Fostering Formative Assessment in Face-to-Face EFL Classrooms: The Role of Wayground and ClassPoint at Tay Nguyen University

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ABSTRACT

This paper aimed to investigate and analyze the influence of Wayground and ClassPoint on student engagement and motivation, to examine students' attitudes toward these two tools as well as to evaluate the support of immediate feedback so as to foster and enhance formative assessment practices in English as a Foreign Language (EFL) classrooms at Tay Nguyen University. The study utilized a theoretical framework of self-determination theory and formative assessment theory. A mixed-methods research design was employed, involving 325 EFL students divided into 2 groups: the experimental group (163 students) used both Wayground and ClassPoint, the control group (162 students) persevered with paper methods. Data collection consisted of questionnaires and interviews. The descriptive statistics, the Mann-Whitney U test in SPSS and thematic analysis were used in this paper. The study revealed that integrating Wayground and ClassPoint boosted student engagement and motivation. Students in the experimental group joined actively and demonstrated more enthusiasm for formative assessment than those in the control group. The quickness of feedback from these two tools also made evaluation more accurate and responsive. The research findings suggest some pedagogical implications for teachers in shaping their strategies of formative assessment. This study also showed some of its limitations.

Keywords: Formative assessment, Wayground, ClassPoint, EFL learners

Introduction

Formative assessment plays a very important role in the teaching and learning process; it is any classroom activity that provides feedback to improve teaching and learning methods (Black & Wiliam, 1998). Formative assessments happen uninterruptedly, permitting teachers to adjust their teaching strategies to meet students' needs effectively. They also noted that some studies provide strong evidence that innovations designed to improve the regular, timely feedback students receive about their learning process lead to significant academic progress. Moreover,

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Carless (2011) highlighted how useful teacher questioning and feedback types can be employed as a formative assessment strategy to enhance students' motivation in learning. However, effective formative assessment is not always easy, especially in Vietnamese university classes, where class sizes are often large, and at Tay Nguyen University in particular, non-English major classes can include 70 or 80 students. Such large class sizes hinder teachers from conducting regular assessments consistently (Pham & Pham, 2021; Ma, 2021). According to Nguyen and Nguyen (2026), large class sizes and accountability pressures often restrict opportunities for iterative feedback. To address this challenge, teachers often use technology to provide quick, timely feedback, a key issue in formative assessment. This trend has accelerated in the post-pandemic digital transformation of EFL classrooms, where digital tools are increasingly relied upon to sustain formative assessment (Bajrami, 2023; Anastasopoulou et al., 2024). However, while these studies support the general value of formative assessment via digital platforms, they have not yet examined the integration of specific platforms, such as Wayground and ClassPoint, in in-person English as a Foreign Language (EFL) classrooms, particularly those with large class sizes. Both are easy-to-use tools that teachers can integrate into lessons to quickly check students' knowledge. Wayground lets students answer questions at their own pace and get instant feedback. It also uses game-like elements like leaderboards to keep students engaged (Lim & Md Yunus, 2021). Teachers expressed positive perceptions of Wayground because of its effectiveness, feasibility, ease of use, and ability to motivate learners (Lim & Md Yunus, 2021). They would like to use it in their teaching and learning processes. ClassPoint is a PowerPoint add-in that allows teachers to add interactive activities, multiple-choice questions, word clouds, and drawing tasks right into their slides (Abdelrady & Akram, 2022). They studied ClassPoint's use in online classes and found that its instant-response system positively affects learning pleasure, increases engagement, enhances active contribution, and effectively supports formative assessment.

In previous studies, several authors have researched ClassPoint, such as Abdelrady and Akram (2022), who conducted an empirical study on student satisfaction with online English learning using ClassPoint. Muliani et al. (2024) studied the influence of ClassPoint on learning motivation in Physics. Sovia et al. (2025) conducted a very recent study on integrating ClassPoint into the teaching of a linear algebra course in Indonesia. Other studies have examined Wayground, including Zhao (2019), which focused on accounting students' engagement and participation in university classrooms. Permana and Permatawati (2020) researched the use of Wayground as a process assessment tool in German language teaching, measuring student responses. Anggraini and Erviana (2023) conducted a quantitative study on the impact of Wayground on learning interest and science learning outcomes in 6th grade students.

We have found that most studies have investigated these two applications separately; To the best of the authors' knowledge, few studies have examined the combined use of Wayground and ClassPoint in EFL classroom. Furthermore, at Tay Nguyen University, there has been no research studying these two applications in learning, particularly in formative assessment to motivate students to learn better and thus improve their learning outcomes.

For all the reasons above, we used a mixed-methods design when integrating these two tools for formative assessment into EFL classes. We conducted the research on how these two IT applications affect students' engagement, motivation, and attitude. Furthermore, we explored how immediate feedback contributes to formative assessments in EFL classrooms.

Literature review

Formative assessment, Wayground and ClassPoint tools, and how these tools affect students' motivation will be covered in this part of study.

