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Strengthening the Research Capacities of International Relations Laboratory Assistants in NVivo-Based Qualitative Social Research

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ABSTRACT

The skill gap in the use of qualitative analysis software remains a challenge for students, especially in social research that requires systematic data management. This study aims to evaluate the effectiveness of NVivo training activities for International Relations laboratory assistants in improving their conceptual understanding and technical skills. The training was conducted through a combination of lectures, demonstrations, and hands-on practice using a know-to-apply model that emphasized immediate application to participants' research needs. The findings show that this training was able to improve participants' understanding of the functions, features, and benefits of NVivo in supporting students' research agendas. In addition, participants assessed that the use of NVivo expanded their analytical capacity and opened up opportunities for optimizing qualitative research in an academic environment. Participants also expressed their hope for the program's continuity and the strengthening of this application's utilization in future research activities. These results emphasize the importance of structured training interventions to bridge the digital skills gap among students and improve the quality of social research.

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INTRODUCTION

University laboratories have traditionally been regarded as integral components of educational infrastructure, as delineated by the National Standards for Higher Education. According to the Minister of Education and Culture Regulation Number 49 of 2014, laboratories, studios, and workshops are classified as essential infrastructure necessary for the implementation of the tridharma, particularly in the realm of education (Kemendikbud, 2014). However, this regulation does not explicitly address the role of laboratories in facilitating research or community service. Consequently, in numerous higher education institutions, laboratories are often relegated to the status of mere practicum rooms, thereby underutilizing their potential as centers for knowledge production.

In alignment with the global transformation of higher education, the conceptualization of laboratory functions, including social laboratories, has expanded. Boyer (1990) redefines academic workload into four domains of scholarship: discovery, integration, application, and teaching. This perspective suggests that laboratories serve not only as venues for practical learning but also as sites for scientific discovery, interdisciplinary synthesis, and the application of knowledge to address real-world challenges. Gibson et al. (1994) further underscore the necessity of generating knowledge that is contextual, transdisciplinary, and socially accountable, advocating for the establishment of social experiment spaces rather than conventional classrooms. In practice, the social laboratory approach offers an operational framework that positions laboratories as collaborative platforms for exploring and iteratively testing solutions to complex problems. Social laboratories are conceptualized not merely as physical facilities but as dynamic learning ecosystems that facilitate repeated experimentation, multi-actor interaction, and continuous systemic learning. This framework is consistent with the strengthening of innovation networks through the Triple Helix model, which involves university, industry, and government collaboration, thereby positioning laboratories as strategic knowledge hubs within regional innovation ecosystems.

In the Indonesian context, numerous studies suggest that laboratories, particularly within the social sciences, have yet to fulfill their potential as centers for research and knowledge production. Utari (2017) identified that many social laboratories remain confined to their teaching function. These laboratories encounter structural challenges, including budget allocations skewed towards equipment procurement and maintenance, a lack of experts, and insufficient commitment from the academic community to utilize laboratories as spaces for sustainable scholarly development. Concurrently, national imperatives to bolster a research and innovation ecosystem focused on impact necessitate the strategic repositioning of social laboratories to enhance institutional research capabilities.

From an institutional standpoint, this transformation agenda aligns with the Universitas Sulawesi Barat (Unsulbar) 2040 vision to advance human resources, science, and technology grounded in culture to address local, national, and global challenges. Consequently, social laboratories must transcend the "practicum room" paradigm and evolve into entities of social experimentation that support rigorous qualitative methodologies, transparent data processing practices, and collaborative cross-disciplinary research. A strategic measure to fortify this capacity is the adoption of computer-assisted qualitative data analysis software (CAQDAS) such as NVivo, which aids researchers in systematically organizing, coding, analyzing, and visualizing qualitative data reliably.

]\Within this framework, community service activities, including NVivo training and the enhancement of social laboratory capacities, have become imperative. These activities not only address methodological competency gaps among assistants and emerging researchers but also facilitate the

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transformation of laboratories into collaborative research hubs responsive to community needs. Strengthening qualitative analysis capacity will elevate the quality of evidence-based research, foster the development of knowledge pertinent to the local context, and augment the contribution of higher education institutions in addressing social issues through applied research and social innovation approaches. Thus, these community service activities constitute an integral component of efforts to fortify the research ecosystem and ensure the sustainability of social laboratories as centers for knowledge production and dissemination.

