An Authentic Assessment Format for Team Based Projects in OBE Curriculum: A Case Study in Teacher Education

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Abstract. The implementation of Outcome-Based Education (OBE) in teacher education emphasises the alignment of assessment practices with Course Learning Outcomes (CLO) and Program Learning Outcomes (PLO). This study aims to develop an authentic assessment format specifically designed for team-based projects, addressing the multidimensional nature of these assignments. The research employs the ADDIE model (Analysis, Design, Development, Implementation, and Evaluation) to systematically create a format that incorporates the principles of OBE, the characteristics of team-based projects, and authentic assessment practices. The resulting assessment format consists of key dimensions, including teamwork process, product quality, reflection, peer assessment, and alignment with CLO/PLO. Each dimension is accompanied by indicators and rubrics tailored to evaluate the specific objectives of various team-based tasks, such as routine assignments, critical reviews, mini research, and idea engineering. The evaluation phase involves feedback from lecturers and students to ensure the practicality of the format. This study contributes to the advancement of authentic assessment practices in teacher education, providing a flexible tool for evaluating team-based projects while supporting the achievement of learning outcomes in an OBE curriculum. Future research is recommended to further validate the format through its implementation in diverse educational settings.

Keywords: Authentic assessment, Outcome-Based Education, team-based projects, teacher education, assessment format development.

1 Introduction

Outcome-Based Education (OBE) has gained traction as a transformative approach in higher education which is placing the achievement of specific learning outcomes at the core of all educational activities [1]. This paradigm emphasizes creating curriculums, instructional methods, and assessment systems that ensure students develop the competencies needed for both professional success and meaningful contributions to society [2], [3].

In teacher education, OBE offers a robust framework for preparing graduates to adapt to ever-changing educational demands. It equips future educators with critical thinking,

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collaborative skills, and the flexibility required to navigate the complexities of modern classrooms [4], [5]. The shift toward OBE reflects a growing awareness of the need to cultivate graduate attributes that align with global priorities, such as fostering innovative and reflective educators who can meet the challenges of today's educational landscape. This focus on equipping graduates with competencies aligned to global educational demands naturally underscores the importance of designing assessments that genuinely reflect these intended learning outcomes. A cornerstone of OBE is the alignment between Course Learning Outcomes (CLO), Program Learning Outcomes (PLO), and assessment practices [6]. This alignment ensures that every instructional activity and assessment task contributes directly to measurable learning outcomes [7]. However, achieving such alignment is particularly complex in teacher education, where the learning process involves multifaceted activities such as fieldwork, group collaboration, and project-based learning (Mahyuddin et al., 2024; Vesely et al., 2017). Among these methods, team-based projects stand out as powerful pedagogical tools for fostering essential skills like collaboration, communication, and applied problem-solving [10]. These projects not only encourage students to work together on meaningful tasks but also simulate real-world teaching scenarios, making them especially relevant for preparing pre-service teachers. For instance, team-based projects might require students to collaboratively design inclusive lesson plans, drawing on diverse pedagogical theories to address practical challenges in education [11]. Despite their potential, assessing team-based projects presents significant challenges. Traditional assessment methods, which often focus on individual performance through tests or essays, fail to capture the collaborative processes and interpersonal skills that are central to team-based learning [12], [13]. Additionally, these methods tend to prioritize the final product, overlooking critical elements such as individual contributions, team dynamics, and reflective learning. This misalignment underscores the need for a more comprehensive approach to assessment. One that aligns with the principles of team-based learning and the overarching goals of OBE recently known as authentic assessment [10], [14].

Authentic assessment offers a promising solution by evaluating students' abilities to apply knowledge in real-world contexts. This approach includes methods such as performance tasks, portfolios, and reflective journals [15]. Unlike traditional assessments, which focus solely on standardized outputs, authentic assessment emphasizes both the processes and outcomes that mirror professional scenarios. This dual focus makes it particularly effective for preparing students to meet the demands of the workplace while fostering skills such as critical thinking, collaboration, and adaptability. In teacher education, the value of authentic assessment is clear. It is especially suited for tasks that reflect the realities of teaching, such as lesson planning, classroom management simulations, and collaborative problem-solving activities [16], [17]. Its principles align closely with the goals of OBE as well, offering a promising approach for evaluating team-based projects. By prioritizing real-world relevance and multidimensional evaluation, [18] argues that authentic assessment not only captures the complexities of collaborative learning but also ensures alignment with Course Learning Objective (CLO) and Program Learning Objective (PLO). For instance, a team-based project to develop a thematic learning module would involve evaluating not just the quality of the module's content and design, but also the team's collaborative dynamics and individual reflections on the process [19].

