

The development of a gamification-based evaluation tool for the creative projects and entrepreneurship subject in grade XI

Yunanda Ahmad*, Hamsu Abdul Gani, Abdul Hakim

Universitas Negeri Makassar, Indonesia

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Abstract: Technology in evaluation can improve the efficiency, accuracy, and quality of learning assessments. This study aims to develop a valid, practical, and effective gamification-based learning evaluation tool for the Creative Products and Entrepreneurship subject. The research employed a Research and Development (R&D) approach using the ADDIE development model. The study was conducted at UPT SMK Negeri 2 Bone, with research subjects including Grade XI DKV students, one Creative Projects and Entrepreneurship teacher, and two expert validators, namely a subject-matter expert and a media expert. Data were analyzed using descriptive qualitative and quantitative techniques. The results indicate that both teachers and students require evaluation tools that are efficient, interactive, and digitally based. The gamification-based evaluation tool was developed in accordance with the learning outcomes and instructional objectives using Canva and ClassPoint applications. Validation results show that the evaluation tool falls into the valid category. The practicality of the evaluation tool is classified as very practical based on teacher and student response questionnaires. The effectiveness of the evaluation tool is demonstrated by classical learning mastery that exceeds the predetermined mastery threshold through post-test results. Therefore, the gamification-based evaluation tool is considered feasible and effective for use as a learning evaluation tool in Grade XI classrooms.

Keywords: Entrepreneurship, evaluation tools, gamification, technology in education

Abstrak: Teknologi dalam evaluasi dapat meningkatkan efisiensi, akurasi, dan kualitas penilaian pembelajaran. Penelitian ini bertujuan untuk mengembangkan alat evaluasi pembelajaran berbasis gamifikasi yang valid, praktis, dan efektif untuk mata pelajaran Kreatif dan Kewirausahaan. Jenis penelitian yang digunakan adalah *Research and Development* (R&D) dengan model pengembangan ADDIE. Penelitian dilaksanakan di UPT SMK Negeri 2 Bone dengan subjek uji coba berupa peserta didik kelas XI DKV, satu guru PKK, serta dua validator ahli, yaitu ahli materi dan ahli media. Analisis data dilakukan secara deskriptif kualitatif dan kuantitatif. Hasil penelitian menunjukkan bahwa guru dan peserta didik membutuhkan alat evaluasi yang efisien, interaktif, dan berbasis digital. Alat evaluasi berbasis gamifikasi dikembangkan sesuai dengan capaian dan tujuan pembelajaran menggunakan aplikasi *Canva* dan *ClassPoint*. Hasil validasi menunjukkan bahwa alat evaluasi berada pada kategori valid. Kepraktisan alat evaluasi berada pada kategori sangat praktis berdasarkan respons guru dan peserta didik. Keefektifan alat evaluasi ditunjukkan oleh ketuntasan belajar klasikal yang melampaui batas ketuntasan melalui post test. Dengan demikian, alat evaluasi berbasis gamifikasi dinyatakan layak dan efektif digunakan sebagai alat evaluasi pembelajaran di kelas XI.

Kata kunci: Kewirausahaan, alat evaluasi, gamifikasi, teknologi dalam pendidikan

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*Corresponding author: yunandaahmad@gmail.com

INTRODUCTION

Teachers in the traditional classroom must respond to the rapidly changing world by creating a flexible learning environment and integrating technology. The education system is confronted with global challenges, including rapid technological developments, changing skill requirements, and demands for learning that is adaptive and relevant to the times as it enters the 21st-century (Bernard et al., 2019; Reddy et al., 2026). Consequently, the learning

process and the assessment and evaluation systems must undergo comprehensive transformation to meet the demands of 21st-century education. The use of digital technology is a fundamental aspect of 21st-century education, fostering a more interactive, adaptable, and student-centered learning experience (Bervell & Arkorful, 2020; Loyola et al., 2022; Valtonen et al., 2021).