METHOD

The training session for utilizing NVivo software for qualitative data analysis was conducted on Saturday, September 27, 2025. This event was intensive, spanning the entire day from morning until evening. It involved a total of 45 individuals, comprising 35 participants and 15 committee members. The participants included laboratory assistants from the Department of International Relations, documentation teams, and faculty service teams. The selection of participants took into account batch representation and gender composition. Participants were active students from various cohorts, ranging from 2021 to 2025, thereby representing a diversity of academic experiences and varying levels of expertise in relevant fields. In terms of gender distribution, there were 15 male and 20 female participants, indicating a higher representation of female students. This also reflects a high level of enthusiasm from all student groups without significant imbalance. The event was held in the Integrated Laboratory on the 3rd floor, specifically in the Mathematics and Statistics Laboratory Room. This venue was selected due to its computers with adequate specifications and a stable internet connection, which significantly facilitated the seamless installation of the program, practice sessions, and exploration of NVivo features by all participants. The implementation of this service activity was structured into three main series of activities, as depicted in Figure 1. Each stage is subsequently explained.

FIGURE 1. PKM Implementation Stage

Before the implementation of the training program, the team engaged in a preparation phase encompassing several essential components, including the development of instructional materials, the collection of supporting data, and the acquisition of necessary equipment such as computers and software. A pivotal step in this process was the procurement of an official license and the installation of NVivo software, completed two days before the event. Following the acquisition of the license, the installation was conducted in stages: initially, the team assessed all laboratory computers to verify the adequacy of hardware specifications. Subsequently, the software was downloaded from the official website, installed individually, and tested using basic features such as data import, coding, and querying. The primary objective of this step was to enable each participant to utilize NVivo without encountering obstacles. In addition to ensuring software readiness, achieving data uniformity was a significant focus during this preparation. The implementation team ensured that all participants utilized the same practice data during the training. This data comprised interview transcripts, research documents, journals, and online media data. The data uniformity process involved: (1) selecting a standard data package for all participants, (2) storing data in a shared folder on the lab server or USB drive, and (3) creating a concise

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guide on how to open and import data into NVivo. Data uniformity was established to prevent participants from being distracted by technical data issues, such as varying table headers, unsupported document formats, or inconsistencies in file naming. With uniform data, the comprehension process becomes more efficient and focused, allowing participants to concentrate fully on the analysis process flow being taught, from coding and visualization to the discovery of new patterns. This preparation step proved effective in enhancing overall efficiency. This approach is consistent with recommendations from experts in the field. Richards (1999), in his book on qualitative analysis, emphasized that uniform data preparation aids participants in avoiding distractions and facilitates a rapid understanding of core concepts. Similarly, Bazeley and Jackson (2013), in their NVivo guide, recommend initial installation and trial runs to ensure smooth operation, as differences in data structure often pose significant challenges for beginners learning qualitative analysis software.

Activity Implementation: Overall, the training ran optimally and consistently with the set schedule. Participant participation showed high enthusiasm, evidenced by their activeness in Q&A sessions and active involvement in both theoretical and practical sessions. Nonetheless, at the initial phase, several minor technical barriers were identified, including disparities in basic computer operation skills among some participants and variations in operating systems on personal laptops. These obstacles were quickly overcome through direct intervention from facilitators and intensive consultation sessions. Additionally, facilitators shared simple guides on system optimization and basic configuration adjustments to ensure all participants could follow practice sessions without significant problems.

During the material delivery, the team structured the presentation around two primary agendas: coding practice utilizing interview data and literature review, followed by content analysis from diverse media sources. This methodology was designed to ensure that participants not only comprehended theoretical concepts but also applied them to empirical data. The initial phase of training concentrated on introducing the fundamental use of NVivo and qualitative data coding practice. In this phase, participants engaged with data derived from literature reviews and interview results to grasp the preliminary process of organizing information in qualitative research. Participants received direct training in creating mother nodes and child nodes as the foundation for developing analysis categories, while also understanding the logical relationships between themes that emerge from the data. Additionally, participants practiced employing various analysis features such as Query for identifying patterns and data relationships, Word Cloud for visualizing the frequency of keywords, and Text Search for locating specific keywords. Furthermore, they were instructed on utilizing the Explore feature to generate various forms of visualization, including Map (mapping theme relationships), Chart (bar graphs), Tree Map (tree maps), and Hierarchical Chart (hierarchical diagrams), which serve to simplify the understanding of data complexity and assist the interpretation process. At the conclusion of this phase, emphasis was placed on reflective and interpretative thinking abilities. Participants were encouraged to relate NVivo analysis findings to the context of pertinent research issues. This exercise aimed to enhance participants' confidence in interpreting data profoundly based on the research context and problem formulation.