While the theoretical advantages of authentic assessment are well-documented, its implementation often falls short in practice. Many assessments continue to focus primarily on the final outputs of projects, neglecting essential aspects such as collaborative processes, individual accountability, and reflective learning [10], [17], [20], [21]. Moreover, the absence of standardized frameworks for integrating authentic assessment principles into team-based

projects has led to inconsistencies in evaluation criteria and practices [22]. These challenges are particularly evident in localized contexts like Indonesia, where educational reforms are still adapting to global standards. The adoption of OBE frameworks in Indonesia has brought significant shifts in higher education, emphasizing student-centered learning and measurable outcomes [1], [4], [10], [23]. However, while teacher education programs increasingly incorporate team-based projects, the tools for assessing these projects comprehensively remain underdeveloped. Institutions often struggle to evaluate the multidimensional nature of such projects, particularly in terms of collaborative processes and their alignment with CLO and PLO. This gap highlights the need for research that bridges the theoretical foundations of authentic assessment with practical, context-sensitive tools. Indonesian educators, in particular, face the dual challenge of balancing OBE's ambitious goals with the practical realities of classroom teaching. Without clear guidelines or standardized formats, assessments of team-based projects risk being subjective and inconsistent, undermining the principles of fairness and accountability central to OBE [24], [25], [26], [27]. Limited access to professional development further exacerbates this issue, leaving educators without the necessary training to implement innovative assessment practices, including authentic assessment.

In order to address these challenges, this study proposes the development of a generic authentic assessment format specifically designed for team-based projects in teacher education. Grounded in Mueller's [22] framework, the format integrates the principles of OBE with the collaborative and multidimensional nature of team-based projects. It aims to provide a comprehensive tool for evaluating both learning processes and outcomes, focusing on key dimensions such as teamwork dynamics, individual contributions, product quality, and reflective learning. The proposed format is designed to be adaptable across diverse team-based project types while ensuring alignment with CLO and PLO, making it a versatile and effective tool for teacher education programs.

2 Research Method

This study employs the ADDIE model that consists of the steps of Analysis, Design, Development, Implementation, and Evaluation, known as a structured framework to systematically develop and evaluate an authentic assessment format for team-based projects in the OBE curriculum implementation. The ADDIE model, widely recognized for its effectiveness in instructional design, ensures that every phase of development builds upon the previous one, leading to coherent and actionable outcomes[28], [29]. As the research is ongoing, this article focuses specifically on the first three phases, namely analysis, design, and development. These product development phases, conducted from January to October 2024, and have culminated in the creation of a finalized assessment format. The subsequent phases, implementation and evaluation, will be explored in future studies, which aim to test and refine the format in broader educational contexts with larger populations.

The *analysis phase* of this study involved three key activities, including the examination of Course Learning Semester Plans (CLSPs), the survey, and a comprehensive literature review. The examination of CLSPs aimed to explore how Course Learning Outcomes (CLOs) and Program Learning Outcomes (PLOs) were assessed within the OBE framework. A total of twelve CLSPs were randomly selected by the faculty's quality assurance team, which is responsible for monitoring and ensuring the alignment and quality of these plans. The selected sample consisted of two general education courses, two pedagogical courses, and eight core

program courses, providing a representative view of how assessments were structured across various subjects. In addition to the CLSP analysis, surveys were conducted to gather insights from both lecturers and students regarding the implementation of OBE principles, specifically focusing on team-based project assignments and their assessments. Lecturers shared their perspectives as curriculum designers and implementers, while students reflected on their experiences as participants engaged in these assignments. Besides the document analysis of CLSPs and survey, the researchers also conducted a comprehensive literature review which further enriched this phase by examining scholarly works related to OBE implementation and assessment, assessment models for team-based projects, and the distinctions between traditional and authentic assessment approaches. This review contextualized the study within existing theoretical frameworks while identifying critical elements for developing an authentic assessment format. By addressing key variables relevant to team-based project assessments, the review ensured that the proposed format would be both theoretically grounded and practically applicable.