Formative assessment in EFL classrooms

According to Sadler (1989), formative assessment is the process in which teachers use feedback to let students know their strengths and weaknesses, so they can adjust their learning accordingly. He also criticized the idea that feedback is simply accurate or inaccurate information that teachers give to students after they complete assignments. Black and Wiliam (1998) defined formative assessment not as a test or grading activity, but as an important part of the teaching and learning process that supports and improves students' learning.

Formative assessment is one of the most effective methods for improving student learning (Carless, 2011). He also emphasized that teachers need support to change their perceptions and learn how to use assessment for better learning and teaching.

In researching formative assessment, Pham and Pham (2021) argued that applying formative assessment in Vietnamese university classrooms faces many difficulties due to cultural barriers, traditional classroom rules and norms, and familiar teaching and learning methods in the Vietnamese context. However, the research also showed that formative assessment can still be successfully implemented when lecturers and students cooperate and actively participate in the learning process.

Nsowah et al. (2025) conducted educational research in Ghana. They highlighted that formative classroom practices play an important role in learning. Their findings showed that classes with large numbers of students affect teachers' ability to assess and facilitate students' learning. Therefore, it is necessary to reduce the number of students in each class so that assessment is more effective, and this will better support students' learning.

Similarly, regarding class size, a Vietnamese study in her master's thesis, Ma (2021), stated that although Vietnamese EFL teachers are well aware of the importance of formative assessment, due to factors such as large class sizes or insufficient class time, these teachers often pay less attention to formative assessment.

Gamified assessment tools: Wayground and ClassPoint

To address the time constraints for providing timely and quick feedback in formative assessment, two gamification applications, ClassPoint and Wayground, have been integrated into English lessons. Wayground and ClassPoint operate on a freemium model, where basic features are freely accessible, while premium plans with more comprehensive tools require a paid subscription. and easy-to-use technology tools available to users with any electronic device. To understand the role of information technology applications in teaching and learning, Vo et al. (2021) studied EFL students' attitudes toward using mobile technology for English learning at a University in Ho Chi Minh City, Vietnam. The findings indicated that students have positive, constructive, and acceptable attitudes towards using mobile technology in English learning.

Indeed, Wayground is an online application where students answer questions at their own pace or according to the teacher's schedule. They receive immediate feedback after submitting their answers, and students see their scores and rankings right away after completing their assignments. This makes the tests more engaging. This is also consistent with Zhao's (2019)

findings. His students admitted that doing in-class exercises using Wayground (formerly Quizizz) was more helpful in their learning than doing in-class exercises on paper.

In addition, ClassPoint supports IT-based learning activities. Ghazali and Yusof (2025) examined the integration of ClassPoint into classroom activities in an Electrical Engineering course, using key structures such as Word Cloud, Short Answer, Slide Drawing, Image Upload, and Quiz Areas to help students join classroom activities actively and provide meaningful feedback. Findings indicated that ClassPoint has demonstrated its potential as an effective formative assessment tool.

Gamification and learner motivation

In their study, Zhang and Crawford (2023) showed that gamified formative assessment fosters motivation; thereby, it could enhance students' engagement and language proficiency. In line with this viewpoint, Casanova-Mata (2023) found that gamification significantly improved reading in the experimental group, as well as attitudes toward English, more active participation, and fewer negative feelings about mistakes. Her study proposed that integrating gamification in lessons can have a positive impact on learning outcomes.

Specifically, for each of these technology devices, Vizcayno (2024) investigated the use of the ClassPoint tool to enhance students' engagement and performance in Science 10. Based on his findings, students' engagement positively and strongly correlated with their learning performance, and using the ClassPoint tool in Science 10 instruction enhanced both students' engagement and learning performance. Hidayat et al. (2023) conducted a case study on implementing ClassPoint in English learning at SMK Muhammadiyah 3 Karanganyar in Indonesia. Using ClassPoint, students showed a more motivated attitude toward learning, and their English skills improved. The ClassPoint application effectively reinforced the learning process by boosting student engagement and interaction with English language exercises in class.

As for the Wayground tool, Lim and Md Yunus (2021) found that teachers accepted Wayground positively because of its effectiveness, feasibility, ease of use, and motivating nature for students. Based on Zhang and Crawford (2023), most students said in interviews that they felt satisfied after finishing the task and enjoyed using Quizizz. This may be due to the competitive environment Quizizz provides, which promotes student engagement and attention. According to this study, teachers might use Quizizz successfully and with fewer barriers to the majority of students' favorable attitudes. With Quizizz's support, teachers can better educate students and clarify the test's purpose to increase motivation.

Most previous studies have investigated the application of ClassPoint or Wayground independently, in learning or in formative assessment. Integrating these two tools in formative assessment remains understudied. Therefore, we carried out this study. Our research aimed to present the positive impact of Wayground and ClassPoint on student engagement and motivation, to show students' attitudes toward these two tools as well as to illustrate the effective support of immediate feedback so as to foster and enhance formative assessment practices in face-to-face classrooms.

Theoretical framework

This study was based on two fundamental theories: Self-Determination Theory (SDT) and Formative Assessment Theory.

