



Enhancing Teachers' Competence in e-Rapor Management through Practice-Based Mentoring at SMA Negeri 5 Luwu Timur

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ABSTRACT

The implementation of digital-based educational administration requires teachers to have adequate competency in utilizing various educational technology applications, including e-Rapor. However, some teachers at SMA Negeri 5 Luwu Timur still experienced difficulties in operating the e-Rapor application, particularly in entering assessment data, managing data, validating assessment results, and generating report cards. This community service program aimed to enhance teachers' competency in using e-Rapor through practice-based mentoring. Unlike conventional technical training, which primarily focuses on delivering technical instructions, this program emphasized hands-on practice accompanied by direct mentoring and immediate feedback while teachers completed actual e-Rapor tasks, enabling them to overcome practical challenges encountered during implementation. The program involved 35 teachers and was conducted in three stages: planning, implementation, and evaluation. During the planning stage, a needs assessment and pre-test were conducted to identify participants' initial competency levels. The implementation stage consisted of hands-on practice and direct mentoring in using the e-Rapor application. The evaluation stage included observation, post-tests, and a participant satisfaction questionnaire. The results showed a substantial improvement in teachers' competency, with the average score increasing from 61.25 in the pre-test to 86.75 in the post-test. Furthermore, all competency indicators in e-Rapor management exceeded the predetermined achievement target of 80%, with achievement rates ranging from 91.4% to 100.0%. Participant satisfaction was also positive, with 85.7% of participants reporting that they were very satisfied, 8.6% satisfied, and 5.7% fairly satisfied with the mentoring activities. These findings suggest that practice-based mentoring effectively improved the short-term competencies of the participating teachers in using e-Rapor, while the satisfaction results indicate positive participant perceptions of the mentoring program.

INTRODUCTION

The implementation of the e-Rapor application is one of the government's initiatives to support digital-based educational administration in Indonesian secondary schools (Purnomo et al., 2024). The application is designed to facilitate the management of student assessment data by integrating teacher, student, class, and subject information from the Basic Education Data System (Dapodik), thereby supporting more systematic assessment management and standardized report-card generation (Direktorat SMA Kemendikdasmen, 2025). This initiative is part of the broader digital transformation agenda in education, which seeks to strengthen the quality, efficiency, and accountability of educational services through the utilization of digital technology (Kemendikdasmen, 2025; Fakrijal & Yusriman, 2024; Rasdiana et al., 2024).

The successful implementation of digital educational administration depends not only on the availability of digital infrastructure but also on teachers' competence in operating digital applications (Althubyani, 2024). Teacher digital competence refers to the knowledge, skills, and attitudes required to use digital technologies effectively in professional practice (Redecker, 2017; Falloon, 2020). For the purpose of this community service program, operational e-Rapor competence refers to teachers' ability to independently perform essential e-Rapor functions, including entering student assessment scores, validating assessment data, managing learning achievement records, correcting data-entry errors, and generating report cards accurately (Bentri et al., 2025). These competencies are expected to support more accurate and efficient assessment administration and have been associated with better technology utilization and teacher performance in educational settings (Jakaria et al., 2025; Afrizal et al., 2025).

SMA Negeri 5 Luwu Timur was selected as the community service partner because the school has implemented the e-Rapor application to manage student assessment activities. The school involves 35 teachers from various subject areas who are responsible for managing assessment data for approximately 232 students each semester. Preliminary observations and discussions with several teachers revealed varying levels of operational e-Rapor competence. Although the application had been routinely used, some teachers still experienced technical difficulties, particularly during assessment data validation, correction of data-entry errors, and report-card generation. Consequently, they occasionally required assistance from the school operator to complete these operational e-Rapor tasks. These observations were consistent with the preliminary competency assessment conducted before the mentoring program, which yielded an average pre-test score of 61.25, indicating that teachers' operational e-Rapor competence still required further strengthening.