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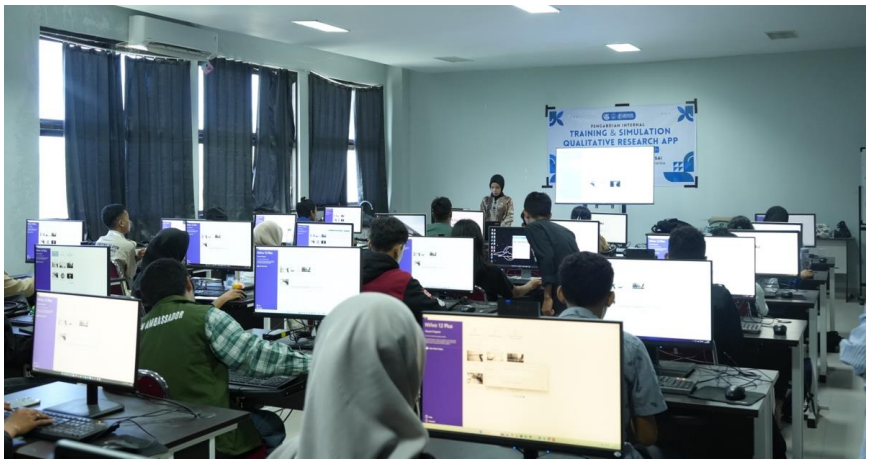

FIGURE 2. NVivo Training Implementation

The second stage involves the application of NVivo for content analysis, utilizing data obtained from online and social media sources. Initially, participants were introduced to the N-Capture feature, an additional extension designed to collect data directly from web pages and social media platforms. This process emphasizes efficiency and equips participants with an understanding of the preliminary stage of digital data collection before analysis in NVivo. The collected data is subsequently imported into NVivo and analyzed using the Cases feature, which facilitates data grouping based on specific categories or sources, such as media types, topics, or actors under study. During this session, participants also engaged in uploading data from various digital platforms and explored how the context of online communication can influence analytical outcomes. In addition to the technical aspects, this training underscored the importance of critically interpreting data visualization results, employing various graphic representations such as Map, Chart, Tree Map, and Hierarchical Chart to strengthen research arguments.

FIGURE 3. Content Analysis in Training

The combination of these two learning stages is designed so that participants gain a comprehensive understanding, encompassing both technical mastery and interpretive skills in managing qualitative data. As such, participants are expected not only to be able to operate NVivo as an analytical tool that supports teaching and research, but also to utilize it effectively.

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Activity Evaluation

The training activities were evaluated using a survey method to assess the program's effectiveness in improving participants' competencies. Out of a total of 35 participants, 30 completed the post-training survey. The survey instrument was designed to measure two main aspects: (1) participants' level of understanding of NVivo's features and functions within the context of social research, and (2) participants' interest in using the software in their research after attending the training. Assessment was carried out using a five-point Likert scale: 5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree, and 1 = Strongly Disagree.

In addition to scale-based questions, the survey also included open-ended questions asking participants to explain their reasons for considering NVivo important in qualitative research, as well as their expectations regarding the continuity of the training organized by the International Relations Laboratory. These open-ended responses were then analyzed using the word cloud feature in NVivo to identify the most prominent keywords and emerging thematic patterns. The use of this mixed survey design provides an opportunity to integrate quantitative and qualitative data, thereby producing a more comprehensive understanding of the training's effectiveness. This type of evaluation method is in line with the training and development literature, which emphasizes that participants' perceptions of increased knowledge and skills are important indicators in measuring the success of learning programs. Kirkpatrick and Kirkpatrick (2006) state that evaluation at the reaction and learning levels can provide strong evidence of the extent to which participants understand and are able to apply the skills taught. In the context of qualitative research, the use of software such as NVivo has proven helpful for researchers in managing, organizing, and analyzing data more systematically (Bazeley & Jackson, 2013). Therefore, this kind of technical training has great potential to improve students' digital research literacy and strengthen research capacity within the academic environment. The findings from surveys and in-depth analyses related to the effectiveness of this training will be analyzed using the NVivo application in the subsequent discussion section to provide a more detailed overview of the program's achievements and implications.

RESULTS AND DISCUSSION

Improved Participant Understanding of the Functions and Benefits of the NVivo Application

Based on the results of the pre- and post-training evaluations, there was a significant change in participants' level of understanding of the functions and benefits of the NVivo application in qualitative research. Before the training, most participants did not have adequate knowledge about using NVivo. This is reflected in the survey data in Figure 3, where 56.7% of participants were in the low category (scores 1–2) and only 26.6% showed a fairly high level of understanding (scores 4–5). This condition shows that most students and laboratory assistants are still in the early stages of familiarization with this qualitative analysis software.