Self-determination theory (SDT)

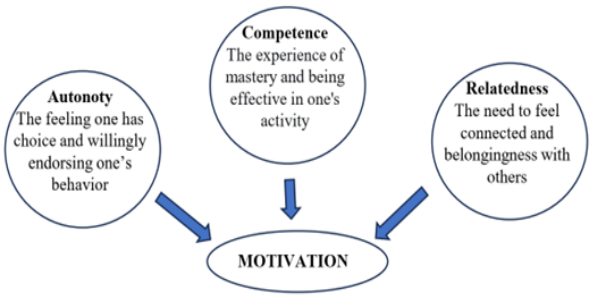
SDT was defined by Deci and Ryan (2000). It emphasizes on three basic psychological needs:

- **Autonomy**: the need to feel in control of one's actions
- **Competence**: the need to feel capable and effective
- **Relatedness**: the need to feel connected to others

Motivation is thus created when these psychological needs are satisfied. Wayground and ClassPoint were observed to facilitate this in our case study. Wayground allowed the students to learn at their own pace (hence the students got some sense of autonomy), provided immediate feedback (thus increasing the feeling of competence), and used leaderboards to create some level of healthy competition (hence the feeling of relatedness was created). ClassPoint gave students the freedom to participate without feeling pressured (promoting autonomy), provided a visual summary using word clouds (increasing competence), and fostered a sense of belonging.

Figure 1

Three Basic Psychological Needs in Self-Determination Theory (adapted from Deci & Ryan, 2000)



Formative assessment theory

The theory behind formative assessment comes from two sources: Sadler (1989), and Black and Wiliam (1998). Sadler (1989) claims that effective formative assessment requires three things. Those are the fact that students should be aware of the target, their current level of knowledge, and how they are supposed to improve.

In a way, feedback becomes a crucial element to fulfill these three requirements. With large classes, it is quite difficult to ensure such feedback for all students. That is why Wayground and ClassPoint will be useful tools to facilitate formative assessment by providing instant feedback to both the teacher and the learners.

Integrating the two frameworks

Both frameworks complement each other in this research. The theory of formative assessment helps to understand the role of Wayground and ClassPoint for the learning process via providing feedback. On the other hand, self-determination theory describes the role of both platforms from the perspective of motivating students by satisfying their psychological needs.

Research questions

Based on the literature and theoretical framework, this study addresses three questions:

1. How do Wayground and ClassPoint influence student engagement and motivation when used together for formative assessment in face-to-face EFL classrooms?

2. What are students' attitudes toward using Wayground and ClassPoint for formative assessment in face-to-face EFL classrooms?
3. How does immediate feedback from Wayground and ClassPoint support formative assessment in face-to-face EFL classrooms?

Methodology

Pedagogical setting and participants

This study was carried out at Tay Nguyen University, in Vietnam. EFL classes here are typically composed of 70 to 80 students per class.

The participants of this study consisted of 325 second-year students enrolled at the Faculty of Education. The subjects of the experiment consisted of six groups, three of which majored in Early Childhood Education, two groups in Primary Education, and one group in Vietnamese Literature Education. All participants studied English 3, a subject consisting of 45 periods. This study spanned from mid-August to October 2025. That means it lasted for about eight weeks, and each class had six periods per week. Two teachers, who were also members of the research group, taught these six groups.

The sample of six classes was split into two categories. The first category comprised three classes with 163 students, where Wayground and ClassPoint were introduced for formative assessments. In the second category, with three classes (162 students), the conventional method of formative assessment through quizzes and oral questioning was applied. Since the classes existed and were already created, random assignment wasn't possible. Therefore, we used convenience sampling (Cohen et al., 2017). Participants had comparable levels of English proficiency based on their placement-test results, as their performance was evaluated using a placement test administered before the semester. Students' participation was voluntary and required written consent from all parties. The demographic composition of the sample is presented in Table 1.

Table 1.

Demographic characteristics of participants

Characteristic	Experimental (n=163)	Control (n=162)
Major		
Early Childhood Education	84	84
Primary Education	52	52
Vietnamese Literature Education	27	26
Sex		
Male	32	30
Female	131	132
English 2 score (mean, SD)	2.34 (0.73)	2.42 (0.76)
Technology familiarity (mean, SD)*	3.85 (0.82)	3.80 (0.85)

Note. English 2 scores are reported on a 4-point scale. Technology familiarity was measured on a 5-point Likert scale (1 = very unfamiliar, 5 = very familiar). Mann-Whitney U tests confirmed no significant differences between groups for English 2 scores (p = .34) or technology familiarity (p = .48).

Design of the Study

We adopted a mixed-methods research design, which is a quasi-experimental approach involving the use of a non-equivalent control group (Creswell & Creswell, 2018). In the quantitative section, the experimental group was contrasted against the control group in how they assessed themselves using Wayground and ClassPoint tools compared with traditional assessment tools such as written quizzes and oral questions. The qualitative aspect involved studying the experiences of the students through interviews and classroom observation.

Data collection and analysis

Data were collected over eight weeks using a questionnaire, semi-structured interviews, and classroom observations.