Preliminary observations also indicated that teachers had generally been introduced to the e-Rapor application through routine school activities. However, they continued to encounter difficulties when independently performing operational e-Rapor tasks in actual assessment administration. These findings suggest a gap between teachers' basic understanding of the application and their practical ability to apply its features in authentic school settings. This condition highlighted the need for a capacity-building approach that not only introduced the application's features but also provided opportunities for teachers to practice using the application while receiving direct guidance in solving operational problems.

Previous studies have reported various approaches to strengthening teachers' digital competencies, including socialization programs, short technical training sessions, and mentoring activities (Ismet et al., 2022; Nadhiroh & Harmonis, 2024; Kirmadi et al., 2025). While these approaches contribute to teachers' professional development, practice-based mentoring provides greater opportunities for participants to learn through authentic tasks, receive individualized guidance, and obtain immediate feedback during the learning process. Such an approach is consistent with the principles of experiential learning, which emphasize learning through direct experience and reflection (Kolb, 2015). Therefore, practice-based mentoring was considered appropriate for addressing the operational challenges identified among teachers at SMA Negeri 5 Luwu Timur.

Based on these conditions, the community service team implemented a program entitled Enhancing Teachers' Competence in e-Rapor Management through Practice-Based Mentoring at

SMA Negeri 5 Luwu Timur. The program aimed to support the development of teachers' operational e-Rapor competence in managing student assessment data, validating assessment records, and generating report cards independently. Program outcomes were evaluated using three indicators: (1) improvements in teachers' knowledge based on pre-test and post-test scores, (2) achievement of at least 80% competency across practical e-Rapor management indicators, and (3) participant satisfaction with the mentoring activities.

METHODS

This community service program was conducted at SMA Negeri 5 Luwu Timur, South Sulawesi, Indonesia, involving 35 teachers from various subject areas as participants. The program employed a participatory practice-based mentoring approach, consisting of three stages: planning, implementation, and evaluation. Throughout the program, the partner school actively participated in identifying priority needs, supporting the implementation process, and evaluating the activity outcomes. The location of this service activity can be seen in the picture below:

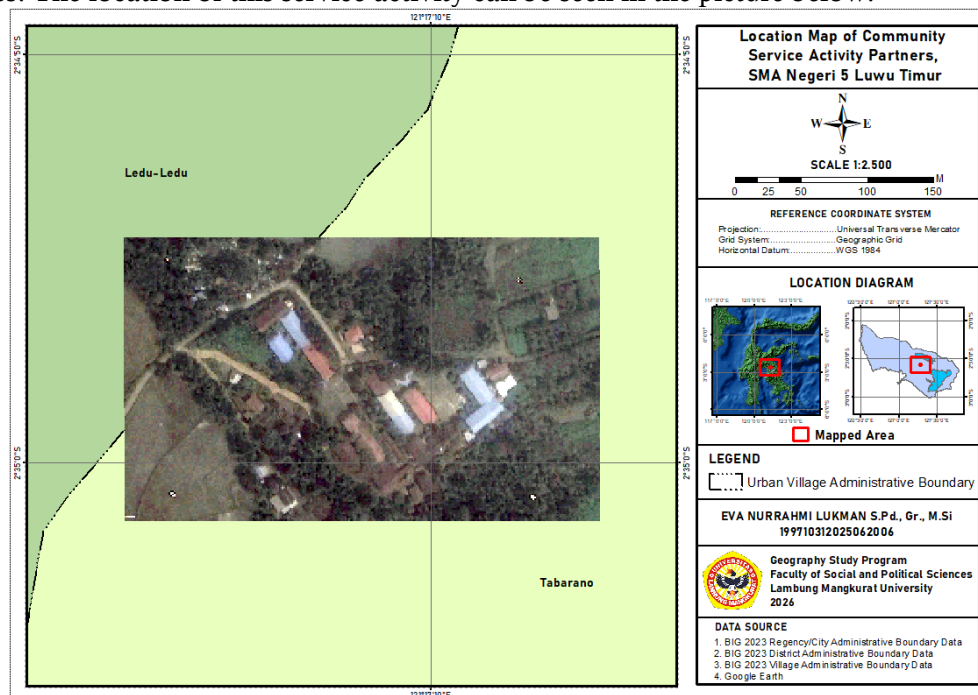


Figure 1. Location of Community Service Activities, East Luwu Regency

1. Planning Stage

The planning stage began with coordination between the community service team and the partner school to identify teachers' needs related to the implementation of the e-Rapor application. Preliminary observations and discussions were conducted with several teachers to explore the operational challenges encountered during student assessment administration. Based on these discussions, the community service team and the partner school jointly agreed that the mentoring activities would focus on the operational aspects that teachers considered most challenging, including assessment data entry, data validation, correction of data-entry errors, and report-card generation.

To identify participants' initial level of understanding, a pre-test was administered before the mentoring activities. The instrument consisted of [number] objective questions covering teachers' knowledge of e-Rapor operation, including application navigation, assessment data entry, data validation, management of student learning outcomes, and report-card generation. Each correct response received a score of 1, whereas incorrect responses received 0. The total score was then converted to a scale of 0–100, with higher scores indicating better initial understanding of e-Rapor operation. The content of the instrument was developed based on the operational functions of the e-Rapor application addressed during the mentoring activities. Implementation stage

2. Implementation Stage

The implementation stage adopted a practice-based mentoring approach conducted in an offline setting. Rather than relying on lecture-based instruction, the activity emphasized direct practice using each participant's own laptop. At the beginning of the session, participants received a brief explanation regarding the objectives of the activity and the main operational features of the e-Rapor application. Teachers then practiced completing authentic operational e-Rapor tasks, including entering student assessment scores, validating assessment data, correcting data-entry errors, and generating student report cards. Throughout the activity, participants practiced independently while receiving direct assistance whenever operational difficulties were encountered. The mentoring process was facilitated by the community service team and supported by three teachers from the partner school who had prior experience in operating the e-Rapor application.

Together, they moved around the training room to provide individualized guidance, answer participants' questions, and assist teachers in resolving technical problems encountered during practice. This mentoring mechanism enabled participants to receive immediate feedback according to their individual learning needs while completing authentic assessment administration tasks. The mentoring activity lasted approximately four hours. Within this duration, the activity was designed to strengthen teachers' initial operational e-Rapor competence, improve their familiarity with the application's key features, and increase their confidence in independently performing routine assessment administration tasks. The activity was intended to support the development of practical operational skills rather than comprehensive mastery of all e-Rapor functionalities.

3. Evaluation stage

The evaluation stage assessed the implementation of the mentoring program from three aspects: knowledge improvement, practical skills, and participant satisfaction. Knowledge improvement was measured by comparing participants' pre-test and post-test scores using the same 20-item true-or-false instrument administered before and after the mentoring activities. Practical skills were evaluated through direct observation during the mentoring session. The observation focused on participants' ability to independently perform essential operational e-Rapor tasks, including entering assessment scores, validating assessment data, correcting data-entry errors, and generating report cards. During the observation, participants' performance on each task was recorded as either successfully completed independently or completed with assistance.

Participant satisfaction was measured using a questionnaire consisting of 10 statements rated on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The questionnaire evaluated participants' perceptions of the relevance of the mentoring materials, clarity of explanations, mentoring process, adequacy of assistance provided, opportunities for hands-on practice, and overall satisfaction with the activity. The collected data were analyzed using descriptive statistics, including mean scores and percentages. The effectiveness of the mentoring program was evaluated based on three indicators: (1) improvement in participants' knowledge as reflected by higher post-test scores than pre-test scores, (2) achievement of at least 80% across the practical competency indicators observed during the mentoring activities, and (3) high levels of participant satisfaction with the mentoring program.