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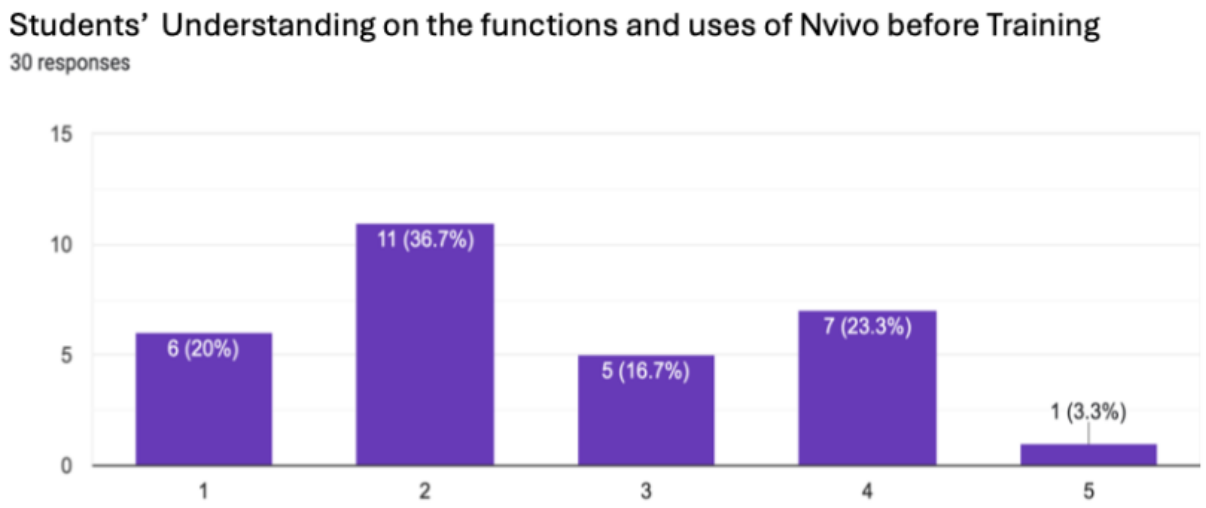

FIGURE 4. Participants' Understanding of NVivo's Functions and Uses Before Training. However,

After participating in a series of training sessions that included two stages of learning, namely the practice of data coding and content analysis using the main features of NVivo, a very significant increase can be seen in Figure 5. In the post-test results, 76.6%. Participants rated themselves in the high category (score 4–5) in understanding the functions and benefits of NVivo. This increase shows that the training approach, which emphasized hands-on practice, the use of real data, and intensive assistance from the implementation team, proved effective in strengthening participants' understanding.

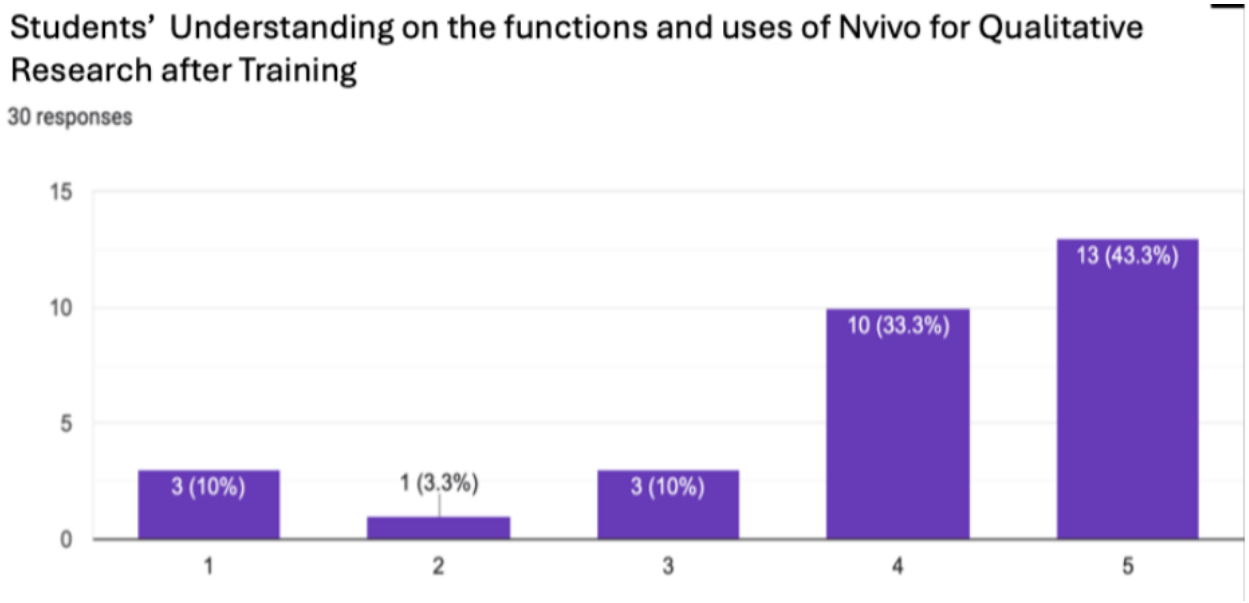

FIGURE 5. Participants' Understanding of NVivo's Functions and Benefits After Training