Questionnaire. All 325 students completed the questionnaire twice: once at the beginning of the course (week 1) and once at the end (week 8). The questionnaire had 27 items on a 5-point Likert scale, divided into four sections:

- **Engagement** (8 items): adapted from Fredricks et al. (2004); it includes behavioral (participation and effort) and emotional (interest, enjoyment) aspects.
- **Motivation** (7 items): adapted from Deci and Ryan (2000); it includes autonomy, competence, and interest.
- **Attitudes** (6 items): adapted from Davis (1989); it includes perceived usefulness and perceived ease of use. During week 8, attitudes were measured by statements which were adjusted individually for each group: the experimental group answered questions regarding Wayground and ClassPoint, while the control group answered questions regarding traditional assessment practices.
- **Perceived usefulness of feedback** (6 items): developed for this research; students' views on immediate feedback were measured.

We conducted pilot testing with 60 students before administering the questionnaire in the main study. The Cronbach alpha scores for Engagement, Motivation, Attitude, and Perceived usefulness of feedback were .901, .860, .854, and .882, respectively. All Cronbach's alpha scores exceed the minimum acceptable level of .70 (Nunnally & Bernstein, 1994).

Table 2

Reliability Statistics of the Scales

Scale	Number of Items	Cronbach's Alpha	Result
Engagement	8	.901	Acceptable
Motivation	7	.860	Acceptable
Attitude	6	.854	Acceptable
Perceived usefulness of feedback	6	.882	Acceptable

Note: The acceptable threshold for Cronbach's Alpha is ≥ 0.70 (Nunnally & Bernstein, 1994)

Interviews. Interviews were conducted with a total of 28 students: 20 from the experimental group and 8 from the control group. The 20 students in the experimental group were selected through purposive sampling to encompass a broad spectrum of engagement levels (Patton, 2015), while the 8 students in the control group were chosen based on their varying academic

performance to provide a basis for comparison. Interviews lasted 10 to 15 minutes and were conducted in Vietnamese, recorded, and transcribed. Interview questions related to student perceptions regarding the technology and instant feedback usage.

Classroom observations. There were four observations per group that lasted about 90 minutes each. These observations helped us collect data on students' involvement and formative assessment in each classroom. The observations were helpful in making sense of the data gathered from interviews.

Implementation of the tools

Throughout the course of the eight-week period, the experimental group utilized both the Wayground and ClassPoint platforms during the class sessions. Both platforms were used to serve distinct purposes, and our intention was to incorporate the two platforms into our routine without making the process appear forced.

At the end of each class session, the students would complete a short quiz on Wayground. Usually, these quizzes comprised about 5 to 10 questions that tested their understanding of key concepts that the teacher taught during that class period. The students took the quiz using their phones and completed it at their own pace. After responding to each question, the students received instant feedback on their response. Upon completing the test, they could see their scores as well as compare themselves with other students in class.

ClassPoint was applied during teaching sessions. The teacher included interactive slides in PowerPoint, such as multiple-choice questions, word clouds, and short-answer polls. For instance, if the teacher presented new words for students to learn, he or she would encourage them to put down associated terms, after which a word cloud would emerge. Students felt happy since they could see their answers displayed immediately on the screen. ClassPoint was also employed to conduct instant comprehension checks in the middle of classes; if the results indicated that many students had misunderstood something taught, the teacher would pause to repeat the lesson.

For the control group, conventional assessment techniques were used. This involved paper quizzes after each class, oral quizzes during class sessions, and sometimes written exercises. In this approach, feedback was not immediate as learners had to wait until their next class session before they received results.

Data analysis

For quantitative data, SPSS was used to generate descriptive statistics, including means and standard deviations. Because the data were not normally distributed (Shapiro-Wilk test, $p < .05$), the Mann-Whitney U test was used to compare groups, with significance set at $p < .05$. Effect sizes (r) were calculated.

Qualitative data were analyzed using thematic analysis (Braun & Clarke, 2006). To provide validity of the findings, methods such as member checking, triangulation via observation notes and questionnaires, as well as peer debriefing (Lincoln & Guba, 1985) were used. Research question three, which concerned immediate feedback, was based mainly on qualitative data.

Findings

This section presents the findings in association with the three research questions. We report quantitative results first, then present the qualitative findings. In some cases, we include

additional relevant data sources that have been collected and analyzed to ensure the results are more reliable.

Influence of Wayground and ClassPoint on student engagement and motivation

Our first research question examined how to use Wayground and ClassPoint to influence student engagement and motivation in formative assessment.

Baseline equivalence between groups

The Mann-Whitney U test (Table 3) revealed that the experimental group had higher mean ranks than the control group for both variables (engagement: p = .010; motivation: p = .019) in Table 3, indicating that the two groups were not equivalent at the pre-test stage. Therefore, we used change scores (post-test minus pre-test) to control for this difference (as in Tables 4, 5 and 6)

The Mann–Whitney U test (Table 3) showed statistically significant differences between the experimental and control groups at the pre-test stage for both engagement (p = .010) and motivation (p = .019). Specifically, the experimental group had higher mean ranks in both variables. Given this lack of baseline equivalence, we used change scores (post-test minus pre-test) to control for these initial differences in subsequent analyses (as presented in Tables 4, 5, and 6)

The Mann–Whitney U test (Table 3) revealed a statistically significant difference between the experimental and control groups at the pre-test stage for both engagement (p = 0.010) and motivation (p = 0.019). Specifically, the experimental group exhibited higher mean ranks for both variables. Given this lack of baseline equivalence, we used change scores (post-test minus pre-test) to control for these initial differences in subsequent analyses (as presented in Tables 4, 5, and 6).