The development of information and communication technology has shifted the paradigm of conventional learning towards technology-based learning. Technology-based learning enables teachers to present material in a more varied, engaging, and contextual manner, while also supporting active student engagement (Damopolii et al., 2022; Dita et al., 2023). The educators are required to possess adequate pedagogical and technological competencies to develop learning innovations that are appropriate to students' characteristics and current developments (Nurhikmah et al., 2022). Learning strategies supported by information and communication technology devices provide quality learning experiences (Gusho et al., 2023; Kashive & Mohite, 2023; Schmidt & Huang, 2022; Setyantoko et al., 2023).

Technology-based educational transformation is not limited to delivering content. Evaluation of learning also plays a crucial role in determining learning success (Deeley, 2018; Lai & Bower, 2019). Evaluation serves as an instrument for measuring learning objectives and as a basis for decision-making to improve the learning (Dunn & Mulvenon, 2009; Lu & Wu, 2018; Nicoll et al., 2018). Akmalia et al. (2023) emphasize that evaluation is a key component in improving the overall quality of learning and education. The success of the learning evaluation will determine the direction of future learning improvement. It can be done using paper-based tests or with the assistance of technology (Chirumamilla et al., 2020; Yu & Iwashita, 2021).

In practice, school learning evaluation is still often conducted conventionally, such as paper-based written tests scored manually. This evaluation model has several limitations, including requiring long correction times, providing less direct feedback to students, and tending to cause boredom and anxiety during the evaluation process (Aldilla, 2023; Romadhona et al., 2024). This condition can affect low student motivation and participation in learning evaluations. In this era of increasingly advanced technology, learning evaluation should adapt to digital technology to be more effective, efficient, and relevant to the characteristics of the digital generation (Handoko et al., 2021; Ota et al., 2023; Wismiati et al., 2025).

Numerous studies have shown that the use of technology in evaluation can improve the efficiency, accuracy, and quality of learning assessments. Technology-based evaluations can accelerate the assessment process, minimize human error, and provide more comprehensive learning outcome data (Cosi et al., 2020; Dewita & Apdeni, 2023; Robertson et al., 2019). In addition to technical aspects, the attractiveness and practicality of evaluation tools are important factors in preventing monotony and increasing student interest in participating in the assessment process. Therefore, teacher creativity and innovation are key to designing effective and engaging evaluation systems, particularly those based on technology (Goosen & Van, 2018).

One of the rapidly developing innovations in 21st-century education is gamification. Gamification is the use of game design elements in non-game contexts to increase user motivation and engagement (García-López et al., 2023; Rajput et al., 2022). In the

educational context, gamification is not merely defined as the use of games, but rather as the application of game principles, such as points, levels, challenges, feedback, and rewards, to the learning and evaluation process (Dehghanzadeh et al., 2024). Muharram and Widani (2021) emphasize that gamification creates a learning environment that encourages student independence, active engagement, and meaningful learning experiences.

Several previous studies have examined the effectiveness of gamification as a learning evaluation tool. Nidhom and Putro (2019) found that gamification can reduce student anxiety during evaluations and produce assessments that better reflect students' true abilities. The gamification-based assessments on digital platforms are feasible and improve learning achievement (Lampropoulos & Sidiropoulos, 2024; Zeng et al., 2024). Furthermore, Lee (2023) reported that gamification can enhance students' creativity, collaboration, and communication skills while creating a fun and competitive learning environment. However, most of this research focuses on general learning and has not examined the development of gamification evaluation tools specifically in the context of vocational education.

Vocational High Schools (VHS) are characterized by a learning approach that emphasizes a balance among knowledge, skills, and work attitudes. One subject that plays a crucial role in equipping students with 21st-century skills is Creative Products and Entrepreneurship (PKK). This subject aims to instill the values of entrepreneurship, creativity, and independence, which are essential in the workplace. Therefore, PKK learning evaluations need to be designed innovatively to authentically assess competency achievement and engage students.