Utilization of the NVivo Application for Student Research Agendas: Know to Apply

The increase in participants' knowledge of NVivo's functions and features after the training shows that they not only understand the basics of using the software, but also begin to be able to identify its

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potential applications in the context of social research. This understanding is an important foundation for encouraging behavioral change, namely from simply knowing about NVivo to actively using it in research data analysis and scientific writing.

Based on the results of the pre- and post-training surveys, there was a significant increase in participants' interest in using NVivo as a tool for analyzing research data or theses, as shown in Figure 4. Before the training, Figure 6 shows that most participants rated their interest as moderate to fairly high, with 33.3% giving a score of 4 and only 10% giving the highest score (5). In fact, 40% of participants showed low interest (scores of 1 and 2).

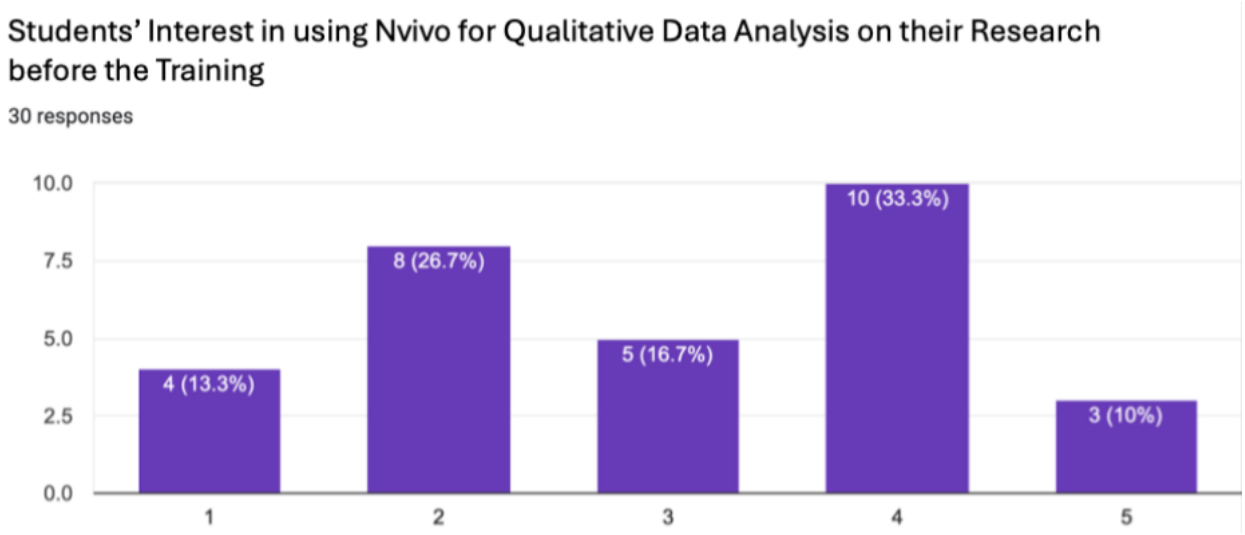

FIGURE 6. Participants' Interest in Using NVivo in Research Before Training

However, after participating in the training, the distribution of responses shifted clearly toward higher levels of interest, as shown in Figure 7. A total of 46.7% of participants gave a score of 5, followed by 30% of participants with a score of 4, indicating that more than three- quarters of participants are now very interested in integrating NVivo into their research. Only a small proportion (10%) remained in the low interest category (scores 1–2).