Building on the findings from the *analysis* stage, the researchers proceeded to *design* the assessment format for team-based project assignments. This phase began with the identification of key components required for assessing six distinct types of team-based projects. The design process emphasized aligning the proposed format with the principles and characteristics of the OBE curriculum, particularly ensuring explicit connections to Course Learning Outcomes (CLOs) and Program Learning Outcomes (PLOs). As part of this alignment, the researchers mapped out the essential components that would constitute the assessment format, creating an initial rough draft tailored to the needs of team-based projects within the OBE framework. Once the preliminary design was drafted, the format was compared against existing assessment models to evaluate its uniqueness, comprehensiveness, and adherence to established best practices and aligning with the context of teacher education. This benchmarking process included examining formats used in similar educational contexts to identify potential improvements or gaps. The initial design was then carefully revised and critically reviewed by all members of the research team. This iterative process ensured that the final version of the format not only addressed the challenges identified in the analysis stage but also adhered to the framework for authentic assessment proposed by [22].

The *development* phase concentrated on validating the authentic assessment format to ensure its alignment with Outcome-Based Education (OBE) principles and its applicability to team-based project assignments. The validation process consisted of two key stages. In the first stage, the format underwent an initial review by assessment and curriculum experts. This draft, which included rubrics and supporting materials, was evaluated for its clarity, relevance, and adherence to Mueller's [22] framework for authentic assessment. Experts provided feedback on whether the format effectively captured essential components of authentic assessment, such as evaluating collaborative processes, fostering real-world application, and addressing multidimensional outcomes. These insights were incorporated into a revised version of the format to enhance its theoretical and practical robustness. In the second stage, the revised format was validated through a pilot study involving lecturers and student teachers. The pilot study provided actionable feedback, ensuring that the authentic assessment format addressed both theoretical expectations and the practical needs of users. In this process, a survey-based approach was employed using a five-point Likert scale to assess two critical dimensions, including feasibility. The feasibility dimension was attempting to assess the practicality of implementing the format, focusing on the clarity of its components, the usability of format, and its adaptability to various types of team-based projects.

2.1 Research Participants

The study was conducted within the teacher education program at the Faculty of Education at a public university in North Sumatera, Indonesia. It focused on team-based project assignments in courses designed under the principles of Outcome-Based Education (OBE). A total of sixty participants were purposively selected to ensure their expertise and relevance to the study objectives. Among them, twenty (33%) were teacher educators, and forty (67%) were student teachers. In terms of gender, 25% of the participants were male, with male representation among both groups by 8% of lecturers and 17% of student teachers.

Notably, the teacher educators involved in the study had not previously developed formal rubrics for assessment or shared clear, structured assignments with students. Team-based project guidelines were often conveyed verbally without an official format for assignments or evaluations, leaving students unaware of how their performance was being assessed. Despite this gap in prior practice, the teacher educators played a critical role in validating the proposed assessment format and testing its application during the pilot study. Meanwhile, the forty student teachers used the new format as part of their team-based projects, gaining clearer insights into assessment criteria and expectations for collaborative work during the pilot phase.

2.2 Data collection methods and instruments

This study employed three data collection methods: document analysis, surveys, and interviews. Each method was carefully selected to align with specific phases of the research and to ensure the validity and reliability of the findings. Triangulation of these methods provided a comprehensive approach to capturing diverse perspectives and verifying the results.

First method used in this research was *document analysis.* This method was employed during the *Analysis Phase* to evaluate how Course Learning Outcomes (CLOs) and Program Learning Outcomes (PLOs) were being assessed within the OBE framework. The researchers analyzed twelve randomly selected Course Learning Semester Plans (CLSPs), using an observation checklist as the primary instrument. The checklist focused on identifying gaps in the structure and alignment of assessment practices for team-based project assignments. This analysis served as the foundation for designing the proposed authentic assessment format.

Secondly, *surveys* were administered as the method of data collection during both the *Analysis and Development Phases* to gather quantitative data from lecturers and student teachers. In the Analysis Phase, surveys were used to uncover participants' experiences with existing assessment formats for team-based project assignments. The surveys identified challenges related to alignment, usability, and transparency, providing critical insights into current practices. While in the Development Phase, the researchers used a five-point Likert scale questionnaire to evaluate the feasibility of the developed authentic assessment format. Feasibility was measured by evaluating the clarity of the format, its usability, and its adaptability to various types of team-based projects.

The last method used to collecting data and information in this research was *unstructured and semi interviews*. It was used as an additional method to supplement the findings from document analysis and surveys. During the *Development Phase*, interviews were conducted with assessment and curriculum experts to validate and refine the proposed format. These interviews provided detailed feedback, confirming the clarity, relevance, and comprehensiveness of the format before it was distributed for broader validation stage.

