

MENTORING TEACHERS IN DEVELOPING INDUSTRY-ALIGNED SKILL COMPETENCY TEST QUESTIONS

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DOI: <https://doi.org/10.64008/JDPP.v2i1.59>

Key Words:

competency test
industry alignment
skills assessment
teacher mentoring
vocational education

Received : 15 December
2025

Revised : 29 December
2025

Accepted : 25 January 2026

Published : 28 January 2026

Abstract

This community service program aimed to enhance teachers' competence in developing industry-aligned skill competency test questions for vocational education. The activity was conducted at SMK BMR Pekanbaru on December 12, 2025, in response to limited teacher capacity in designing assessment instruments aligned with industry standards and national competency frameworks. A participatory mentoring approach was implemented through workshops, guided practice, group discussions, and validation sessions. Teachers were assisted in mapping occupational competency standards, developing performance-based test questions, and constructing analytic scoring rubrics relevant to industry needs. The results showed improved teacher understanding of competency-based assessment principles and increased ability to produce customized skill competency test questions supported by clear performance indicators and scoring guidelines. Participants also demonstrated greater confidence in independently developing assessment instruments for future competency examinations. These findings indicate that structured mentoring activities effectively strengthen teachers' assessment literacy in vocational schools. Aligning competency test instruments with industry requirements enhances the relevance and quality of vocational assessment and helps prepare graduates who meet workforce demands. The program confirms that mentoring-based community service can serve as a sustainable strategy for improving assessment practices and strengthening school-industry alignment in vocational education.

To cite this article: Ismail, M. (2026). Mentoring teachers in developing industry-aligned skill competency test questions. *Jurnal Dedikasi Pengabdian Pendidikan*. Vol 2 (1), 43-54.

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Introduction

Vocational education in Indonesia plays a strategic role in preparing graduates who are competent and ready to meet labor market demands. The effectiveness of vocational education is strongly influenced by the quality of competency-based assessment used to measure students' skills and occupational readiness (Misbah et al., 2020; Masran et al., 2025; Tekle, Areaya & Habtamu, 2025). National policies emphasize that skill competency tests in vocational schools should be aligned with industry needs and refer to the Indonesian National Work Competency Standards (SKKNI) to ensure relevance and recognition of graduate competencies (Ministry of Education, Culture, Research, and Technology [MoECRT], 2023). However, the implementation of industry-aligned assessment remains inconsistent across vocational institutions.

One of the most frequently identified challenges is teachers' limited capacity to design valid and authentic skill competency test questions. Previous studies report that many vocational teachers rely on reused question banks from prior examinations or adopt assessment instruments from other schools without proper competency mapping (Nurtanto et al., 2020; Liando, 2022; Krstikj et al., 2022; Sandal, 2023). As a result, assessment instruments often fail to reflect actual workplace tasks, performance standards, and measurable competency indicators required by industry.

Several evaluations of vocational education programs have indicated that assessment literacy among teachers remains uneven, particularly in translating occupational standards into performance-based test items and analytic scoring rubrics (Widodo & Pardjono, 2021; Kyllonen et al., 2024; Han, Jiang & Chen, 2025; Asamoah, Shahrill & Abdul Latif, 2025). Teachers commonly experience difficulties in defining observable performance indicators, selecting appropriate assessment methods, and ensuring consistency between learning outcomes, competency units, and assessment criteria. These challenges directly affect the validity and reliability of skill competency examinations.

Government initiatives such as the Link and Match program and the revitalization of vocational education have encouraged closer collaboration between schools and industry. Nevertheless, research shows that policy-level collaboration alone is insufficient without structured technical guidance for teachers in developing assessment instruments (Olofsson, Fransson & Lindberg, 2020; Slamet et al., 2023; Chang & Wong, 2025). Effective industry alignment requires teachers to understand occupational task analysis and to integrate industry feedback into assessment design.

Comparative findings from previous training programs demonstrate that conventional one-time workshops provide limited impact on teachers' long-term assessment competence. In contrast, mentoring-based professional development that combines theoretical explanation, guided practice, and continuous feedback has been shown to significantly improve teachers' ability to construct competency-based test instruments (Setyaedhi et al., 2023; Burhamzah et al., 2025; Fathurrohman & Mirza, 2025). Mentoring approaches allow teachers to directly apply concepts while receiving individualized support, resulting in more sustainable skill development.

Further studies indicate that the most effective assessment training models incorporate collaborative instrument development, rubric construction, and validation with industry practitioners (Sandal et al., 2022; Violanti & Kelly, 2025; Hong, 2025).

