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Development of E-Rubric Assessment on Table Set Up Practicum

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A B S T R A C T S

This research is motivated by the absence of a standardized and validated performance assessment instrument for evaluating students' competencies in table set-up practicum activities. Performance-based assessments play a crucial role in vocational education, especially in hospitality training, where hands-on skills and precision are essential. To address this gap, the researcher developed a digital performance assessment tool in the form of an electronic rubric (e-rubric) aimed at enhancing the objectivity and efficiency of evaluating student performance during table set-up practical sessions. The assessment rubric was structured around three key components: appearance, preparation, and process, with each aspect evaluated using four performance levels— excellent, good, fair, and poor. The research employed a Design-Based Research (DBR) methodology, which consisted of four phases: (1) identifying the problem, (2) developing an initial design of the performance assessment tool, (3) validating the initial design through expert judgment, and (4) implementing and refining the e-rubric using the Smart-Rubric platform. Validation was carried out through two rounds of expert review involving subject matter experts and educational evaluation specialists. The final results indicate that the developed e-rubric is both valid and appropriate for assessing students' performance in table setting practicum. The implementation of this e-rubric is expected to improve the consistency and clarity of performance assessments in vocational learning environments.

A R T I C L E   I N F O

1. INTRODUCTION

Vocational education, as outlined in Indonesia's Law No. 20 of 2003 on the National Education System, article 15, aims to prepare students to enter the workforce by equipping them with both theoretical knowledge and practical skills relevant to specific professional fields. In vocational high, particularly in the Culinary Arts program, students are expected to master a range of competencies, including the ability to analyze and implement table set-up procedures, as mandated in the 2013 revised curriculum under Competency Standards KD 3.7 and KD 4.7 (Kurniawan & Suryani, 2021).

The implementation of practical learning activities, such as table set-up, necessitates appropriate assessment methods to measure students' proficiency accurately. Performance assessment has been recognized as an effective evaluation method, requiring students to demonstrate practical skills in realistic contexts, thereby assessing both their cognitive understanding and psychomotor capabilities (Panadero et al., 2023). However, based on interviews conducted with culinary arts teachers at SMK Yapari-Aktripa Bandung, it was found that while performance assessments are employed, they are not yet fully integrated into the practicum process. Existing performance rubrics tend to be general and do not adequately capture critical aspects such as appearance, preparation procedures, and the execution process during table set-up tasks.

Moreover, current manual evaluation methods where teachers record and calculate scores manually pose significant challenges in terms of time efficiency, consistency, and objectivity. These limitations are consistent with findings from recent studies indicating that traditional paper-based observation sheets often lead to subjective evaluations and can hinder meaningful feedback for student improvement (Akhiruddin & Ibrahim, 2023; Barrot, 2021; Kintu, Zhu, & Kagambe, 2022).

The integration of technology into assessment practices offers innovative solutions to these issues. Digital tools such as electronic rubrics (e-rubrics), particularly those accessible via Android-based platforms, have been shown to improve the objectivity, transparency, and efficiency of performance evaluations in vocational education (Westerlaken & Suleri, 2025). E-rubrics enable clear articulation of assessment criteria, standardization of grading, and immediate feedback, thus enhancing both teaching and learning outcomes (Olson & Krysiak, 2021; Rachmatullah et al., 2022).

Despite these advantages, there remains a notable research gap regarding the development and validation of e-rubrics specifically designed for table set-up practicum in culinary education settings. Addressing this gap, the present study aims to develop and validate an e-rubric-based performance assessment tool tailored for evaluating students' skills in table setting. By leveraging mobile technology, this tool is expected to provide a structured, efficient, and transparent assessment method that meets the competency demands of the hospitality industry and the broader goals of vocational education reform.

2. METHODS

This study focused on the development of a performance assessment format for table set-up practicum using the Design-Based Research (DBR) approach. DBR is a systematic educational and instructional design process that includes stages of analysis, design,

evaluation, and revision to produce effective and practical outcomes. The research was conducted through the following stages:

1) Problem Identification and Analysis
2) Initial Design of the performance assessment instrument in the form of a rubric
3) Expert Validation of the initial design by two expert validators, followed by necessary revisions based on their input
4) Development of the E-Rubric as a digital assessment tool

The participants in this research consisted of two expert validators: a subject matter expert and an evaluation expert. The primary research instrument was an expert validation sheet used for expert judgment.

Expert validation involves evaluating the quality and feasibility of the designed product by professionals with expertise and experience in the relevant subject area. This process helps assess the appropriateness of the instrument based on established criteria.

Data analysis employed content validity techniques, which assess the degree to which the content of an instrument is relevant and representative of the intended construct. As content validation relies on expert judgment, it is inherently subjective; however, the level of agreement among experts contributes to the validity and reliability of the assessment instrument.