Additionally, interviews with lecturers and student teachers offered qualitative insights into their experiences as users of the format. This allowed the researchers to capture valuable perspectives on the applicability of the format in real-world educational settings. By employing these three methods, each supported by specific instruments, the researchers were trying to ensure robust data collection that enhanced the validity and trustworthiness of the study. Therefore, with these various methods of data collection, the triangulated approach could be implemented where it provided a holistic understanding of the challenges and potential solutions in implementing an authentic assessment format for team-based projects within the OBE curriculum.

2.3 Data analysis

The data collected from the document analysis, surveys, and interviews resulted in two primary types of data, including qualitative and quantitative. Each data type was analyzed using appropriate methods to ensure validity and reliability in addressing the research objectives comprehensively.

The qualitative data were derived from the document analysis of Course Learning Semester Plans (CLSPs) and the interviews conducted during the Development Phase. These data were analyzed using [30], [31], [32] thematic analysis method, a rigorous approach for identifying, analyzing, and interpreting patterns or themes within qualitative data. The thematic analysis process consisted of six steps, (1) *Familiarization with the Data*, in this step the researchers immersed themselves in the data by thoroughly reviewing observation checklists from the document analysis and transcripts from the interviews to gain an initial understanding of the content; (2) *Generating Initial Codes*, codes were assigned to segments of the data that captured meaningful insights related to the clarity, alignment, and feasibility of the assessment format. For example, recurring observations about gaps in CLO-PLO alignment or comments on rubric usability were coded systematically; (3) *Searching for Themes*, then the codes were grouped into broader themes representing patterns in the data; (4) *Reviewing Themes*, in this step the themes were reviewed and refined to ensure they accurately represented the data. Any overlapping or vague themes were clarified, ensuring consistency across all data sources; (5) *Defining and Naming Themes*, the final themes were clearly defined and named in this stage, providing a structured framework for reporting findings, (6) *Producing the Report*, when the themes were organized into a cohesive narrative to highlight key qualitative findings, ensuring they directly addressed the research objectives.

While the quantitative data that was collected through the surveys during the Analysis and Development Phases, were analyzed descriptively to evaluate the feasibility of the proposed assessment format [33]. The Likert scale responses were processed to calculate mean scores, standard deviations, and percentages for each item. The feasibility of the format was assessed based on three main criteria, including clarity, usability, and adaptability. A scoring rubric was established to interpret the results, as outlined in the table below:

Table 1. Criteria for Feasibility Analysis.

Score Range	Interpretation	Criteria Description
4,21 - 5,00	Highly feasible	The format is clear, user friendly, and easily adaptable to various tasks.
3,41 - 4,20	Feasible	The format meets expectations

		but may require minor adjustments.
2,61 - 3,40	Moderately feasible	The format has notable usability issues and needs improvement.
0,00 - 2,60	Not feasible	The format is unclear, impractical, or unsuitable for implementation.

To enhance the validity and trustworthiness of the findings, the qualitative and quantitative data were triangulated. The themes identified in the qualitative analysis were cross-referenced with the quantitative results to ensure consistency. For instance, if survey responses indicated high feasibility, the qualitative data were examined to identify specific aspects that supported this perception, such as participant feedback on rubric clarity or task adaptability. By integrating both qualitative and quantitative analyses, the study provided a holistic understanding of the challenges and solutions in developing an authentic assessment format for team-based projects within the OBE curriculum.

2.4 Ethical Consideration

This study adhered to rigorous ethical research principles to ensure the rights, privacy, and well-being of all participants. Before data collection began, all participants, including teacher educators and student teachers, were provided with comprehensive information about the study. They were informed about its purpose, methods, and potential outcomes, and their participation was entirely voluntary. Informed consent forms were signed to document their willingness to be part of the research. To maintain confidentiality, all data were anonymized during the analysis and reporting stages. Identifiers such as names and specific roles were replaced with codes, and access to raw data was restricted to the research team. These measures ensured that participants' identities remained protected throughout the study. Also, the participants were also made aware of their right to withdraw from the study at any time without any negative consequences. This approach underscored the voluntary nature of their involvement and prevented any form of coercion. All collected data were securely stored in password-protected digital files, while physical documents were kept in locked storage. The data will be retained for a specified period in compliance with institutional guidelines before being securely destroyed.