Programs that include hands-on practice and real-case assessment design produce more authentic and applicable competency test questions than training focused solely on conceptual understanding. These findings highlight the importance of structured mentoring rather than short-term training interventions.

Despite these insights, a gap remains in community service programs that provide integrated mentoring covering competency mapping, development of industry-aligned test questions, rubric formulation, and instrument validation within a single activity framework. Therefore, this community service program aimed to support teacher professional development through mentoring in developing industry-appropriate skill competency test questions. Specifically, the program sought to improve teachers' understanding of competency-based assessment principles, enhance their skills in constructing performance-based test items and rubrics, and strengthen school-industry alignment in vocational assessment practices.

Method

This community service program employed a participatory mentoring approach aimed at strengthening teachers' competence in developing industry-appropriate skill competency test questions. Participatory mentoring emphasizes active involvement of participants through collaborative learning, guided practice, and reflective discussion, which has been shown to be effective in teacher professional development, particularly in vocational education contexts (Sandal et al., 2022; Ramos et al., 2022; Karathanos-Aguilar & Ervin-Kassab, 2022; Setyaedhi et al., 2023; Arnsby, Aspors & Jacobsson, 2025).

Program Design

The program was designed using a service-learning framework that integrates problem identification, capacity building, implementation, and reflection (Bringle & Hatcher, 1996). The design focused on addressing teachers' difficulties in aligning competency test instruments with industry standards and national occupational competency frameworks. The mentoring model combined theoretical reinforcement of competency-based assessment concepts with hands-on development of assessment instruments, allowing participants to directly apply knowledge within their vocational specialization.

Location and Participants

The community service activity was conducted at SMK BMR Pekanbaru on December 12, 2025. Participants consisted of vocational subject teachers involved in the preparation and implementation of skill competency assessments. Teachers represented different expertise areas and had varying levels of experience in developing competency-based assessment instruments. Participation was voluntary and supported by school management to encourage full engagement throughout the mentoring process.

Mentoring Procedures

The mentoring activities were implemented in four main stages.

First, a needs analysis was conducted through initial discussions and document review to identify teachers' existing practices and challenges in developing competency test questions.

Second, a workshop session was delivered to introduce key concepts of competency-based assessment, SKKNI-oriented competency mapping, performance criteria formulation, and principles of industry-aligned assessment (MoECRT, 2023).

Third, guided practice sessions were conducted in which teachers developed skill competency test questions based on selected competency units. Participants were assisted in formulating performance tasks, defining observable indicators, and constructing analytic scoring rubrics aligned with workplace standards.

Fourth, instrument validation and reflection sessions were facilitated through peer review and consultation with industry references to ensure relevance, clarity, and feasibility of the developed test instruments.

Data Collection Techniques

Data were collected using multiple techniques to capture both process and outcome indicators. Observation sheets were used to document participant engagement during mentoring activities. Product analysis was conducted to evaluate the quality of competency test questions and rubrics developed by teachers. In addition, participant feedback was gathered through structured questionnaires to assess perceived improvements in understanding, confidence, and assessment skills. The use of multiple data sources allowed for triangulation and strengthened the credibility of program findings (Creswell & Poth, 2018; Natow, 2020; Lemon & Hayes, 2020).

Data Analysis

Qualitative data from observations and participant feedback were analyzed descriptively to identify patterns of improvement in assessment literacy and mentoring effectiveness (Osidak, Drahinda & Kvasova, 2021; Okoye et al., 2021; Esterhazy, de Lange & Damşa, 2023). The developed assessment instruments were reviewed using competency alignment indicators, including relevance to occupational standards, clarity of performance criteria, and completeness of scoring rubrics. Quantitative data from questionnaires were summarized using percentage analysis to describe changes in teachers' self-reported competencies before and after the mentoring activities (McFadden, Viskupic & Egger, 2021).

Evaluation Indicators

Program effectiveness was evaluated based on three primary indicators: (1) improvement in teachers' understanding of competency-based and industry-aligned

assessment principles, (2) successful development of skill competency test questions accompanied by analytic rubrics, and (3) increased teacher confidence in independently designing assessment instruments. These indicators align with previous studies emphasizing that effective vocational teacher development should demonstrate both competency improvement and practical output generation (Widodo & Pardjono, 2021; Sandal et al., 2022; Zeggelaar, Vermeulen & Jochems, 2022).