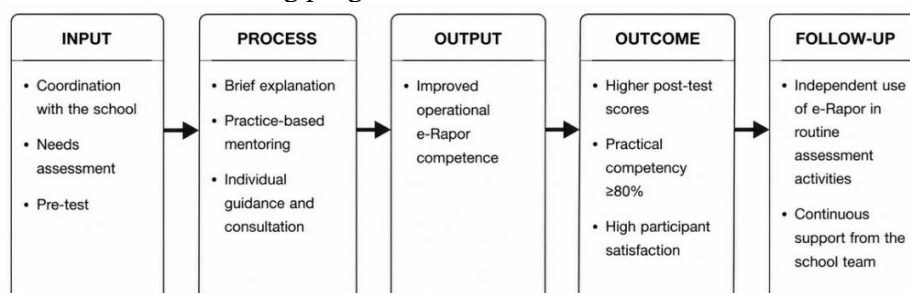


Figure 2. Framework of the practice-based mentoring program

RESULTS AND DISCUSSION

The community service program involved 35 teachers from SMA Negeri 5 Luwu Timur, representing various subject areas and actively participating in teaching and student assessment activities. All participants had prior experience using the e-Rapor application as part of the school's routine assessment administration. However, preliminary observations and discussions with several teachers indicated that participants had different levels of operational e-Rapor competence. Although the application had been routinely implemented, some teachers still experienced difficulties in performing more complex operational tasks, particularly assessment data validation, correction of data-entry errors, assessment data management, and report-card generation. As a result, some teachers continued to require assistance from the school operator when technical or operational problems occurred. To describe participants' baseline conditions, a pre-test was administered before the mentoring activities. The instrument consisted of 20 true-or-false questions covering five operational domains of the e-Rapor application: application navigation, assessment data entry, assessment data validation, management of student learning outcomes, and report-card generation. The same instrument was administered as a post-test after the mentoring activities to assess short-term changes in participants' knowledge of e-Rapor operation. The results of the pre-test and post-test are presented in Table 1.

Table 1. Comparison of Teachers' Competence in Using e-Rapor Before and After the Mentoring Program

Component	Pre-test	Post-test	Improvement
Teachers' Competence in Using e-Rapor	61.25	86.75	25.50

Table 1 presents the changes in participants' knowledge scores measured using a 20-item true-or-false test with scores converted to a 0–100 scale. The mean score increased from 61.25 in the pre-test to 86.75 in the post-test, representing an absolute increase of 25.50 points. These findings indicate a positive change in participants' knowledge following the practice-based mentoring activities. However, because the program employed a one-group pre-test–post-test design without a comparison group or statistical testing, the results should be interpreted as describing short-term changes in participants' knowledge rather than demonstrating the causal effectiveness of the mentoring program. The observed increase may be associated with the practice-based mentoring approach, which provided participants with opportunities to perform authentic operational e-Rapor tasks while receiving immediate guidance and feedback from the mentoring team. This learning process allowed participants to relate conceptual knowledge to practical application during the mentoring sessions. Similar observations have been reported in previous community service programs, where hands-on mentoring supported teachers' understanding and familiarity with educational technology through direct practice and continuous assistance (Ismet et al., 2022; Nadhiroh & Harmonis, 2024).

The findings of this program suggest that the observed increase in participants' knowledge was closely related to the learning approach implemented during the mentoring activities. Rather than receiving information through a lecture-based session alone, participants practiced completing authentic operational e-Rapor tasks while receiving immediate guidance and feedback whenever difficulties occurred. This approach enabled participants to directly apply newly acquired knowledge to practical assessment administration tasks, particularly those identified as challenging during the preliminary needs assessment. Compared with previous community service programs that primarily emphasized technical training or short-term workshops (Ismet et al., 2022; Nadhiroh & Harmonis, 2024), the present program incorporated individualized practice-based mentoring throughout the operational activities. This approach allowed participants to receive immediate assistance according to their specific learning needs while completing assessment data entry, validation, and report-card generation tasks. Such learning experiences are consistent with the view that professional development is more meaningful when teachers actively engage in authentic workplace tasks rather than relying solely on theoretical instruction (Falloon, 2020; Redecker, 2022).