The study's design was reviewed to ensure that no harm would come to participants. The surveys, interviews, and document analysis were designed to be non-invasive and focused solely on professional or academic practices related to assessment in the OBE curriculum. Ethical approval was obtained from the Directorate of Research and Community Services or in Indonesian Language called as *Lembaga Penelitian dan Pengabdian Kepada Masyarakat* (LPPM) of the affiliated university, ensuring compliance with institutional and international standards for educational research. Throughout the research process, the team prioritized respect for participants by maintaining professional and courteous interactions. Efforts were made to accommodate participants' schedules for survey completion and interviews, minimizing any inconvenience. By incorporating these ethical safeguards, the study upheld the highest standards of integrity and responsibility, ensuring a research process that was both trustworthy and respectful of all participants.

3 Result and Discussion

3.1 Result

After conducting qualitative and quantitative data analysis and triangulating the findings, this study produced results addressing the research questions related to the development process, the feasibility of the authentic assessment format, and the challenges identified by participants.

3.1.1 The Development Process of the Authentic Assessment Format

The development of the authentic assessment format for team-based projects within the OBE curriculum was conducted through a systematic process guided by the ADDIE framework. This research focused on the first three phases: analysis, design, and development. The process was novel in its alignment with [22] framework for authentic assessment, ensuring the inclusion of real-world application, multidimensional evaluation, and alignment with CLOs and PLOs. In the *analysis* phase, qualitative data obtained from the document analysis of 12 Course Learning Semester Plans (CLSPs) revealed several gaps. These included a lack of explicit connections between CLOs and PLOs, unclear rubrics, and inconsistencies in how team-based project assignments were assessed. Survey data supported these findings, with 72% of lecturers and 65% of student teachers reporting a lack of transparency in assessment criteria. These results provided the basis for identifying essential components for the proposed format, including task types, rubrics, reflection, and 360-degree assessment. During the *design* phase, the initial format was drafted based on the findings from the analysis phase. The draft emphasized aligning assessment components with CLOs and PLOs, creating detailed rubrics, and ensuring usability in team-based project assignments. Existing assessment models were reviewed to benchmark the design, ensuring its comprehensiveness and relevance to the OBE curriculum.

The *development* phase involved validating the format through expert review and participant feedback. The expert highlighted the need for clearer task descriptions and additional indicators for evaluating collaboration. Also, this process lets the expert fill out a validation rubric to evaluate clarity, practicality, and comprehensiveness, and he provides written feedback for improvements.

Table 1. Results of Expert Validation Using Aiken's V

Feasibility aspect	Aiken's V score	Interpretation
Clarity	0,78	Valid
Practicality	0,80	Valid
Comprehensiveness	0,76	Valid

The validation results indicated that the format was valid across all criteria. Experts suggested adding a section for explicitly stating the graduate profile of the study program and how the course aligns with it. This recommendation was incorporated into the final version of the format. After revisions, the updated format was pilot-tested using surveys and interviews. The pilot phase confirmed the general feasibility of the format while identifying areas for further refinement.

3.1.2 Feasibility of the Assessment Format

The feasibility of the developed assessment format was evaluated using a five-point Likert scale questionnaire distributed to lecturers and student teachers during the pilot study. The feasibility was assessed across three dimensions: clarity, usability, and adaptability. The results are presented in table 2.

Table 2. Table title. Table captions should always be positioned *above* the tables.

Feasibility aspect	Mean score	SD
Clarity	3,95	0,44
Usability	3,85	0,60
Adaptability	3,80	0,72

The overall feasibility score of 3.87 indicates that the format was feasible, with clarity scoring the highest among the three dimensions. Participants noted that the rubrics provided specific indicators for performance and that task descriptions were detailed and accessible. However, feedback suggested several areas for improvement, including simplifying the process of recording individual contributions and enhancing the flexibility of rubrics for various types of team-based projects.

3.1.3 Strengths and Weaknesses of the Format According to Participants

Interviews with lecturers and student teachers provided qualitative insights into the strengths and weaknesses of the format.

One lecturer noted, *"The format provides much-needed structure and transparency, but the addition of the graduate profile makes it clearer how tasks align with broader program goals."* However, lecturers emphasized that implementing the format required additional training, particularly for understanding how to use 360-degree assessments effectively.