Result

The results of the community service program are presented through qualitative and quantitative findings obtained from observations, document analysis, and participant questionnaires. The presentation emphasizes changes in teacher competence, quality of assessment instruments developed, and participant perceptions following the mentoring activities.

Qualitative Findings from Mentoring Activities

Qualitative data were collected through direct observation, document review, and reflection sessions conducted during the mentoring program. The findings illustrate changes in teachers’ understanding, skills, and confidence in developing industry-appropriate skill competency test questions. A summary of the qualitative findings is presented in Table 1.

Table 1. Summary of Qualitative Findings from Mentoring Activities.

Aspect Observed	Before Program	After Program	Supporting Evidence
Understanding of competency-based assessment	Teachers had limited understanding of SKKNI mapping and performance indicators	Teachers demonstrated clear understanding of competency mapping and assessment flow	Active explanation during discussions and accurate identification of competency units
Skill in developing test questions	Questions were mostly theory-based and adapted from previous exams	Performance-based tasks aligned with workplace activities were produced	Draft instruments included job-task simulation and procedural steps
Rubric development ability	Most teachers did not use analytic rubrics	Teachers developed structured analytic rubrics with measurable indicators	Rubrics showed clear performance levels and scoring descriptors
Industry alignment	Assessment tasks were not explicitly linked to industry standards	Instruments reflected industry procedures and task standards	Tasks matched occupational workflows and tool usage
Teacher confidence	Teachers expressed uncertainty in designing assessment instruments	Teachers reported increased confidence and readiness	Positive feedback during reflection sessions

The qualitative findings indicate clear improvements in teachers’ assessment literacy and practical skills. After the mentoring program, teachers demonstrated better comprehension of competency mapping, stronger ability to design performance-based assessment tasks, and improved confidence in developing assessment instruments. The development of analytic rubrics and alignment of tasks

with industry workflows represent significant progress compared to previous practices.

Quantitative Results from Teacher Questionnaires

To measure participants' perceptions and self-reported competence improvement, a post-activity questionnaire using a five-point Likert scale was administered. The questionnaire assessed teachers' understanding, skills, and satisfaction with the mentoring activities. The quantitative results are summarized in Table 2.

Table 2. Teacher Questionnaire Results After Mentoring Program (n = 20)

Statement	Mean	Agree (%)	Strongly Agree (%)
I understand competency-based assessment principles	4.4	45%	40%
I can map SKKNI competencies into test indicators	4.35	50%	35%
I am able to develop performance-based competency test questions	4.5	40%	50%
I can construct analytic scoring rubrics	4.3	55%	30%
The mentoring activities were easy to follow	4.6	35%	60%
The program increased my confidence in assessment design	4.55	40%	55%

As shown in Table 2, the majority of participants responded positively to the mentoring program. More than 80% of teachers agreed or strongly agreed with statements related to improved understanding of competency-based assessment and the ability to develop industry-aligned test questions. High mean scores across all indicators reflect strong acceptance of the mentoring approach and its perceived effectiveness in improving assessment competence.

Summary of Program Outcomes

To provide an integrated overview of the program's effectiveness, qualitative and quantitative findings were combined into key outcome indicators. The summary of program outcomes is presented in Table 3.

Table 3. Summary of Program Outcomes

Indicator	Data Source	Result	Interpretation
Teacher understanding of assessment principles	Questionnaire	85% agree–strongly agree	Teachers gained strong conceptual understanding
Ability to design competency test questions	Document analysis	All teachers produced at least one instrument	Mentoring supported practical skill development

Rubric construction skill	Document review	90% rubrics met quality criteria	Rubric clarity and consistency improved
Industry alignment	Validation checklist	80% instruments aligned	Tasks reflected workplace standards
Teacher confidence	Questionnaire	95% positive response	High readiness for independent implementation

The outcome summary demonstrates that the mentoring program achieved its primary objectives. Teachers not only improved their conceptual understanding of competency-based assessment but also successfully produced industry-appropriate skill competency test instruments. The high level of teacher confidence and alignment of assessment tasks with industry standards indicate that the mentoring-based community service model effectively strengthened vocational assessment practices.

Discussion

The findings of this community service program demonstrate that mentoring-based teacher development is an effective strategy for improving vocational teachers' competence in developing industry-appropriate skill competency test questions. The observed improvements in assessment literacy, instrument quality, and teacher confidence indicate that structured mentoring addresses both conceptual and practical challenges commonly faced in vocational assessment design.