In addition to the pre-test and post-test evaluation, participants' practical operational e-Rapor competence was assessed through direct observation during the mentoring activities. The assessment aimed to examine participants' ability to perform essential operational tasks in the e-Rapor application after completing the practice-based mentoring sessions. Each participant was assessed individually by the community service team, assisted by three teachers from the partner school who had prior experience in operating the e-Rapor application. The observation covered five key operational competency indicators: logging into the e-Rapor system, entering assessment data, managing assessment data, validating assessment data, and generating student report cards. Participants were considered competent for each indicator if they were able to complete the assigned task independently and correctly according to the operational procedures demonstrated during the mentoring sessions. To promote consistency in the assessment process, all assessors used the same observation checklist and applied predetermined assessment criteria throughout the activity. The program established a practical performance target whereby at least 80% of participants were expected to demonstrate competence in each operational e-Rapor task. The results of the practical competency assessment are presented in Table 2.

Table 2. Achievement of Teachers' Competencies in e-Rapor Management

Competency Indicator	Target	Participants Demonstrating Competence, n (%)	Target Achievement
Ability to access and log in to the e-Rapor application	≥ 80% of participants	35 out of 35 participants (100.0%)	Achieved
Ability to enter assessment data into e-Rapor	≥ 80% of participants	32 out of 35 participants (91.4%)	Achieved
Ability to manage assessment data	≥ 80% of participants	31 out of 35 participants (88.6%)	Achieved
Ability to validate assessment data	≥ 80% of participants	30 out of 35 participants (85.7%)	Achieved
Ability to generate and print report cards	≥ 80% of participants	34 out of 35 participants (97.1%)	Achieved.

Source: primary data 2026

As shown in Table 2, all competency indicators exceeded the predetermined target of 80%, indicating that the mentoring program effectively improved teachers' ability to manage the e-Rapor application. The highest achievement was observed in the ability to generate and print report cards (97.1%), demonstrating that participants were able to utilize the application's output features effectively. More importantly, the achievement in assessment data management (88.6%) and assessment data validation (85.7%) indicates that participants were able to perform more complex tasks related to organizing, verifying, and ensuring the accuracy of assessment information. These competencies are essential in supporting the reliability and quality of digital-based academic reporting. Meanwhile, the achievement in assessment data entry (91.4%) shows that most participants were capable of inputting assessment results accurately after receiving practice-based mentoring. Although the ability to access and log in to the e-Rapor application reached 100.0%, this indicator represents a basic operational skill and is therefore considered a prerequisite rather than the primary evidence of digital competency improvement.

Among the evaluated competency indicators, the achievement in assessment data validation was relatively lower than the other indicators, although it still exceeded the predetermined target, indicating that most participants had developed an adequate understanding of the validation process. This finding may be attributed to the greater complexity of data validation, which requires users not only to operate the e-Rapor application but also to verify the completeness, consistency, and accuracy of assessment records before finalizing student reports. According to the European Framework for the Digital Competence of Educators (DigCompEdu), competencies related to monitoring, evaluating, and validating digital assessment data demand higher-order digital skills than routine operational tasks such as data entry (Redecker, 2017); (Suzer & Koç, 2024). Similarly, the UNESCO ICT Competency Framework for Teachers emphasizes that teachers are expected

to develop competencies in managing and validating digital information to ensure the quality and reliability of educational data (UNESCO, 2018). During the mentoring activities, several participants experienced difficulties in identifying inconsistent data, ensuring that assessment components met the required criteria, and verifying the accuracy of the information entered into the system. These findings suggest that, although the mentoring program successfully improved participants' operational competencies, additional practice and continuous mentoring are still needed to strengthen teachers' skills in assessment data validation (Lucas et al., 2021).

These challenges reflect that data validation requires a higher level of accuracy and understanding of the assessment management process compared to other e-Rapor functions. Therefore, although teachers were able to operate the main features of e-Rapor, further strengthening is needed in data verification and quality control processes. Follow-up mentoring should focus on advanced practices, including systematic assessment data checking, error identification, and simulation of report validation procedures before final submission. This approach is expected to improve teachers' confidence and accuracy in managing digital assessment systems. These results support previous findings that mentoring and continuous professional development activities can strengthen teachers' digital competencies and improve their ability to utilize technology in educational administration (Bentri et al., 2022; Rasdiana et al., 2024). Overall, the achievement of all indicators demonstrates that the mentoring program effectively enhanced teachers' practical competence in e-Rapor management and supported the implementation of digital-based assessment administration at SMA Negeri 5 Luwu Timur.