3. RESULTS AND DISCUSSION

3.1 Needs Analysis and Identification of Assessment Gaps

A field survey conducted at SMK Yapari-Aktripa Bandung highlighted critical shortcomings in the existing performance assessment rubric for table set-up practicums. Although the Catering subject teacher had developed a rubric, it primarily assessed final outcomes, neglecting essential process components such as appearance, preparation, and execution stages. This limited perspective weakens the ability to fully capture students' competency development across multiple dimensions of vocational skill learning. Research by Putra et al. (2022) similarly found that assessment tools focusing only on end results are inadequate for evaluating the nuanced skill acquisition processes crucial in vocational education.

Additionally, the rubric's task descriptions lacked specificity, leading to inconsistencies and ambiguity in assessment. According to Oliveira et al. (2021), detailed performance indicators are crucial for ensuring assessment transparency, fairness, and reliability. Without clear guidance on what tasks and processes should be demonstrated, both students and assessors can misinterpret performance expectations, resulting in subjective judgments. Olson and Krysiak (2021) reinforce that rubrics with clearly articulated criteria significantly enhance the reliability and validity of competency-based assessments, particularly when evaluating complex practical tasks.

3.2 Design and Development of the Performance Assessment Rubric

To address the identified gaps, a new performance rubric was designed emphasizing three key aspects: appearance, preparation, and execution. Each aspect was evaluated using a four-tiered performance scale: Excellent, Good, Fair, and Poor. This structured approach provides detailed performance descriptors for each level, thereby offering clearer expectations to both students and evaluators. As noted by Yusop et al. (2022), rubrics that include descriptive and

observable performance criteria foster greater consistency in evaluations and guide learners more effectively in developing practical competencies.

The rubric development process also included expert validation to ensure content validity and linguistic clarity. Subject matter and evaluation experts provided critical feedback, resulting in revisions that refined performance indicators and operational verbs used within the rubric. Panadero et al. (2023) emphasize that expert validation is a best practice in assessment development, as it helps align instruments with theoretical and practical competencies. Consistent with Design-Based Research (DBR) approaches (Rai et al., 2022), this iterative validation ensured that the rubric was not only theoretically sound but also practically applicable in real-world vocational education settings.

3.3 Transition to an Electronic Rubric (E-Rubric)

After validation, the rubric was digitized using the SmartRubric platform, enabling online performance evaluation that is more systematic and accessible. Transitioning to an e-rubric format was crucial in addressing inefficiencies linked to manual scoring, such as time delays and inconsistencies in grading. Westerlaken and Suleri (2025) found that e-rubrics enhance assessment reliability, promote immediate feedback, and support data-driven instructional improvement in vocational education contexts. The digitization aligns with broader trends of integrating mobile and cloud-based tools to modernize assessment practices.

The use of an electronic platform also facilitates real-time data collection and analysis, enabling teachers to monitor learning progress more effectively. Maier et al. (2020) highlighted that technology-enhanced assessments foster formative feedback loops, helping students improve their performance progressively. Furthermore, digital rubrics can be easily customized, updated, and reused, offering a flexible tool for long-term educational assessment strategies. The adoption of e-rubrics thus positions SMK Yapari-Aktripa to align better with contemporary educational standards and industry expectations for competency-based learning.

3.4 Implications for Vocational Education

The introduction of the e-rubric for the table set-up practicum presents several important implications for vocational education. First, it significantly improves assessment accuracy by ensuring that both the process and final product are evaluated comprehensively. Parmin et al. (2017) found that detailed process-based assessments lead to more precise evaluations of practical competencies, which are critical for preparing students for real workplace challenges. Accurate assessments also enable educators to diagnose student weaknesses more effectively and provide targeted remediation strategies, enhancing overall learning quality.

Second, the use of digital rubrics facilitates improved feedback mechanisms, offering students timely, specific, and actionable input regarding their performance. Yusop et al. (2022) and Lai and Bower (2020) argue that timely feedback is essential for building vocational skills, as it allows learners to make immediate adjustments and promotes self-directed learning. Furthermore, the structured format of e-rubrics promotes alignment with industry standards. EQAVET (2025) emphasizes that competency-based training must mirror industry expectations to enhance graduates' employability and relevance in the labor market.

In addition to promoting alignment with professional standards, the rubric encourages students to engage in reflective practices by providing clear benchmarks for performance expectations. Panadero et al. (2023) stress that self-assessment supported by rubrics fosters

metacognitive development, which is crucial for lifelong learning skills. Ultimately, the implementation of the e-rubric not only improves immediate learning outcomes but also cultivates critical thinking, self-regulation, and continuous improvement skills among vocational students, positioning them better for future career success.

4. CONCLUSION

In conclusion, the development of an electronic rubric (e-rubric) for assessing table set-up practicum in vocational education has proven to be a valid and practical solution to address the limitations of existing manual assessment tools. Through a systematic Design-Based Research (DBR) approach, the e-rubric was carefully designed, validated by experts, and refined to ensure it meets the criteria of clarity, objectivity, and relevance to real-world skills. The integration of appearance, preparation, and process components, assessed through clearly defined performance levels, enhances the accuracy and transparency of evaluations. By utilizing the Smart-Rubric platform, the assessment process becomes more efficient, accessible, and aligned with digital transformation trends in education. This innovation not only improves the quality of performance assessment in vocational learning but also contributes to the development of more competent and industry-ready graduates.

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