Table 3.

Mann–Whitney U Test for Pre-test Scores (Baseline Equivalence)

Variable	Mean Rank (Exp)	Mean Rank (Ctrl)	U	Z	p
ENG_PRE	176.28	149.64	11039.00	-2.56	.010
MOT_PRE	175.17	150.75	11219.00	-2.35	.019

Note. Experimental group (n = 163), Control group (n = 162).

Post-intervention comparisons

Table 4.

Descriptive Statistics

	Group	N	Mean	Std. Deviation
ENG_POST	Experimental	163	4.1173	.58168
	Control	162	3.3361	.71343
MOT_POST	Experimental	163	4.0540	.61772
	Control	162	3.2771	.73770

As can be seen in Table 4, compatible with the results of the pre-test, the experimental group had a higher post-test engagement score (M = 4.12, SD = 0.58) compared with that of the control group (M = 3.34, SD = 0.71). Likewise, the experimental group had higher motivation scores (M = 4.05, SD = 0.62) than the control group (M = 3.28, SD = 0.74)

As shown in Table 5, Mann-Whitney U results indicated that the mean rank score of engagement and motivation of the experimental group was statistically higher than the one of the control group (Mean Rank Score of engagement = 198.49 vs 127.29, experimental and control group respectively; and motivation = 194.15 vs 131.66). More specifically, the differences were statistically significant with moderate-to-large effect sizes (engagement: r = 0.38; motivation: r = 0.33), as shown in Table 6.

Table 5.

Ranks for Engagement and Motivation Post-test by Group

Variable	Group	N	Mean Rank	Sum of Ranks
ENG_POST	Experimental	163	198.49	32354.50
	Control	162	127.29	20620.50
MOT_POST	Experimental	163	194.15	31646.00
	Control	162	131.66	21329.00

Table 6.

Mann–Whitney U Test Statistics for Post-test Scores

	ENG_POST	MOT_POST
Mann–Whitney U	7417.50	8126.00
Z	-6.86	-6.01
p	< .001	< .001
r	0.38 (moderate-to-large)	0.33 (moderate)

Change score analysis

Although the two groups differed significantly at baseline (engagement: p=.010 & motivation: p=.019, as detailed in Table 3), the change-score analysis using Mann–Whitney U tests showed the intervention was effective, even after controlling for initial disparities. This analysis strengthens the conclusion that the differences after intervention are due to the effects of the Wayground and ClassPoint tools, not to the initial differences.

Table 7 indicates the ranks of change scores. The experimental group scored better than the control group on change scores, with motivation exhibiting a clear difference.

Table 7.

Ranks for Change Scores (Post - Pre) by Group

Variable	Group	N	Mean Rank	Sum of Ranks
ENG_CHANGE	Experimental	163	172.70	28150.00
	Control	162	153.24	24825.00
MOT_CHANGE	Experimental	163	187.69	30594.00
	Control	162	138.15	22381.00

As shown in Table 8, the experimental group demonstrated significantly greater improvement in engagement (U = 11622.00, Z = -2.23, p = .026, r = 0.12) and motivation (U = 9178.00, Z = -5.49, p < .001, r = 0.30). The effect size for motivation remained moderate, while the effect size for engagement was small.

Table 8.

Mann–Whitney U Test Statistics for Change Scores

	ENG_CHANGE	MOT_CHANGE
Mann–Whitney U	11622.00	9178.00
Wilcoxon W	24825.00	22381.00
Z	-2.23	-5.49
Asymp. Sig. (2-tailed)	.026	< .001
r	0.12 (small)	0.30 (moderate)

Note. $r = Z / \sqrt{N}$, with $N = 325$.

Summary and synthesis

To provide an overview of the intervention's effectiveness across different analytical approaches, Table 9 shows that the intervention was truly effective, particularly in improving motivation, and the results are reliable because they were not influenced by initial differences between the two groups.

Table 9.

Summary of Effect Sizes (r) and Statistical Significance Across Analyses

Outcome	Post-test (unadjusted)	Change score (adjusted)
Engagement	r = 0.38 (moderate-to-large), p < .001	r = 0.12 (small), p = .026
Motivation	r = 0.33 (moderate), p < .001	r = 0.30 (moderate), p < .001

Note. Change score analysis subtracts pre-test scores from post-test scores to control for baseline differences. The experimental group (n = 163) showed significantly greater improvement than the control group (n = 162) on both outcomes after adjustment, though the effect on engagement was small.

Table 9 shows that the size of effect in relation to motivation was still moderate (r= 0.30), whereas the size of effect in regard to engagement fell from moderate (r= 0.38) to small (r= 0.12). These results demonstrate that the combined application of Wayground and ClassPoint has more effect on motivation than on engagement.