Figure 3. (a). Assistance in filling out report cards, (b) e-report card filling process

Furthermore, the success of this mentoring program demonstrates the important role of hands-on training in improving teachers' digital competencies. Active participation in practical activities enabled participants to directly apply the knowledge acquired during the mentoring sessions, thereby strengthening their understanding and practical ability in using the e-Rapor application (Fakrijal et al., 2024; Stefany et al., 2024). This approach aligns with the principles of adult learning theory proposed by Knowles (1984), which emphasizes that adult learners acquire knowledge more effectively when learning activities are relevant to their professional needs, problem-centered, and supported by direct experience. In this context, the practice-based mentoring allowed teachers to engage directly with e-Rapor features related to assessment data entry, management, validation, and report generation.

Furthermore, the practical experiences gained during the mentoring process may contribute to teachers' self-efficacy in managing digital assessment systems. According to Bandura's Social Cognitive Theory (1986), mastery experiences obtained through successful task completion can influence individuals' beliefs in their ability to perform specific tasks. However, changes in teachers' self-efficacy were not directly measured in this study and should be further examined using specific instruments in future research. This finding is also consistent with the concept of experiential learning, which emphasizes that knowledge and skills are more effectively developed through direct experience and active engagement in learning activities (Kolb, 2015).

The findings of this program are consistent with previous studies demonstrating that mentoring and training activities can enhance teachers' capacity to utilize digital technologies in educational settings. However, compared with previous studies, this program emphasizes a practice-based mentoring approach specifically designed to strengthen teachers' competence in managing the e-Rapor system, rather than focusing only on general digital literacy improvement.

Ismet et al. (2022) and Nadhiroh and Harmonis (2024) reported that structured training and continuous assistance contributed to improving teachers' ability to adopt educational technologies; however, their interventions were mainly focused on introducing digital tools and improving general technology utilization skills. In contrast, the present program involved direct practice on authentic administrative tasks, including assessment data entry, management, validation, and report generation, allowing teachers to apply digital skills within their actual professional context.

Furthermore, the achievement of all competency indicators above the established target indicates that practice-based mentoring can provide measurable improvements in teachers' operational competence in digital assessment administration. These findings complement previous studies by showing that technology adoption programs are more effective when training activities are accompanied by contextual guidance and hands-on experience. Therefore, the implementation of practice-based mentoring activities can serve as a strategic approach to supporting digital transformation initiatives and strengthening teachers' readiness to adapt to technology-based educational administration systems (Afrizal et al., 2025; Jakaria et al., 2025).

Participants' overall satisfaction with the mentoring program was evaluated using a post-activity questionnaire administered immediately after the mentoring session. The questionnaire consisted of a single question: "Overall, how satisfied were you with the mentoring program?" Participants selected one of four response categories: Very Satisfied, Satisfied, Fairly Satisfied, or Dissatisfied. The responses were summarized descriptively using frequencies and percentages, and the results are presented in Figure 4

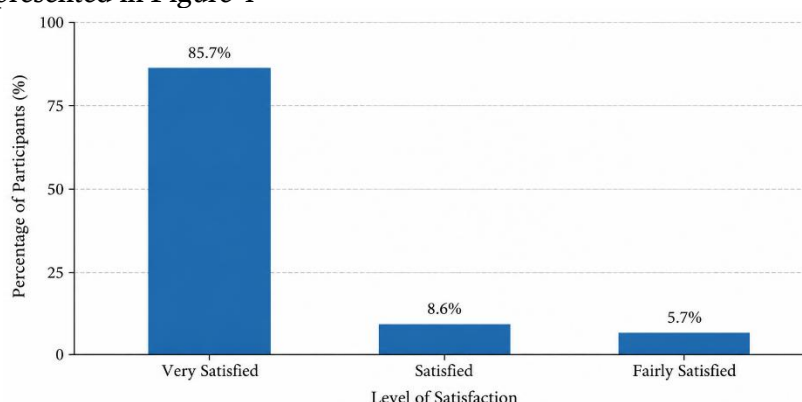


Figure 4. Participant Satisfaction with the e-rapor Completion Assistance Program

