

Integrating Kahoot! in ESP courses: Vietnamese technical students' perspectives

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ABSTRACT

This study investigates the integration of Kahoot!, an online gamified platform, in an English for specific purposes (ESP) course at a Vietnamese state-run university. The study examines Kahoot!-use frequency and students' perception of its effectiveness in supporting classroom and autonomous learning. Using an explanatory mixed-methods design, the study draws on survey data from 87 technical students and focus groups with 10 volunteers. Findings indicate that while Kahoot! was frequently used in class, its use outside classrooms was limited by insufficient teacher support. Although gamified tasks were perceived as engaging and useful, misalignments between instructional practices and learners' expectations, including over-emphasis on vocabulary and grammar, inappropriate pacing, insufficient feedback, and overly challenging tasks, reduced its effectiveness and motivational impact. The study highlights the need to align gamified pedagogy with ESP learners' needs, use platform analytics for pedagogical adaptation, and use Kahoot! beyond classrooms to enhance learners' engagement and autonomy.

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1. INTRODUCTION

Educational research has widely recognized multiple benefits of gamification, including enhanced motivation, engagement [1]–[4], behavioral change [5], and academic performance [4], [6]. Similarly, in English language teaching, gamified learning has been associated with higher motivation, engagement, and language achievement [7]. Chaves-Yuste and de-la-Peña [8] found that digital game-based activities outperformed traditional and other digital resources in improving English for specific purposes (ESP) learners' performance. In this context, Kahoot! has become increasingly popular in English as a foreign language (EFL) settings and is recognized for its engaging design and effectiveness [9], [10]. Even during online teaching amid the COVID-19 pandemic, Kahoot! sustained motivation and enhanced English learners' need satisfaction [9]. However, emerging evidence suggests that gamification is not universally beneficial. Poorly designed activities may produce unintended consequences, especially psychological strain, reduced intrinsic motivation, and superficial learning [11]. Similarly, using gamification mainly for assessment may reduce learner satisfaction and knowledge retention [12].

However, despite growing empirical evidence of Kahoot!'s benefits in general English education, its implementation in ESP contexts remains under-researched, especially in technical disciplines and Vietnamese higher education. As ESP learners are often externally motivated, game elements such as points, badges, and leaderboards may enhance engagement. Additionally, existing literature has focused mainly on

learner engagement and learning outcomes, while pedagogical practices have received less attention. Since successful technology integration highly depends on instructional strategies [8], [13], [14], this study investigates Vietnamese technical students' perceptions of their teachers' use of Kahoot! in ESP classes. This study contributes to the literature in three ways. First, it shifts attention from the impact of gamification on learning outcomes in general English education to the implementation of Kahoot! in ESP contexts. Specifically, it examines how learners' experiences are shaped by instructional practices. Second, the study addresses a contextual gap by focusing on Vietnamese technical students in higher education, an underrepresented setting to date. Third, using an explanatory sequential mixed-methods design, it provides both broad patterns of Kahoot! usage and in-depth insights into the pedagogical factors that influence the effectiveness of Kahoot! integration. The study addresses the following research questions:

- How frequently is Kahoot! used within and outside ESP classes?
- What are students' perceptions of their teachers' pedagogical approaches to using Kahoot!?

2. LITERATURE REVIEW

2.1. Gamification in English for specific purposes

The integration of gamification in language teaching is claimed to evoke learners' natural enthusiasm for games and, thus, boost their engagement, learning motivation, and academic achievement. In the ESP context, empirical evidence consistently supports the effectiveness of Kahoot! in improving learners' motivation and language improvement [8]. Wibowo *et al.* [15] found that game elements, including points and leaderboards, increased learners' motivation in a maritime English course; Synekop *et al.* [16] reported higher vocabulary retention rates, grammar test scores, and positive attitudes in gamified ESP classes. Meanwhile, in a study of university students in Poland and Ukraine, Głowacki *et al.* [17] found that learner engagement, learning motivation, and overall language performance were enhanced with the use of Kahoot!.

However, alongside these benefits, gamification also presents multiple challenges. Technical issues such as unstable internet connections and unequal device access [18], limited technological readiness, and poor infrastructure [19], may hinder smooth implementation. Additionally, time-limited quizzes and competitive structures can negatively affect learners by causing anxiety and the fear of failure [18], while excessive competition may reduce long-term motivation [20]. Recent systematic evidence also indicates that gamification may also lead to deeper learning-related issues. Nugroho *et al.* [11] found that learners may prioritize rewards and competition over learning, which fosters performance pressure, emotional strain, and superficial learning. Similarly, other study by Kwon and Özpölat [12] reported that gamified assessment resulted in lower satisfaction and poorer content knowledge acquisition than non-gamified settings. These barriers highlight the need for careful pedagogical planning to balance motivation, effectiveness, and learners' emotional well-being.

Generally, gamification has proven effective in enhancing ESP learning outcomes. However, its success remains conditional, depending highly on pedagogical integration and access to stable internet and technological devices. Notably, despite the importance of adapted instructional design for effective gamified learning, the topic remains under-researched, underscoring a crucial gap in the literature.