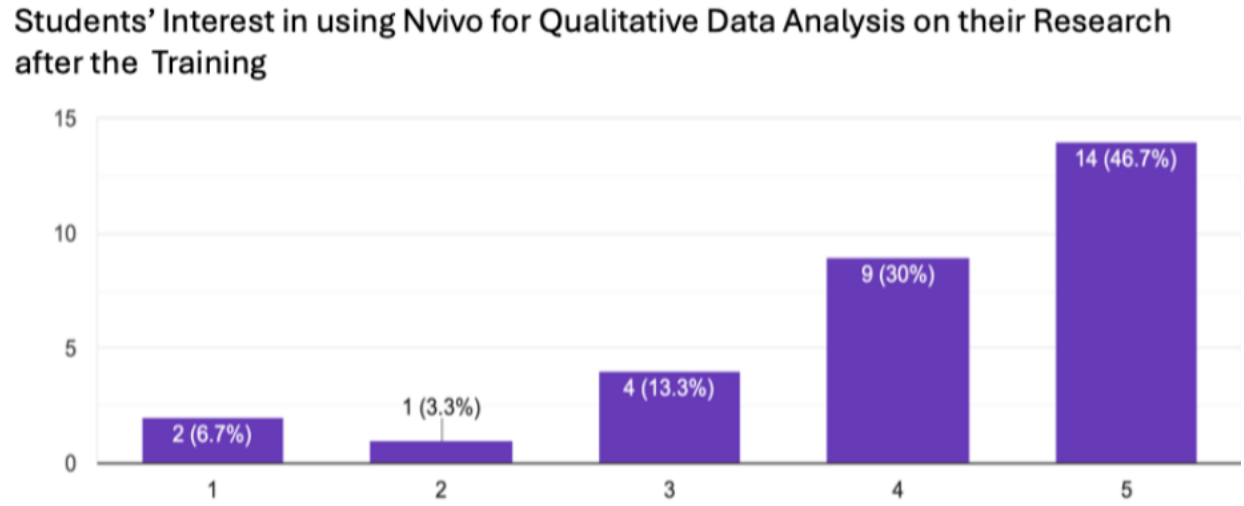

FIGURE 7. Participants' Interest in Using NVivo in Research After Training: The transition

From the knowing stage to the applying stage marks the success of the training not only as a process

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of transferring technical knowledge, but also as a transformation in participants' way of thinking about digital-based qualitative research. Post-training data shows a significant increase in students' interest and readiness to integrate NVivo into their research data analysis, including in the preparation of their theses. Students began to view NVivo as a tool that supports the process of categorization, coding, and interpretation of data in a more systematic and transparent manner. This shift in perspective indicates the internalization of a new research mindset that is more reflective, structured, and technology-based, which makes it easier for participants to analyze social research.

This finding is in line with Zamawe (2015), who asserts that NVivo should be understood as a facilitator in the scientific thinking process, not as a substitute for critical analysis by researchers, because this tool helps researchers organize data and trace patterns of meaning more systematically. In a pedagogical context, Woolf and Silver (2017), through the Five-Level QDA Method, show that qualitative analysis software can bridge the process of data translation and its connection with theoretical concepts, thereby enriching the analytical capacity of researchers. From a data management perspective, NVivo plays an important role in supporting accurate, structured, and objective data management. Yahmady and Al Abri (2013) emphasize that NVivo enables researchers to handle large amounts of data systematically and validly, as well as providing a clear audit trail, thereby strengthening accuracy and minimizing bias in the interpretation process.

Furthermore, Feng and Behar-Horenstein (2019) show that NVivo improves researchers' ability to analyze open-ended responses through visualization and consistent coding approaches, which in turn deepens the quality of thematic analysis. The consistency of this analytical process contributes to strengthening researchers' confidence in the data and methodology used. In line with this, Hayashi et al. (2019) emphasize the importance of processual validity in qualitative research, where the use of software such as NVivo can improve methodological transparency and accuracy, as long as researchers maintain analytical reflection as the core of qualitative interpretation.

With the increased ability of students to analyze data more accurately, it is hoped that their motivation to conduct independent research will grow. From a learning perspective, the results of this training are in line with the findings of Yulianto and Wijaya (2022) and Soehardi et al. (2021), which show that practice-based training and exploration of digital qualitative analysis tools can increase students' self-efficacy and motivation to engage in scientific research. This capacity building is also in line with the vision of social laboratory development as stated by Utari (2017), which places the laboratory as an active learning space as well as a center for methodological innovation in higher education.

Thus, providing training on the use of the NVivo application to students is part of an effort to foster their intellectual abilities and readiness to adapt to the demands of qualitative research in the digital age. NVivo is expected to function as a reflective learning medium that connects data analysis skills with methodological awareness, thereby shaping young researchers who are more adaptive, critical, and evidence-based. This ability ultimately makes it easier for students to manage large amounts of data and produce more rigorous and scientifically accountable research.