SMKN 2 Bone is one of the schools that already has adequate technological facilities and infrastructure, including internet access, smartphone use, and computer labs. Furthermore, this school has implemented the Independent Curriculum since 2022, which provides teachers with flexibility in designing lessons and assessments. However, preliminary studies indicate that PKK learning evaluation at the school is still dominated by conventional, paper-based, and manual methods. This situation indicates a gap between the potential of available technology and its utilization in learning evaluation activities.

Given these needs, developing a gamification-based learning evaluation tool is a relevant and contextually appropriate alternative. One platform that can be utilized is ClassPoint, a web-based application integrated with Microsoft PowerPoint that provides interactive assessment features and gamification elements (Saleh & Mohamed, 2025; Yanti et al., 2025). ClassPoint allows teachers to present quizzes, polls, and practice questions in real time, with automated scoring and direct feedback to students (Abdelrady & Akram, 2022; Ananayo, 2024; Basijan, 2024; Mazlan et al., 2025). Thus, the evaluation process becomes more efficient, transparent, and engaging. This study aims to develop a valid, practical, and effective gamification-based learning evaluation tool for the Creative Products and Entrepreneurship subject for grade XI at SMKN 2 Bone. Specifically, this research contributes to enriching the study of the development of gamification-based digital assessments in the context of vocational education.

METHOD

This study used the Research and Development (R&D) method to develop and test the quality of a gamification-based learning evaluation tool for the Creative Project and

Entrepreneurship (PKK) subject. The development model used was ADDIE (Branch, 2009). The ADDIE model was chosen because it allows developers to conduct a comprehensive needs analysis, design a product that suits user characteristics, and evaluate it based on validity, practicality, and effectiveness.

The research was conducted at the Technical Implementation Unit (UPT) of State Vocational High School 2 Bone, Bone Regency, South Sulawesi, during the odd semester of the 2024/2025 academic year. The research subjects consisted of: (1) expert validators, one material expert and one instructional media expert, who were tasked with assessing the product's validity; (2) 11th-grade PKK teachers, who served as product users and respondents in the practicality test; and (3) 47 11th-grade DKV students, who participated in a limited trial and field test to measure the practicality and effectiveness of the evaluation tool.

Data collection in this study was conducted through interviews, questionnaires, and learning outcome tests. Interviews were conducted to gather information on the conditions and needs for learning evaluation in the Creative Projects and Entrepreneurship subjects. Questionnaires were administered to teachers and students after using the gamification-based evaluation tool to assess practicality and user response, while a learning outcome test (post-test) was used to measure the effectiveness of the evaluation tool based on the completeness of student learning outcomes as a class.

The data analysis techniques in this study include item analysis based on validity and reliability tests, difficulty-level tests, and discriminatory-power tests. Validity analysis from material experts, media experts, and media design with validity level criteria as in Table 1.

Table 1. Validity level criteria (Arsyad, 2016)

Value Achievement Criteria	Validity Level
$1 \leq Va < 2$	Invalid
$2 \leq Va < 3$	Less Valid
$3 \leq Va < 4$	Quite Valid
$4 \leq Va < 5$	Valid
$Va = 5$	Very Valid

The practicality analysis was obtained from the teacher response questionnaire and the student questionnaire with the practicality level criteria in Table 2.

Table 2. Practicality level criteria (Gulo & Harefa, 2022)

%	Level of Practicality
0% - 20%	Very Impractical
21% - 40%	Not Practical
41% - 60%	Quite Practical
61% - 80%	Practical
81% - 100%	Very Practical

The analysis of the effectiveness of the evaluation tool is determined based on the classical completion of learning outcomes, namely if at least 75% of students achieve a score

above the Minimum Completion Criteria (KKM) with the following equation (Riduwan, 2013):

$$\text{Classical Completion} = \frac{\text{Number of students who completed}}{\text{Total number of students}} \times 100\% \tag{1}$$