Student teachers highlighted the format's focus on reflective practices as both a strength and a challenge. One student remarked, *"The reflective section helped me think critically about my contribution to the project, but I needed clearer guidance on how to write it."* Another student expressed difficulty with peer evaluations, stating, *"It was hard to assess my teammates objectively without feeling uncomfortable."*

These challenges highlight areas where the format could be further refined, including clearer instructions for reflection and additional training on using peer evaluations.

3.2 Discussion

The results of this study demonstrate the feasibility of the developed authentic assessment format for addressing gaps in assessing team-based projects within the OBE curriculum. By integrating principles from [22] and aligning them with CLOs and PLOs, the format provides a standardized yet flexible approach to evaluating multidimensional outcomes. The findings reinforce the idea that authentic assessment, when properly designed, can provide a space for promoting collaboration and real-world application [11], [15], [21], [34], [35], [36]. The

alignment of this study with previous research on authentic assessment is evident in its emphasis on multidimensionality and reflective practices. For instance, [37] highlighted the importance of integrating tasks that encourage deep learning and teamwork, which is supported by this study's focus on rubrics and 360-degree assessments. Similarly, Andanawarih[17] emphasized that authentic assessment formats are particularly effective in fostering critical thinking and problem-solving skills, both of which are integral to this study's approach.

The inclusion of 360-degree assessments aligns with findings by Gulikers, Bastiaens, and Kirschner (2004), who argued that assessment processes that include peer and self-evaluation contribute to greater accountability and teamwork efficiency. This supports the positive feedback from participants regarding the collaborative dynamics fostered by the developed format. Moreover, [38] noted that authentic assessment improves student engagement by making learning tasks relevant and meaningful, which resonates with the student teachers' appreciation for the reflective components included in this study. Despite its feasibility, the results also reveal several limitations that align with critiques of authentic assessment in the literature. For instance, some participants found the reflective components challenging to understand, a finding consistent with critiques by Almas et,al [36], who argued that authentic assessments often impose high cognitive demands on learners, requiring additional support. Similarly, the time-intensive nature of implementing 360-degree assessments aligns with concerns raised by [21], [39], who warned that such approaches can overburden both students and educators if not carefully managed. Furthermore, while this study demonstrates the feasibility of the format, its moderate usability and adaptability scores indicate areas for refinement. These findings align with Irianti (2018), who observed that authentic assessments often struggle to accommodate diverse learning contexts and project types. This suggests that the developed format may require additional contextual adaptations to ensure it is universally applicable across various courses and disciplines. On the other hand, the study contributes to addressing gaps identified in prior research. For example, [39] argued that authentic assessment frameworks often lack explicit connections to measurable learning outcomes, such as CLOs and PLOs. This study directly addresses this gap by ensuring that every component of the format is explicitly linked to these outcomes, providing a clear pathway for evaluating both team-based and individual achievements. Additionally, the format's structured approach to collaboration reflects research by [40], who found that structured teamwork assessments positively impact student engagement and learning outcomes. However, the findings of this study contrast with concerns raised by [41], who cautioned that standardized rubrics in authentic assessments might limit creativity and flexibility. While the rubrics in this study were praised for their clarity and alignment, their adaptability to diverse project types remains a challenge. Future iterations of the format should consider incorporating more flexible guidelines to address this critique.

4 Conclusion

This study developed an authentic assessment format for team-based projects within the OBE curriculum, focusing on the phases of analysis, design, and development guided by the ADDIE framework. The findings reveal that the format is feasible, as demonstrated by its alignment with authentic assessment principles, measurable CLOs and PLOs, and the practical needs of team-based learning environments. The inclusion of task types, rubrics, reflection, and 360-degree assessments contributed to its multidimensional nature, supporting collaborative and reflective practices in team-based projects. However, the moderate scores for usability and

adaptability indicate that the format requires further refinement. Challenges such as the cognitive demands of reflective components, the time-intensive nature of implementation, and the need for more flexible rubrics highlight areas for improvement. These findings suggest that while the format has strong potential, its implementation and evaluation phases remain critical to addressing these limitations and ensuring scalability across diverse educational contexts.

This research contributes to the growing body of literature on authentic assessment by addressing key gaps in connecting assessment practices with CLOs and PLOs, aligning with Mueller's [22] framework. Nonetheless, it underscores the need for future studies to focus on refining the format through pilot implementation in broader educational contexts and conducting long-term evaluations to measure its effectiveness and sustainability.

In conclusion, the study provides a foundation for developing robust, authentic assessments in higher education but highlights the importance of continuous adaptation to meet the diverse and evolving needs of learners and educators within the OBE framework.

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