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The Importance of the NVivo Application and Participants' Expectations for the Training Implementation

FIGURE 8. Results of Word Cloud Analysis on the Importance of NVivo for Participants

Figure 8 shows the results of word frequency analysis, with a word cloud dominated by the words "NVivo," "research," "students," "help," and "thesis." The dominance of these words confirms that the main focus of this activity is to strengthen laboratory assistants' capacity to use Computer-Aided Qualitative Data Analysis Software (CAQDAS) as a research data analysis tool. The word "NVivo" appears most prominently, reflecting the urgency of mastering this tool as a basic competency in modern qualitative research. Meanwhile, the appearance of words such as "transcript," "video," "article," "source," and "case" indicates that NVivo is understood as an important tool for organizing, managing, and analyzing various forms of data more systematically and efficiently (Bazeley & Jackson, 2019; Hartono et al., 2025). In addition, the emergence of words such as "help," "facilitate," "activities," and "program" reflects the participants' perceptions of the practical benefits of using NVivo in the research process, particularly in the stages of coding, thematic analysis, and data management. Participants view NVivo as a tool that not only speeds up the analysis process but also minimizes potential researcher bias. Thus, the quality of research outputs, especially student theses, can be more structured, accountable, and academically responsible (Wahid et al., 2023).

In line with this, the words "students," "theses," "assignments," and "knowledge" indicate that the strategic objective of this training activity is to improve the capacity of laboratory assistants in assisting students with their thesis writing. The use of NVivo enables the data analysis process to be carried out more quickly, accurately, and transparently, thereby supporting students in producing evidence-based research findings (Rahadi, 2020). In recent literature, the ability to operate CAQDAS has become an important competency for social science students, including International Relations, as it has a direct impact on improving research literacy and academic competitiveness (Abidin et al., 2024). Beyond technical aspects, the emergence of the words "coaching," "sharing," and "understanding" indicates that the program's implementation is not solely focused on introducing NVivo features but is also designed as a comprehensive learning experience. Through hands-on practice, experience-sharing discussions, and intensive mentoring, participants not only grasp foundational concepts but also learn to effectively apply NVivo within their research contexts. This approach strengthens participants' digital skills and analytical competencies, so that the benefits of the program can be felt tangibly in the research process.

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Overall, the word cloud pattern shows that NVivo training is not only seen as a technical necessity but also as an academic capacity-building strategy that directly impacts the quality of student research and the effectiveness of laboratory support. This program is an important foundation in building a more professional, systematic, and technology-based research culture in the academic environment.

FIGURE 9. Results of NVivo Word Cloud Analysis of Participants' Expectations of Implementers

The word cloud in Figure 6 shows that dominant words such as "sustainable," "NVivo," "students," "helping with thesis," "research," and "knowledge" reflect participants' strong expectations that NVivo training should not stop at a single activity but be developed as a long- term program. The dominance of the word "sustainable" particularly emphasizes the expectation that the training be conducted regularly, gradually, and continue to provide space for improving participants' qualitative data analysis skills. Furthermore, the emergence of words such as "help with thesis," "students," and "assignments" shows that NVivo training is seen as a strategic necessity to support the thesis writing process. Participants see this activity as a form of methodological assistance that helps them understand the steps of qualitative analysis more systematically. This expectation also illustrates the important contribution of training to strengthening student competencies, especially in facing increasingly complex academic demands. On the other hand, words such as "continuation," "coaching," "deepening," and "development" show the participants' desire for the training material to go beyond basic NVivo skills. Participants hoped for in-depth sessions, ranging from advanced thematic analysis, data visualization, case classification management, to the integration of various data sources. This indicates that participants' needs have shifted towards mastering more applicable features that support more comprehensive academic research.

Expectations regarding the quality of training are also reflected in the use of the words "training" and "needs." Participants want a clear learning path, structured material, well-prepared instructors, and sufficient practice time so that their understanding can develop optimally. In addition, the emergence of the words "lecturer" and "educator" indicates that participants hope this program is not only intended for students or laboratory assistants, but can also strengthen the capacity of lecturers in providing academic guidance based on modern qualitative analysis. Overall, the pattern in the word cloud illustrates that NVivo training is seen as a strategic necessity to improve the quality of qualitative research on campus. Participants hope that this activity will develop into a long-term capacity building program that can support students, lecturers, and laboratories in producing systematic, credible research that is in line with current developments in qualitative data analysis technology.

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FIGURE 10. Documentation of Participants and Training Implementers

CONCLUSION

Based on the evaluation results, it can be concluded that this community service activity ran quite well and achieved most of the planned objectives. This achievement shows that the majority of participants were able to understand and apply the material directly in the form of scientific papers that meet academic standards. These results are an indicator of the success of the activity, as well as demonstrating the effectiveness of the training approach used by the PKM Team. As a suggestion for the next PKM Team, it is recommended that this activity be further developed in the form of follow-up mentoring or collaborative research. The PKM Team can design sustainable activities that focus on improving the quality of student research. In addition, participants are expected to continue honing the skills they have acquired by practicing independently and broadening their knowledge through other online training courses.