RESULTS AND DISCUSSION

The results of the study indicate that the gamification-based learning evaluation tool for the Creative Products and Entrepreneurship subject that was developed meets the criteria for good quality in terms of validity, practicality, and effectiveness. The results of the needs analysis indicate that the implementation of learning evaluation in the Creative Products and Entrepreneurship subject in grade XI of SMKN 2 Bone is still dominated by conventional, paper-based methods and has not utilized technology optimally. Teachers generally use written tests with manual correction and score processing, which takes considerable time and does not provide direct feedback to students. Educators usually allocate a lot of time to reviewing exams, but often find it difficult to provide adequate feedback on individual student errors, which may be delayed until students no longer remember the questions or answers (Öz & Özturan, 2018).

The questionnaire results showed that all students had smartphones and adequate internet access, and the majority agreed with the use of digital-based evaluations equipped with gamification elements. Students also expressed interest in evaluation systems that featured points, levels, and competitions, as they were considered more engaging and motivating. These findings indicate a gap between the potential of available technology and current evaluation practices, necessitating the development of gamification-based learning evaluation tools that meet teachers' needs and students' characteristics. Currently, learning must utilize technology to facilitate and facilitate student learning (Dita et al., 2024; Mustofa et al., 2024). The results of this needs analysis serve as the basis for digital product design (Damopolii & Kurniadi, 2019), particularly gamification-based products (Priyadi et al., 2023).

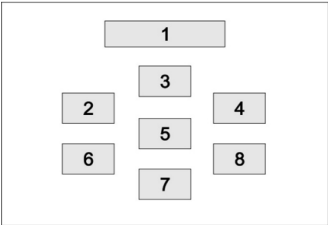
Main Menu		
		
Text and Images	Description	Action
Text and Images	The main menu is the central navigation display for the gamification-based evaluation tool. It includes a description of the evaluation tool, its purpose, learning outcomes, learning objectives, evaluation, a leaderboard, and a developer profile.	1. Main Menu Text 2. Learning Objectives Menu 3. Evaluation Tool Description Menu 4. Learning Objectives Menu 5. Learning Outcomes Menu 6. Evaluation Menu 7. Developer Profile Menu 8. Leaderboard Menu

Fig. 1. Storyboard of gamification-based evaluation tool

The product design results in a gamification-based learning evaluation tool developed using the ClassPoint application integrated with Microsoft PowerPoint. The evaluation tool design is based on the learning outcomes and characteristics of 11th-grade students in the Creative Projects and Entrepreneurship subject. The product is designed as an interactive quiz with a simple, attractive visual display and features gamification elements, including a points system, scores, and a leaderboard. The appearance of the gamification-based evaluation tool is presented in Figure 2.

