process. Participants shared challenges in navigating ethical approval processes, maintaining student confidentiality, and balancing research ethics with classroom needs. These ethical considerations can affect the design, execution, and reporting of action research.

With the identified limitations, there is a need for improved time management strategies among senior education students. Allocating dedicated time for action research or streamlining coursework to accommodate research activities could alleviate this constraint. Also, the college may ensure equitable access to research resources and consider providing additional support, such as funding or access to materials, to facilitate comprehensive research. On the other hand, ethical dilemmas highlight the importance of ethical training and support within teacher education programs. Providing guidance on ethical approval processes and strategies for maintaining student confidentiality while conducting research in educational settings can aid students in addressing these challenges.

Discussions

The study reveals four (4) opportunities that senior education students gain through their involvement in action research within teacher education programs. Firstly, action research significantly contributes to the development of innovative teaching strategies and a deeper understanding of effective pedagogy. This fosters a proactive approach to teaching improvement and encourages future educators to adapt their methods based on research findings. This can enhance the quality of education delivery. As mentioned by Albalawi & Johnson (2022), adapting teaching methods based on research findings benefits educators by improving the effectiveness of their instruction and enhancing student learning outcomes.

Furthermore, action research empowers students to identify classroom challenges and seek solutions, promoting a culture of continuous improvement and reflective practice. This not only improves problem-solving abilities but also enhances the overall teaching quality. This enables the future educators to identify classroom challenges, develop innovative solutions, and enhance their teaching methods. It is worthy to note that they gain additional knowledge and skills on effective and responsive teaching practices. Abu (2016) said that action research helps teachers regularly assess their teaching, make improvements, and better meet their students' needs.

Action research also provides valuable opportunities for collaborative learning and peer interactions, where students work together on research projects, receive valuable guidance from instructors, and deepen their comprehension of educational concepts. These results indicate that integrating action research into teacher education programs can enhance the educational environment and contribute to ongoing professional development. As cited by Mooi & Mohsin (2012), action research can aid in the professional development of future teachers by encouraging them to actively identify and address challenges in their classrooms, fostering a culture of continuous improvement, and providing opportunities to refine their teaching strategies based on evidence and reflection.

On the other hand, the table shows the three (3) limitations encountered by senior education students while conducting action research. Notably, participants faced significant time constraints due to coursework demands and scheduling conflicts. This often resulted in rushed data collection and analysis, potentially compromising the quality of research outcomes. Hence, effective time management is essential for participants facing time constraints, as it helps them prioritize research tasks, reduce stress, maintain research quality, meet deadlines, and balance responsibilities effectively (Cox, 2019).

Resource accessibility including limited access to research resources, inadequate funding, and varying material availability, hindered the comprehensiveness and consistency of research. Ethical dilemmas also emerged, complicating the research process, particularly in ethical approval processes, maintaining student confidentiality, and balancing research ethics with classroom needs. Mapolisa (2012) reiterated that providing equitable access to research resources, offering financial support or grants for materials, and implementing comprehensive ethical training and support to help future educators navigate these challenges effectively.

These findings have significant implications for teacher education programs. While action research offers opportunities for enhancing teaching skills, problem-solving abilities, collaborative learning, and ethical awareness among future educators, addressing the identified limitations is essential. To ensure the success and effectiveness of action research initiatives, teacher education programs should focus on improving time management strategies, ensuring equitable resource access, and providing guidance on ethical considerations. Through this initiative, the college can equip future educators with the skills, mindset, and ethical awareness necessary for effective and responsible teaching. Mahammuda (2016) asserted that research-capability activities contribute to the development of more effective educators capable of addressing the challenges of modern education.

Conclusion and suggestions

The opportunities identified through action research engagement emphasize its significant role in enhancing teaching skills, fostering problem-solving abilities, promoting reflective practice, and encouraging collaborative learning among senior education students. These opportunities underscore the potential for action research to enrich teacher education programs and equip future educators with valuable skills and ethical awareness. However, the limitations highlighted in this study, such as time constraints, resource accessibility issues, and ethical dilemmas, pose considerable challenges.

To advance the integration of action research within teacher education programs, several key research avenues emerge from the study's findings. Exploring effective time management strategies for senior education students engaged in action research is essential, addressing the challenge of balancing coursework, fieldwork, and research activities. As a practical step to address this need, the college could consider organizing a seminar focused on effective time management strategies for senior education students engaged in action research.

To ensure equitable access for all student-researchers, the administration may conduct a comprehensive assessment of the current accessibility and availability of research resources and funding for action research, followed by the development of a structured plan to address resource disparities. This plan may involve securing additional funding sources, expanding resource repositories, and implementing resource allocation strategies to support students' research endeavors.

It is essential to conduct in-depth research to identify and implement concrete strategies that simplify ethical approval processes, safeguard student confidentiality, and seamlessly integrate robust ethical training and support mechanisms within teacher education programs. This initiative may involve collaborating with ethics committees, developing standardized ethical guidelines, and providing training to ensure that ethical considerations in research are consistently addressed and adhered to by all students and educators.

For future research, consider a long-term study to evaluate how action research influences the ongoing professional development and practices of senior education students. Additionally, conduct a comparative analysis across institutions to explore how action research is integrated and examine potential policy changes that could enhance its effectiveness in teacher education programs. These steps will provide valuable insights and comprehensive guidance for improving action research in education.

New knowledge and the effects on society and communities

Action research in teacher education programs extends its effects beyond the classroom to society and communities. It equips educators with improved teaching strategies and skills that promote active learning and critical thinking among students. By addressing local educational challenges, action research contributes to better educational outcomes in specific communities. Moreover, it fosters a culture of continuous improvement and reflective practice among educators, ensuring that education remains adaptable and responsive. The collaborative nature of action research encourages community engagement, enhancing the sense of ownership over educational processes. Lastly, action research informs evidence-based educational policies, leading to more effective and equitable educational systems and positively impacting society as a whole.

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