So, these findings confirm that gamified assessment tools can significantly enhance both engagement and motivation in formative assessment contexts. These tools greatly improve motivation but have only a moderate impact on engagement, so teachers should use them in combination with other pedagogical strategies for optimal results for EFL learners.

To account for the baseline differences, an Analysis of Covariance (ANCOVA) was conducted, controlling for pre-test scores. As shown in Table 10, the ANCOVA confirmed that the experimental group significantly outperformed the control group in both post-test Engagement ($F(1, 322) = 75.46$, $p < .001$, $\eta^2 = .190$) and Motivation ($F(1, 322) = 87.50$, $p < .001$, $\eta^2 = .214$).

Table 10.
ANCOVA Results for Post-test Scores Controlling for Pre-test Scores

Dependent Variable	Source	F	Sig. (p)	Partial Eta Squared (η^2)
ENG_POST	Group	75.46	< .001	.190
MOT_POST	Group	87.50	< .001	.214

Students' attitudes toward using Wayground and ClassPoint

Our second research question investigated students' attitudes toward using Wayground and ClassPoint for formative assessment. We collected both questionnaire and interview data to gain a deeper understanding.

Questionnaire Results on Attitudes

Again, the attitude scores were not normally distributed (Shapiro-Wilk test, $p < .05$ in Table 11), so we used the Mann-Whitney U test. The experimental group ($n = 163$) had a mean rank of 188.35, while the control group ($n = 162$) had a mean rank of 137.49 (Table 12). The difference was statistically significant, $U = 9070.50$, $Z = -4.90$, $p < .001$, with a small to medium effect size ($r = 0.27$) as shown in Table 13.

Table 11

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	GR	Statistic	df	Sig.	Statistic	Df	Sig.
ATT_POST	1	.130	163	.000	.970	163	.001
	2	.123	162	.000	.961	162	.000

a. Lilliefors Significance Correction

Table 12: Ranks

	GR	N	Mean Rank	Sum of Ranks
ATT_POST	1	163	188.35	30701.50
	2	162	137.49	22273.50
	Total	325		

Table 13: Test Statistics[a]

	ATT_POST
Mann-Whitney U	9070.500
Wilcoxon W	22273.500
Z	-4.902
Asymp. Sig. (2-tailed)	.000

a. Grouping Variable: GR

Interview findings on attitudes

Experimental group responses

We interviewed 20 students from the experimental group. The three main themes of these interviews were: enjoyment, perceived usefulness, and ease of use.

Theme 1: Enjoyment

Most of the students found the tools enjoyable. For instance, one of the respondents stated that "*I often get anxious during my classes when the teacher asks any question. However, with Wayground, the quiz turned out to be a fun game for me.*" (Student 7)

In addition, another respondent noted that "*the use of ClassPoint increased the level of interest in lessons since when the instructor placed the word cloud on the board, everyone tried to participate.*" (Student 12)

Theme 2: Perceived usefulness

The learners also appreciated how the tools were useful to their learning process. As one learner mentioned, "*These tools enabled me to know my weaknesses. Each time we used Wayground, it was easy for me to know the questions that I failed*." (Student 4)

Another said, "*It was easy for the teacher to view our responses. In case most learners had problems answering the same question, the teacher went ahead to explain it once more*." (Student 15)

Theme 3: Ease of use

Despite the lack of experience, even among those who considered themselves technologically illiterate, the tools proved relatively easy to use. One said: "*I am not comfortable working on computer-based tests. Yet, Wayground was rather straightforward. I just tapped the right option on my phone. ClassPoint was easy too. We just needed to scan the code.*" (Student 9)

Control group responses

As mentioned in the methodology, 8 students from the control group were interviewed. Their responses revealed that they were generally more critical about the tests. One participant said: "*The paper tests were really boring. However, I took them because I had to*." (Student 3, Control Group)

Another stated that: "*I had no idea whether I made a mistake or not, as the papers were returned after a couple of days. Then, I forgot what I answered*." (Student 8, Control Group)

A third respondent said: "*I was nervous whenever the teacher called me up in class. I prefer answering questions on paper.*" (Student 11, Control Group)

Unlike the experimental group, the participants from the control group viewed assessment as dull and ineffective.

Summary of attitudes findings

The outcomes of both methods show that participants' attitudes toward Wayground and ClassPoint were positive; students found these tools enjoyable to use and useful for learning, and they did not find the technology difficult to use. In contrast, the control group members were bored by and dissatisfied with paper-based testing.

How immediate feedback supports formative assessment

To answer this question, we looked at what students said in interviews and what we saw in class. Numbers alone wouldn't tell us much here; we wanted to know how they actually used the feedback.

Students' views on immediate feedback

Students in the experimental group often said that receiving feedback immediately changed the way they learned English. Three main ideas appeared repeatedly in the interviews.