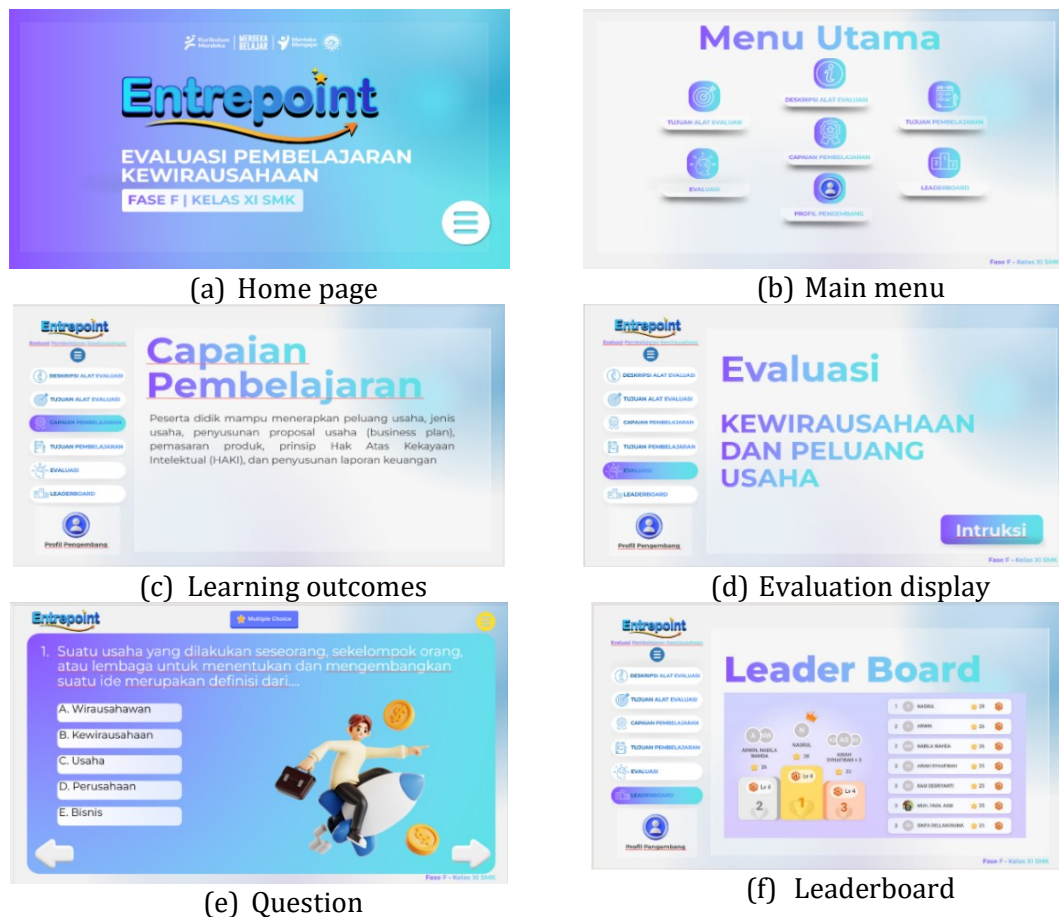


Fig. 2. ClassPoint gamification-based evaluation tool

The design of a gamification-based evaluation tool begins with designing all aspects that support its development. Flowcharts and storyboards help visualize the evaluation process, from the initial display, navigation, student interaction, and assessment mechanisms. This ensures that each part of the media is interconnected and follows a logical workflow, facilitating the implementation process in subsequent stages. Using Canva to design the evaluation tool's display significantly contributes to aesthetics and visual consistency. Selecting colors, layouts, icons, and graphic elements effectively enhances the media's appeal and adapts it to learners' characteristics. As Sutrisno (2020) points out, the design process must facilitate user absorption of all information and visuals presented and must be engaging.

In addition to the display design, developing evaluation tool questions is a key component of this stage. Questions are structured around learning outcomes and objectives

and tailored to the ClassPoint platform's features to ensure optimal functionality of gamification features such as points, timers, and leaderboards. This aligns with research by Pratiwi et al. (2024), which states that a technology-based learning evaluation currently available is the ClassPoint application, which offers a variety of superior features not available in PowerPoint, helping educators create more diverse and innovative learning assessments.

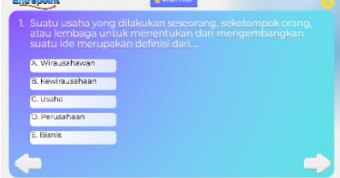
The validity analysis of the gamification-based learning evaluation tool in this study was conducted during the development stage, referring to the ADDIE model. The results of the validity analysis are presented in Table 3.

Tabel 3. Results of validation analysis by material experts and media experts

Validaroe	Average	Information
Material	4.81	Valid
Design	4.71	Valid
Media	4.61	Valid

The validity test results indicate that the developed gamification-based learning evaluation tool is valid and suitable for use. The assessment was conducted by subject matter and media experts, who reviewed aspects such as the appropriateness of the content to learning outcomes, the accuracy of question construction, language clarity, and the media's appearance and functionality. The subject matter experts' assessments indicated that the test items aligned with the competencies and characteristics of the Creative Project and Entrepreneurship subject, while the media experts' assessments indicated that the visual design, navigation, and integration of gamification elements into the ClassPoint application performed well. These findings indicate that the developed evaluation tool meets conceptual and technical feasibility standards and can therefore be used in the learning evaluation process.