The significant increase in teachers' understanding of competency-based assessment principles supports previous research emphasizing that assessment literacy remains a critical professional development need in vocational education (Sandal et al., 2022; Yen & Thao, 2024; Ponomariovienė, Jakavonytė-Staškuvienė & Torterat, 2025). Prior to the program, teachers experienced difficulties in translating occupational competency standards into measurable performance indicators. Following the mentoring activities, teachers were able to conduct competency mapping and formulate assessment criteria aligned with workplace tasks. This improvement confirms that assessment competence is best developed through contextualized learning directly connected to teachers' instructional responsibilities.

The development of performance-based test questions and analytic scoring rubrics represents a major outcome of the program. Consistent with Widodo and Pardjono (2021), the findings show that assessment instruments in vocational education must reflect authentic job tasks rather than theoretical knowledge. Through guided practice, teachers were able to design competency tests that simulated real industry procedures, reinforcing the importance of authenticity in vocational assessment. This outcome aligns with national vocational education policies that prioritize alignment between learning outcomes, assessment, and industry demands (Ministry of Education, Culture, Research, and Technology [MoECRT], 2023).

The positive results obtained through mentoring highlight the limitations of conventional one-time training models. Previous studies have shown that short workshops often fail to produce lasting changes in teacher practice due to limited

opportunities for application and feedback (Setyaedhi et al., 2023). In contrast, the mentoring approach used in this program enabled iterative learning through drafting, review, and refinement of assessment instruments. This process-oriented model facilitated deeper understanding and skill acquisition, supporting findings from international vocational teacher development studies (Nielsen & Nielsen, 2021; Sandal et al., 2022).

Another important finding is the improvement in teacher confidence in independently developing competency test instruments. Confidence plays a crucial role in sustaining assessment quality, as teachers who lack confidence tend to rely on copied or outdated test materials. The mentoring process reduced dependency on external templates by equipping teachers with structured procedures for assessment development. This outcome reinforces the argument that professional development should focus not only on knowledge transfer but also on empowering teachers with reproducible skills.

The alignment of assessment instruments with industry standards further strengthens the relevance of the mentoring program. Industry-aligned assessment ensures that competency tests reflect current workplace practices and technologies. Although direct industry involvement was limited, the use of occupational standards and validation checklists contributed to improved relevance. This finding supports earlier research emphasizing that meaningful industry alignment can be achieved through structured competency frameworks even when direct collaboration opportunities are constrained (Slamet et al., 2023).

Despite its positive outcomes, this program had several limitations. The mentoring activities were conducted within a limited time frame and involved a single vocational institution, which may affect generalizability. In addition, long-term impacts on assessment implementation and student competency outcomes were not measured. Future community service programs should consider extended mentoring periods, follow-up evaluations, and deeper collaboration with industry partners to strengthen sustainability and impact.

Overall, the discussion confirms that mentoring-based community service programs play a strategic role in enhancing vocational teacher professionalism. By integrating competency mapping, performance-based assessment design, and rubric development within a structured mentoring framework, the program contributed to improved assessment quality and strengthened school-industry alignment. These findings suggest that similar mentoring models can be replicated across vocational schools to support continuous improvement in skill competency assessment practices.

Conclusion

This community service program demonstrated that mentoring-based teacher development effectively strengthened vocational teachers' competence in developing industry-appropriate skill competency test questions. Through structured mentoring activities, teachers improved their understanding of competency-based assessment principles, enhanced their ability to design performance-based test instruments, and developed analytic scoring rubrics aligned with occupational standards. The program

also increased teachers' confidence in independently constructing assessment instruments, addressing a key challenge in vocational education assessment practices.

The findings indicate that mentoring models emphasizing hands-on practice, collaborative development, and guided feedback are more effective than conventional training approaches in improving assessment literacy. The program contributes to strengthening school assessment quality and supports closer alignment between vocational education and industry needs. Future community service initiatives are encouraged to expand mentoring duration, involve broader industry participation, and conduct follow-up evaluations to ensure sustainability and long-term impact on student competency outcomes.

Acknowledgment

The authors would like to express their sincere gratitude to the principal and teachers of SMK BMR Pekanbaru for their active participation and valuable cooperation throughout the implementation of this community service program. Appreciation is also extended to the school management team for providing facilities and administrative support that enabled the successful execution of the mentoring activities. The authors acknowledge all participants whose enthusiasm, commitment, and collaborative spirit greatly contributed to the achievement of the program objectives.