First, students felt that instant feedback helped them correct mistakes more quickly. One student explained:

> *"When I got an answer wrong, Wayground showed me the correct answer right away. I didn't have to wait until the next class. I could learn from my mistakes immediately." (Student 3)*

Another student shared a similar experience:

> "*Before, when the teacher gave paper quizzes, I usually had to wait about a week to get my score. By that time, I had already forgotten my answers. With ClassPoint, I could get feedback immediately*." (Student 18)

Second, students became more aware of their own learning progress. Seeing scores and correct answers helped them understand how well they were doing in class. One student commented:

> *"After each Wayground activity, I could see my score and compare it with my classmates' results. It helped me know whether I was keeping up with the class." (Student 8)*

Finally, several students said that the feedback influenced the way they studied. By recognizing repeated mistakes, they were able to focus more on the areas they needed to improve. One student explained:

> *"When I noticed that I kept making the same mistakes, I went back to my notes and reviewed that part again. The feedback helped me see what I needed to study more." (Student 6)*

Classroom observations

During the observations, it is undeniable that receiving feedback straightaway also helped the teacher. In the experimental group, the teacher often assessed students based on ClassPoint activities during his lesson. When students finished their answers, the teacher would stop and explain what they didn't do correctly. Before or after each lesson, the teacher gives the whole class quizzes on Wayground, and students know where they are in the teacher's lecture thanks to Wayground's immediate feedback.

In the control group, the teacher mostly focused on asking questions to the whole class. When students gave wrong answers, the teacher corrected them, but it seemed to take time to determine whether most students were struggling with the same point. Consequently, some misunderstandings were addressed only in later classes.

Quantitative findings on perceived usefulness of feedback

A Mann-Whitney U test was carried out to evaluate the experimental and control groups on six items related to feedback. As shown in Table 14, the experimental group had significantly higher mean ranks than the control group in all items ($p < .05$ for all comparisons). The effect size was small (r ranged from .17 to .24), suggesting that although the experimental group found the quick feedback more helpful, the magnitude of this difference was small.

Table 14.

Perceived usefulness of immediate feedback: group comparisons

Item	Mean Rank (Exp)	Mean Rank (Ctrl)	U	Z	p	r
FB1	181.36	144.53	10210.50	-3.99	< .001	0.22
FB2	182.34	143.54	10050.50	-4.26	< .001	0.24
FB3	180.50	145.39	10350.00	-3.87	< .001	0.21
FB4	176.37	149.54	11023.00	-2.98	.003	0.17
FB5	181.36	144.53	10210.50	-3.99	< .001	0.22
FB6	182.34	143.54	10050.50	-4.26	< .001	0.24

Note. *Experimental group (n = 163), Control group (n = 162). All items measured perceived usefulness of immediate feedback (Cronbach's α = .882). All six differences were statistically significant (p < .01), but the effect sizes ranged from small to medium.*

These quantitative results support the findings from the interviews and classroom observations. Students in the experimental group consistently reported that direct feedback helped them better understand their mistakes, learn more effectively, and guide their study although the effect sizes suggest that there is still room for improvement.

Summary

Sadler (1989) argued that effective feedback requires three conditions: understanding of learning goals, awareness of current performance, and strategies for narrowing the gap. The findings suggest that immediate feedback from Wayground and ClassPoint supported all three dimensions.

Students received feedback on their performance right after completing the activity instead of having to wait several days. They could also review incorrect responses and compare them with the correct answers while the task was still fresh in their minds. The teacher also used real-time results to modify the lesson when many students struggled.

In line with Sadler's framework, it is obvious that digital tools can operationalize these three conditions in a large EFL classroom. The contribution is showing that immediate feedback from gamified platforms is not just faster – it is more actionable for students and more useful for teachers.

Discussion

This study examined whether combining Wayground and ClassPoint in formative assessment affected EFL students at Tay Nguyen University. Simultaneously, findings confirm that students in the experimental group experienced higher engagement and motivation, held more positive attitudes to assessment, and benefited from immediate feedback.

Engagement and motivation

The experimental group got higher scores than the control group not only in engagement but also in motivation. But before concluding that the intervention was the cause of this difference, we had to check whether the two groups were similar at the start. Obviously, they were not perfectly similar. The experimental group had significantly higher pre-test scores for both engagement ($p = .010$) and motivation ($p = .019$). To account for these initial differences, we ran an analysis of covariance (ANCOVA) using pre-test scores as a covariate; the results confirmed that the intervention still had a significant impact on both variables.

To clarify this issue, we conducted a score-based analysis, subtracting the pre-test score from the post-test score, and the results clearly showed a significant improvement. The experimental group performed better than the control group. However, motivation and engagement differed only slightly after the experiment.

For motivation, the effect remained clear and meaningful. The effect size was $r = 0.30$ ($p < .001$), which is considered moderate. For engagement, the effect was much smaller ($r = 0.12$, $p = .026$) after adjustment. In other words, the intervention had a real and significant impact on motivation, but its impact on engagement, while still statistically significant, was rather modest.

Why did engagement decrease more than motivation? One possible explanation is that engagement is shaped not only by classroom instruction but also by factors students bring with them into the learning environment – their usual attentiveness, interest in the subject, or habits as learners. The experimental group already had a slight advantage in these areas at baseline. Once that advantage is removed, what remains from the intervention is real but limited.

Motivation, on the other hand, seemed to respond more directly to what Wayground and ClassPoint offered: the real-time quizzes, the leaderboards, the immediate feedback. These features may have given students a sense of progress and competence that enhanced their motivation regardless of their initial level.