Table 4. Revisions to the gamification-based evaluation tool by media experts

Before Revision	Suggestion	After Revision
	Add menu button on home page	
	The logo of the gamification-based evaluation tool should be improved	
	Add images/elements so that the question display is not too plain	

Based on the validity analysis conducted by subject matter experts, media experts, and media design experts, the gamification-based evaluation tool for the 11th-grade Creative Projects and Entrepreneurship course was found to be valid and suitable for use in the learning process. This finding aligns with research by Sari and Purwaningsih (2024), which demonstrated that gamification-based evaluation questions using ClassPoint were valid and suitable for use as a learning evaluation instrument. These results are also supported by the research of Triatmojo and Sukriman (2024), which found that a learning evaluation system with gamification features has a high level of usability, thereby facilitating the implementation of learning evaluations and supporting the achievement of optimal learning outcomes.

Furthermore, we also analyzed the validity and reliability of the tests used in the gamification. Based on the instrument quality test results, which included validity, reliability, difficulty level, and discriminatory power, we found that 25 of 30 evaluation questions were valid and 5 were invalid. The instrument also has high reliability, as indicated by the r_{11} value of 0.850, suggesting reliable questions. The results of the difficulty level test showed that 29 questions were in the medium category and 1 in the easy category, indicating a proportional level of difficulty. The discriminatory power analysis showed that 13 questions were categorized as good, 13 as sufficient, and 4 as poor. Based on the overall analysis results, five questions that were invalid and had low discriminatory power, namely numbers 18, 19, 24, 25, and 27, were removed and not included in the final evaluation instrument. Kafi and Ilma (2022) stated that questions with low validity should be removed because they cannot accurately measure competency, and Amanda et al. (2024) stated that items in the poor category are not suitable for use because they fail to differentiate between capable and less capable students.

The practicality of the gamification-based learning evaluation tool was determined from teacher and student questionnaire responses collected during the implementation phase. The teacher questionnaire was completed by the Creative Project and Entrepreneurship subject teacher, and the student questionnaire was completed by 9 grade XI Visual Communication Design 1 students during a small-group trial, as presented in Table 5.

Based on the teacher response questionnaire analysis of the gamification-based evaluation tool, a 89% was obtained, which, when converted using a conversion table, is categorized as very practical. Thus, the developed gamification-based evaluation tool is considered highly practical and suitable for use as a learning evaluation medium in the next trial stage. This indicates that the gamification-based evaluation tool is well received by teachers, as it is considered easy to use, supports the assessment process, and can increase student engagement during the evaluation. This aligns with the findings of Rahmadani et al. (2025), who found that evaluation tools incorporating gamification elements are highly practical for teachers to use in the learning evaluation process. These findings also support the findings of Johni et al. (2024), who reported that gamification-based digital evaluation is very practical for teachers to use in learning.