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REFERENCES

Abidin, H., Mukhlis, I., & Zagladi, A. N. (2023). Multi-method Approach for Qualitative Research: Literature Review with NVivo 12 PRo Mapping. Kalam Cendekia: Jurnal Ilmiah Kependidikan, 11(3). https://doi.org/10.20961/jkc.v11i3.80748

Baxter, P., & Jack, S. (2008). Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers. The Qualitative Report, 13(4), 544-559. https://doi.org/10.46743/2160-3715/2008.1573

Brandão, C. (2015). P. Bazeley and K. Jackson, Qualitative Data Analysis with NVivo (2nd ed.): (2013). London: Sage. Qualitative Research in Psychology, 12(4), 492–494. https://doi.org/10.1080/14780887.2014.992750

https://doi.org/10.35568/abdimas.v9i1.7516

Boyer, E. L. (1990). Scholarship Reconsidered: Priorities of the Professoriate. Princeton University Press / Carnegie Foundation for the Advancement of Teaching. https://www.umces.edu/sites/default/files/al/pdfs/BoyerScholarshipReconsidered.pdf

Feng, X., & Behar-Horenstein, L. S. (2019). Enhancing the trustworthiness of qualitative findings: Using NVivo to analyze open-ended survey responses. The Qualitative Report, 24(3), 563–577. https://doi.org/10.46743/2160-3715/2019.3692

Gibson, C., Goldfrank, B., & Huber, J. (1994). Institutionalizing Knowledge Production: Integrating Social Science in Higher Education Reform. University of Wisconsin–Madison, Center for International Education.

Hartono, H., Da Silva, J., Da Costa, F., Melianto, D., & Suparta, M. (2025). Implementasi Metode Analisis Menggunakan NVivo dalam Penelitian Kualitatif. Journal of Management and Creative Business, 3(2), 191-198. https://doi.org/10.30640/jmcbus.v3i2.4652

Hayashi, P., Abib, G., & Hoppen, N. (2019). Validity in Qualitative Research: A Processual Approach. The Qualitative Report, 24(1), 98-112. https://doi.org/10.46743/2160-3715/2019.3443

Jackson, K., & Bazeley, P. (2019). Qualitative data analysis with NVivo. https://us.sagepub.com/sites/default/files/upm-assets/114916_book_item_114916.pdf

Kirkpatrick, D. L., & Kirkpatrick, J. D. (2006). Evaluating Training Programs: The Four Levels (3rd ed.). Berrett-Koehler. https://www.scirp.org/reference/referencespapers?referenceid=2702697

Utari, R (2017). Penguatan Dan Perluasan Fungsi Laboratorium Pada Rumpun Ilmu Sosial Di Perguruan Tinggi, Dinamika Pendidikan, 22(1), 16–26. https://journal.uny.ac.id/index.php/dinamika-pendidikan/article/view/19767

Richards, L. (1999). Using NVivo in qualitative research. https://archive.org/details/usingnvivoinqual0000rich/page/n3/mode/2up

Soehardi, F., Putri, L. D., & Dinata, M. (2021). NVivo software training for young researchers. Mattawang: Jurnal Pengabdian Masyarakat, 2(1), 8–13. https://doi.org/ 10.35877/454RI.mattawang265

Wahid, S. H., Kususiyanah, A., Sirait, W. Y., & Umbar, K. (2023). Analisis data kualitatif menggunakan Nvivo. Publica Indonesia Utama. https://books.google.co.id/books/about/Analisis_Data_Kualitatif_Menggunakan_Nvi.html?hl=id&id=qdiuEAAAQBAJ&redir_esc=y

Woolf, N. H., & Silver, C. (2017). Qualitative analysis using NVivo: The Five-Level QDA® method. Routledge. https://doi.org/10.4324/9781315181660

Yahmady, M., & Al Abri, R. (2013). Using NVivo for data analysis in qualitative research. International Interdisciplinary Journal of Education, 2(2), 181–186. DOI: 10.12816/0002914

Yulianto, A., & Wijaya, A. P. (2022). Pelatihan perangkat lunak NVivo untuk menunjang penelitian kualitatif bagi mahasiswa Universitas Negeri Semarang. Jurnal Pengabdian Pendidikan Masyarakat (JPPM), 3(1), 25–30. DOI: 10.52060/jppm.v3i1.732

Zamawe, F. C. (2015). The implication of using NVivo software in qualitative data analysis: Evidence-based reflections. Malawi Medical Journal, 27(1), 13–15. https://doi.org/10.4314/mmj.v27i1.4.

https://doi.org/10.35568/abdimas.v9i1.7516