These findings also align well with Self-Determination Theory (Deci & Ryan, 2000). The theory suggests that people become more motivated when three needs are supported: autonomy, competence, and relatedness. In this study, Wayground allowed students to learn at their own pace, which may have supported autonomy. The instant feedback from both tools likely helped students feel more confident in their learning. At the same time, leaderboards and group activities encouraged interaction among classmates. These factors may explain why students' motivation remained relatively strong in the change score analysis. In addition, the present findings are in line with earlier studies. Sapuan et al. (2025) found that Wayground reduced learners' anxiety and increased their motivation in language learning. Likewise, Narayanasamy et al. (2025) reported that ClassPoint increased engagement through live interaction.This study contributes to previous research by showing that combining both tools was linked to higher engagement and motivation than the control condition, and that this combination may help sustain motivation over time.

Attitudes toward Wayground and ClassPoint

Students in the experimental group had more positive attitudes toward assessment than those in the control group. The Mann-Whitney U test showed a significant difference, with a small-to-medium effect size ($r = 0.27$). The data from the interview can help to explain the reason. Students said they really liked these tools because the activities made them feel like they were playing games. Additionally, they found them useful because students themselves could see their mistakes right away, and they found them easy to use, even for those who were not skilled at technology.

This finding is consistent with earlier studies conducted in Vietnam. Hoang and Tran (2023) observed that Vietnamese EFL students became more interested in classroom activities when game-based elements were introduced. Similarly, Zhang and Crawford (2023) found that Wayground encouraged EFL learners to develop stronger self-regulation skills. The present study extends these findings by showing that students in the Central Highlands, a region that has received limited research attention, also reacted positively to gamified learning tools. This suggests that the advantages of gamified assessment may be relevant not only in urban or highly resourced settings but also in less advantaged educational regions.

Immediate feedback and formative assessment

In the third question, interviews and observations were used. Students said that immediate feedback helped them correct mistakes quickly, understand their own progress, and know what to study next. Observations showed that the teacher could also use the feedback to adjust instructions during the lesson. For example, when ClassPoint showed that many students did not understand any vocabulary, the teacher could stop and explain it again.

These experiences reflect what Sadler (1989) described as essential for formative assessment: students need to know what the goal is, where they are, and how to close the gap. In this study, immediate feedback from Wayground and ClassPoint helped students check where they were and what they needed to do next. Furthermore, the teacher can see where the class is and change accordingly. So these tools not only helped students learn better but also made things easier for the teacher.

Conclusion

This study examined how using Wayground and ClassPoint together might influence formative assessment in face-to-face EFL classrooms at Tay Nguyen University. This may indicate that students who used these tools maintained longer engagement and stronger motivation than those who learned with traditional methods. At the same time, they maintained more positive attitudes to these two tools, and the instant and immediate feedback features helped them learn from their mistakes and pursuit their learning progress.

The findings from this study indicate that tools like Wayground and ClassPoint may make it easier for EFL teachers to put Sadler's ideas into practice in the classroom. Students will have more time to answer questions at their own pace when using Wayground while ClassPoint helps the teacher check students' understanding. Together, they supported different moments of the teaching and learning process. This combination has not been explored much in previous research, especially in the Vietnamese context.

The findings also suggest that gamified tools can be useful in large classes, where giving individual feedback to every student is often difficult. Moreover, teachers do not need to be competent at using these tools. At the same time, most students found them easy to use, even those who were not confident with technology. For thoes who want to try something new with formative assessment, it is valuable to try Wayground and ClassPoint.

Pedagogical implications

Based on the findings of this study, several practical suggestions can be offered to lecturers considering integrating Wayground and ClassPoint into their teaching process. First of all, the integrated use of Wayground and ClassPoint offers a promising strategy to enhance student engagement and motivation. Specifically, Wayground proved effective for individual revision at the end of a lesson, whereas ClassPoint was better suited for quick comprehension checks during the lesson. In this way, each tool addresses a different phase of the class session, and together they provide more comprehensive support for student learning.

Another important implication concerns how easily these tools can be adopted in EFL classrooms. Although there were initial concerns about possible technological difficulties, most students in this study - including those who considered themselves less confident in using digital technology -reported that both platforms were simple and user-friendly. The findings suggest that teachers can become familiar with the basic features within a relatively short time, while students only need a smartphone to join classroom activities. The study also shows the importance of using the feedback from these tools effectively. The visual reports from Wayground and ClassPoint helped teachers quickly identify concepts the class struggled with. In this study, the instructor used this real-time feedback to revisit difficult points immediately during the lesson. Based on students' responses, this approach helped them recognize and correct mistakes before misunderstandings could continue.

Limitations and future research

This study had limitations that future research should address. Firstly, this study was conducted at only one university; future studies should be carried out at two or three universities to obtain results with broader applicability. In addition, the study only lasted eight weeks, so future studies should extend the experimental phase, perhaps a semester, to see how the effects change. Finally, future research could also examine more closely how teachers used feedback from these tools to adjust their teaching.

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