Table 5. Results of teacher questionnaire response analysis

No	Statements	Score
1	The content/questions align with the applicable curriculum	5
2	The questions in ClassPoint's gamification-based evaluation media are relevant to the established learning outcomes	4
3	The questions in ClassPoint's gamification-based evaluation media support the desired learning objectives	4
4	ClassPoint's gamification-based evaluation media is easily accessible to teachers and students without technical constraints	5
5	ClassPoint's gamification-based evaluation tools are easy for teachers to use when creating evaluation tools	5
6	ClassPoint's gamification-based evaluation media makes it easier for teachers to manage student evaluation results	4
7	ClassPoint's gamification-based evaluation media increases students' enthusiasm in participating in learning evaluations	4
8	Gamification elements (points, levels, badges) in ClassPoint gamification-based evaluation media motivate students to actively participate	4
9	ClassPoint's gamification-based evaluation media provides clear and detailed feedback to students	5
10	ClassPoint's gamification-based evaluation media provides a fun learning experience for students	5
11	ClassPoint's gamification-based evaluation media provides equal opportunities for all students to participate	5
12	The assessment system in ClassPoint's gamification-based evaluation media is fair and impartial	4
13	Instructions in the ClassPoint gamification-based media evaluation tool are easy for students to understand	5
14	Gamification elements (points, levels, badges) in ClassPoint gamification-based evaluation media are attractive to students	4
15	ClassPoint's gamification-based evaluation media helps teachers monitor students' learning progress in real-time	4
16	ClassPoint's gamification-based evaluation media enables teachers to accurately assess students' understanding	4
17	ClassPoint's gamification-based evaluation media simplifies the process of analyzing evaluation results by teachers	4
18	The visual display of ClassPoint gamification-based evaluation media is attractive and supports students' understanding of the material	5
19	ClassPoint's gamification-based evaluation media minimizes bias in the student evaluation assessment process	4
20	ClassPoint's gamification-based evaluation media encourages active participation from all students without discrimination	5
Average		4.45
Percentage		89

Table 6. Student responses

No	Statements	Score
1	The questions in the ClassPoint gamification-based evaluation tool are in accordance with the material that has been studied	4.33
2	Instructions in ClassPoint's gamification-based evaluation tool are easy to understand	3.78
3	ClassPoint's gamification-based evaluation tool is easily accessible	4.44
4	I did not experience any technical difficulties while using ClassPoint's gamification-based evaluation tool	3.78
5	ClassPoint's gamification-based evaluation tool makes me more motivated to learn	4.67
6	I feel more enthusiastic about participating in the evaluation because of the gamification elements (points, levels, badges)	4.33
7	ClassPoint's gamification-based evaluation tool makes the learning and evaluation process more fun	4.67
8	ClassPoint's gamification-based evaluation tool provides clear feedback after I complete the questions	4.00
9	The feedback provided helped me understand the misunderstanding	4.00
10	The feedback provided helped me understand the misunderstanding	4.44
11	The grading system in ClassPoint's gamification-based evaluation tool feels fair	4.44
12	The gamification elements (points, levels, badges) in the evaluation tool are clear and engaging	4.22
13	Gamification elements (points, levels, badges) do not distract me from focusing on the questions	4.33
14	The ClassPoint gamification-based evaluation tool interface is engaging and helps me understand the material better	4.33
15	I feel all students are treated equally in this evaluation process	4.33
Average		4.27
Percentage		85.48

Based on the questionnaire analysis of student responses to the gamification-based evaluation tool presented in Table 4.13, 85.48% were found to be very practical, according to the practicality criteria table. This indicates that students responded positively to the gamification-based evaluation tool. Students found the gamification-based evaluation tool easy to use and engaging, and it helped them understand and answer questions more comfortably. Gamification features such as points, leaderboards, and interactive displays increased student engagement during the evaluation process. This aligns with research by Fahrudin and Saefuddin (2025), which found that gamification-based assessment can increase student motivation and understanding of the material during the learning evaluation process. These findings also support the research by Sari and Pratiwi (2023), which found that assessments supported by the ClassPoint application received positive responses from students and facilitated learning assessment activities.

The results of the practicality analysis indicate that the developed gamification-based evaluation tool is highly practical for learning. This is evidenced by the teacher questionnaire responses, which placed the evaluation tool in the "very practical" category, indicating that it was easy to operate, engaging, and helped simplify the assessment process. Furthermore, student responses also fell into the "very practical" category, where students felt that the evaluation display was engaging, easy to understand, and that gamification features such as points, levels, and leaderboards made the evaluation process more enjoyable and motivating. Overall, these findings confirm that gamification-based evaluation tools are practical, as they can be used efficiently, support student engagement, and facilitate teachers in implementing learning evaluations.