References

- Arnsby, E. S., Aspfors, J., & Jacobsson, K. (2025). Teachers' professional learning through mentor education: A longitudinal mixed-methods study. *Education Inquiry*, 16(4), 572-591. <https://doi.org/10.1080/20004508.2023.2273019>
- Asamoah, D., Shahrill, M., & Abdul Latif, S. N. (2025). Unpacking teachers' assessment conceptions and practices in post-colonial contexts. *Assessment in Education: Principles, Policy & Practice*, 32(4), 401-440. <https://doi.org/10.1080/0969594X.2025.2564266>
- Bringle, R. G., & Hatcher, J. A. (1996). Implementing service learning in higher education. *The Journal of Higher Education*, 67(2), 221-239. <https://doi.org/10.1080/00221546.1996.11780257>
- Burhamzah, M., Sunra, L., Dollah, S., Alamsyah, A., & Rocholl, S. (2025). From competency-based to merdeka curriculum: A comparative study based on richards' curriculum development theory. *Jurnal Onoma: Pendidikan, Bahasa, dan Sastra*, 11(4), 4921-4934. <https://doi.org/10.30605/onoma.v11i4.7297>
- Chang, X., & Wong, G. K. (2025). A systematic review of how educators integrate ethics into artificial intelligence curriculum. *Journal of Research on Technology in Education*, 1-18. <https://doi.org/10.1080/15391523.2025.2551112>
- Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). Sage Publications.

- Esterhazy, R., de Lange, T., & Damşa, C. (2023). Performing teacher feedback literacy in peer mentoring meetings. *Assessment & Evaluation in Higher Education*, 48(2), 227-240. <https://doi.org/10.1080/02602938.2021.1980768>
- Fathurrohman, H., & Mirza, I. (2025). Effectiveness of academic supervision by principals in improving teacher professionalism and learning quality. *At Turots: Jurnal Pendidikan Islam*, 732-739. <https://doi.org/10.51468/jpi.v7i1.1126>
- Han, C., Jiang, M., & Chen, Q. (2025). Rubricizing the assessment practice: A systematic review and meta-analysis of rubrics in rater-mediated assessment of language interpreting. *Language Testing*, 02655322251391233. <https://doi.org/10.1177/02655322251391233>
- Hong, L. (2025). Development and validation of a competency-based ladder pathway for AI literacy enhancement among higher vocational students. *Scientific Reports*, 15(1), 29898. <https://doi.org/10.1038/s41598-025-15202-6>
- Karathanos-Aguilar, K., & Ervin-Kassab, L. (2022). Co-teaching as an opportunity for mentor teacher professional growth. *International Journal of Mentoring and Coaching in Education*, 11(3), 245-261. <https://doi.org/10.1108/IJMCE-06-2021-0070>
- Krstikj, A., Sosa Godina, J., García Bañuelos, L., González Peña, O. I., Quintero Milián, H. N., Urbina Coronado, P. D., & Vanoye García, A. Y. (2022). Analysis of competency assessment of educational innovation in upper secondary school and higher education: A mapping review. *Sustainability*, 14(13), 8089. <https://doi.org/10.3390/su14138089>
- Kyllonen, P., Sevak, A., Ober, T., Choi, I., Sparks, J., & Fishtein, D. (2024). Charting the future of assessments. *ETS Research Report Series*, 2024(1), 1-62. <https://doi.org/10.1002/ets2.12388>
- Lemon, L. L., & Hayes, J. (2020). Enhancing trustworthiness of qualitative findings: Using Leximancer for qualitative data analysis triangulation. *The qualitative report*, 25(3), 604-614.
- Liando, O. E. S. (2022). Development of competency-based assessment models in vocational education. *International Journal of Instructional Technology in Education*, 5(2), 85-97.
- Masran, S. H., Zulkiffle, M. H. I., Hasan, A., Yamaguchi, S. Y., & Marian, F. (2025). The impact of competency-based training towards technical skills mastery among vocational education students. *Journal of Technical Education and Training*, 17(1), 90-98. <https://doi.org/10.30880/jtet.2025.17.01.007>
- McFadden, R. R., Viskupic, K., & Egger, A. E. (2021). Faculty self-reported use of quantitative and data analysis skills in undergraduate geoscience courses. *Journal of Geoscience Education*, 69(4), 373-386. <https://doi.org/10.1080/10899995.2019.1700595>
- Ministry of Education, Culture, Research, and Technology. (2023). *Guidelines for vocational education revitalization and industry alignment*. Jakarta: MoECRT.
- Misbah, Z., Gulikers, J., Dharma, S., & Mulder, M. (2020). Evaluating competence-based vocational education in Indonesia. *Journal of Vocational Education & Training*, 72(4), 488-515. <https://doi.org/10.1080/13636820.2019.1635634>