Source: Participant satisfaction question, 2026

The participant satisfaction survey indicated generally positive responses toward the assistance program. As shown in Figure 4, 85.7% of participants reported being very satisfied, 8.6% were satisfied, and 5.7% were fairly satisfied, while no participants expressed dissatisfaction. These findings suggest that participants perceived the mentoring activities positively, particularly because of the practical and interactive approach, which combined direct guidance with hands-on practice in operating the e-Rapor application. In addition, the discussion sessions enabled participants to seek clarification and receive immediate solutions to technical issues encountered during the mentoring process (Scherer et al., 2021; Silvester et al., 2024; Widhanarto et al., 2024).

However, these findings should be interpreted with caution because participants completed the satisfaction questionnaire immediately after the mentoring activities. Consequently, their responses may have been influenced by social desirability or courtesy bias, resulting in more favorable evaluations of the program (Grimm, 2010; Krumpal, 2013). Furthermore, according to Kirkpatrick (2016), participant satisfaction reflects only the reaction level of training evaluation and should not be considered the primary indicator of program effectiveness. Therefore, the satisfaction findings should be regarded as supportive evidence of participants' positive perceptions, whereas the effectiveness of the mentoring program is more appropriately demonstrated by the observed improvement in participants' competencies following the intervention.

Although the activity was conducted within a relatively short time frame of approximately four hours, the findings indicate that the assistance program was effective in improving teachers' short-term understanding and skills in using the e-Rapor application. Participants also perceived the materials as relevant to their needs, and the hands-on practice approach facilitated a better understanding of the application's features and functions. These findings are consistent with previous studies reporting that practice-based professional development activities promote positive learning experiences by addressing participants' immediate workplace needs (Ismet et al., 2022; Rasdiana et al., 2024; Wati et al., 2024). However, the interpretation of these findings should be limited to short-term outcomes because no follow-up assessment was conducted to determine whether participants were able to use the e-Rapor application independently and consistently over time. Therefore, while the mentoring program appears to have enhanced participants' initial competencies and readiness to use e-Rapor, further longitudinal evaluation is needed to confirm the sustainability of these outcomes.

CONCLUSION

The mentoring program improved participants' competencies in managing assessment data, validating assessment information, and generating report cards using the e-Rapor application. All competency indicators exceeded the predetermined target of 80%, with achievement rates ranging from 91.4% to 100.0%. In addition, most participants (85.7%) reported being very satisfied with the mentoring program, indicating that the activity was well received by the participating teachers. However, these findings should be interpreted within the context of the program, as the evaluation was limited to immediate post-activity assessments and did not include follow-up observations to determine the long-term and independent use of the e-Rapor application. Therefore, the results reflect the short-term outcomes achieved by the 35 participating teachers and should not be generalized beyond the participants involved in this mentoring activity. Future studies are recommended to include longitudinal follow-up evaluations to examine the sustainability of competency improvement and the continued implementation of e-Rapor in school practice.

These outcomes have the potential to support more effective, accurate, and efficient assessment management at the participating school. To sustain the benefits of the mentoring program, schools are encouraged to establish an internal standard operating procedure (SOP) for e-Rapor management, designate peer support administrators to assist teachers in resolving technical issues, and organize regular e-Rapor clinics, particularly during report-card preparation periods. In addition, periodic monitoring and technical assistance during assessment and report-card completion are recommended to ensure the consistent and accurate use of the e-Rapor application. Future community service programs may expand their implementation to a broader range of schools while incorporating follow-up mentoring activities to strengthen the sustainability of teachers' digital competencies. Continuous collaboration between higher education institutions and schools is also essential to support ongoing capacity building and the effective integration of digital technologies into educational administration.

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