Effectiveness analysis was used to determine the effectiveness of the developed gamification-based learning evaluation tool. After a small-group trial, a large-group trial (field test) was conducted with 21 students from class XI DKV 1. The test was conducted using an evaluation to assess the completeness of student learning outcomes, using a gamification-based evaluation tool. The student learning outcome test (post-test) is presented in Figure 3.

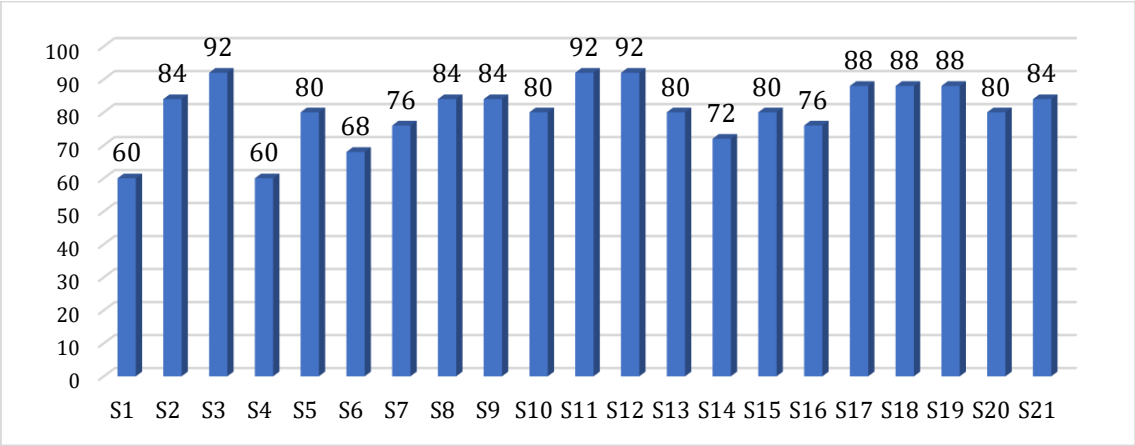


Fig. 3. Student post-test results

Based on Figure 3, data from the gamification-based evaluation tool's post-test activity show that of the 21 students who took the test, 17 completed it, and 4 did not. The classical learning completion score for the students was 80.95%. This result indicates that the gamification-based evaluation tool is effective for learning evaluation, as students' learning completion exceeded the set limit of 75%.

The effectiveness of the gamification-based evaluation tool was determined from post-test results during a large-group test in class XI DKV 1, involving 21 students, and was calculated using the classical learning completion score. The classical completion percentage of 80.95% indicated that the majority of students achieved the minimum score set in the KKTP (Competency Standards for Learning) of 75. This indicates that the gamification-based evaluation tool not only functions as an assessment instrument but also provides a more engaging evaluation experience and motivates students to achieve optimal learning outcomes. These results align with the views of Aini and Husna (2025), who stated that gamification principles, such as points, levels, challenges, and rewards, effectively create a competitive yet enjoyable learning environment. These findings also align with

research by Utin et al. (2021), which found that evaluation tools incorporating gamification elements are effective and suitable for learning evaluation because they can increase student attention and engagement.

CONCLUSION

Based on the research results, it can be concluded that the gamification-based evaluation tool using ClassPoint is valid, practical, and effective for use in Creative Project and Entrepreneurship learning. The needs analysis showed that teachers and students require more interactive and efficient evaluation, so gamification is the right solution. The product was developed through designing question instruments, flowcharts, storyboards, and visual designs using Canva, which were then integrated with ClassPoint features. The instrument was declared valid by material, media, and design experts with an average score in the valid category. In addition, the product's practicality was supported by teacher responses of 89% and student responses of 85.48%, both of which were in the very practical category. The instrument's effectiveness was also proven by the classical completeness of 80.95%, which exceeded the minimum completeness standard. Thus, this gamification-based evaluation tool has been proven suitable for supporting the learning evaluation process in a more engaging, efficient, and meaningful way.

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