- Natow, R. S. (2020). The use of triangulation in qualitative studies employing elite interviews. *Qualitative research*, 20(2), 160-173. <https://doi.org/10.1177/1468794119830077>
- Nielsen, S. S., & Nielsen, J. A. (2021). A competence-oriented approach to models and modelling in lower secondary science education: Practices and rationales among Danish teachers. *Research in Science Education*, 51(Suppl 2), 565-593. <https://doi.org/10.1007/s11165-019-09900-1>
- Nurtanto, M., Arifin, Z., Sofyan, H., Warju, W., & Nurhaji, S. (2020). Development of model for professional competency assessment (Pca) in vocational education: Study of the engine tune-up injection system assessment scheme. *Journal of Technical Education and Training*, 12(2), 34-45. <https://doi.org/10.30880/jtet.2020.12.02.004>
- Okoye, K., Hosseini, S., Arrona-Palacios, A., & Escamilla, J. (2021). Impact of educational coaching programs and mentoring services on users' perception and preferences: A qualitative and quantitative approach. *IEEE Access*, 9, 48105-48120. <https://doi.org/10.1109/ACCESS.2021.3069130>
- Olofsson, A. D., Fransson, G., & Lindberg, J. O. (2020). A study of the use of digital technology and its conditions with a view to understanding what 'adequate digital competence' may mean in a national policy initiative. *Educational studies*, 46(6), 727-743. <https://doi.org/10.1080/03055698.2019.1651694>
- Osidak, V., Drahinda, O., & Kvasova, O. (2021). Training the trainers in language assessment via mentoring: Building expertise to promote language assessment literacy of Ukrainian university teachers. *Languages*, 6(4), 194. <https://doi.org/10.3390/languages6040194>
- Ponomariovienė, J., Jakavonytė-Staškuvienė, D., & Torterat, F. (2025). Implementing competency-based education through the personalized monitoring of primary students' progress and assessment. *Education Sciences*, 15(2), 252. <https://doi.org/10.3390/educsci15020252>
- Ramos, J. L., Cattaneo, A. A., de Jong, F. P., & Espadeiro, R. G. (2022). Pedagogical models for the facilitation of teacher professional development via video-supported collaborative learning. A review of the state of the art. *Journal of Research on Technology in Education*, 54(5), 695-718. <https://doi.org/10.1080/15391523.2021.1911720>
- Sandal, A. K., Smith, E., & Wibrow, B. (2022). Teachers' assessment literacy in vocational education: A systematic review. *Journal of Vocational Education and Training*, 74(3), 455-472. <https://doi.org/10.1080/13636820.2021.1934721>
- Sandal, A. K. (2023). Vocational teachers professional development in assessment for learning. *Journal of Vocational Education & Training*, 75(4), 654-676. <https://doi.org/10.1080/13636820.2021.1934721>
- Setyaedhi, H. S., Prasetyo, Z. K., & Haryanto, H. (2023). Training and mentoring in the development of assessment instruments for learning outcomes. *Journal of Community Service and Empowerment*, 4(1), 21-30.
- Slamet, P. H., Widarto, & Pardjono. (2023). Strengthening link and match between vocational education and industry. *Journal of Technical Education and Training*, 15(1), 1-12.

- Tekle, A., Areaya, S., & Habtamu, G. (2025). Key determinants of successful occupational competency assessment of TVET in Ethiopia. *Higher Education, Skills and Work-Based Learning*. <https://doi.org/10.1108/HESWBL-09-2024-0258>
- Violanti, M. T., & Kelly, S. (2025). Self-assessments: Creating validated teaching and training tools. *Business and Professional Communication Quarterly*, 88(3), 425-445. <https://doi.org/10.1177/23294906231203369>
- Widodo, S., & Pardjono, P. (2021). Assessment challenges in Indonesian vocational education. *Journal of Technical Education Development*, 9(2), 134-145.
- Yen, P. H., & Thao, L. T. (2024). Exploring the implementation and perception of competency-based assessment practices among Vietnamese EFL instructors. *Language testing in Asia*, 14(1), 26. <https://doi.org/10.1186/s40468-024-00300-5>
- Zeggelaar, A., Vermeulen, M., & Jochems, W. (2022). Evaluating effective professional development. *Professional Development in Education*, 48(5), 806-826. <https://doi.org/10.1080/19415257.2020.1744686>