2.2. Kahoot!

Kahoot! is a platform that enhances motivation, engagement, and collaborative learning through gamification [21]. It serves as a learning and assessment tool with an intuitive interface and accessible features. Teachers can create customizable quizzes and presentations by adjusting question types, time limits, scoring systems, and multimedia elements such as images, music, or videos to boost engagement [21]. Learners can join game sessions through a personal identification number (PIN), earn points based on accuracy and response speed, and get instant feedback. Leaderboard rankings after each question may further boost motivation. Kahoot! also provides participation and performance statistics for teachers to review and adjust future activities accordingly. Additionally, the platform allows learners to creatively and autonomously design their own activities [22]. Due to its simplicity [2], interactivity, and feedback-rich environment, Kahoot! effectively supports both teaching and learning [22].

2.3. The use of Kahoot! in education and English education

Kahoot! is one of the most popular 21st-century educational gamification platforms, and has proven valuable for teaching and assessment across disciplines, including English education [23]. Studies show that Kahoot!-based activities can increase motivation, engagement, knowledge retention, and cooperative learning, even among less active students [2], [24]–[26]. The platform can assist vocabulary [17], [24], grammar [17], [23], and reading instruction [26], and serves as a useful assessment tool [2], although it may be less effective in reading evaluation [27]. However, the effectiveness of a digital learning tool often depends not only on itself but also on the teacher guidance, learner characteristics, instructional content,

and delivery mode. Similarly, Kahoot! activities may hinder learning, particularly grammar without proper pacing and sufficient feedback [23]. Moreover, the competitiveness of those activities is not always beneficial [25], while it can enhance engagement, it may also increase anxiety or distract learners from learning goals [13], [14]. These concerns highlight the critical role of pedagogical implementation, an issue that remains underexplored to date.

3. METHOD

3.1. Research design

An explanatory sequential mixed-methods design was selected [28]. In phase 1, quantitative data were collected and analyzed to identify general patterns. In phase 2, qualitative data were collected and analyzed to provide deeper explanation of the patterns. The two data sources were integrated at both the instrument-development and discussion stages. That is, survey results informed the focus-group protocol by highlighting the limited out-of-class Kahoot! use and learners' dissatisfaction with certain pedagogical practices. In the results and discussion sections, findings from both data sources were compared and triangulated. Interpretive emphasis was placed mainly on the qualitative data to provide contextualized insights.

3.2. Context and participants

The research was conducted at a large state-run technical university in Vietnam as part of a larger project on gamification in ESP. Approximately 600 information technology (IT) students enrolled in one of six ESP courses were invited to complete an online survey on digital learning platforms used in their ESP classes. The survey returned 387 responses (response rate=64.5%). The ESP program followed a blended format, with two-thirds of instruction conducted face-to-face and one-third online.

The final survey section focused on Kahoot!. With a screening instruction, only students reporting prior experience with Kahoot! in their courses proceeded to this section. The 87 students completed the seven Kahoot!-related items and formed the analytic subsample. As participation depended on self-reported experience, the findings were context-specific and not intended to be generalized to all ESP students. At the end of the survey, respondents were invited to volunteer for focus groups. Total 10 students from five ESP levels participated and were assigned in three focus groups (G1-G3), with pseudonyms (S1-S10).

3.3. Instruments

3.3.1. Survey

The Kahoot! section comprised seven items measuring the frequency of Kahoot! use inside and outside the classroom, the ESP aspects supported by Kahoot! activities, students' interest in, and their perception of Kahoot! usefulness, and satisfaction with related pedagogical practices. Developed especially for this study, the survey was informed by research on gamification, learner engagement, and technology-enhanced language learning. Administered in Vietnamese, it included multiple-choice items on usage frequency, a multiple-response item on supported English aspects (e.g., grammar, vocabulary, and content knowledge), and 5-point Likert-scale items (strongly agree-strongly disagree) for perception-related constructs. To establish content validity, two experienced ESP lecturers reviewed the items for clarity, relevance, and alignment with the study constructs, which resulted in minor revisions. As the items measured conceptually distinct constructs rather than a single scale, Cronbach's alpha was not calculated, and the items were analyzed individually.

3.3.2. Focus groups

Five semi-structured interview questions were developed from the survey findings to explore Kahoot! use patterns, perceived usefulness, satisfaction with pedagogical practices, and suggestions for improvement. Focus groups were conducted in Vietnamese to facilitate in-depth discussion. A total 10 volunteer participants were recruited from survey respondents. Although volunteer sampling does not ensure representativeness, participants represented five of the six ESP levels, providing students' perspectives across different stages of study. The focus groups generated contextual insights that complemented and triangulated the survey findings.

3.4. Data collection

Data were collected sequentially. First, an online survey was distributed to nearly 600 IT students enrolled in ESP courses and remained open for three weeks. Of 387 respondents, only those with prior Kahoot! experience completed the Kahoot! section. Second, focus groups were conducted after preliminary survey analysis and lasted 45–60 minutes each. Sessions were audio-recorded with participants' written consent.

3.5. Data analysis

Survey data (n=87) were analyzed using descriptive statistics (frequencies and percentages) to identify patterns. Interview recordings were transcribed verbatim in Vietnamese and thematically analyzed using Braun and Clarke [28] six-step framework. Coding was conducted in Vietnamese to preserve meaning. Selected excerpts were translated into English and reviewed by a colleague for accuracy. To enhance trustworthiness, the authors independently coded the data and resolved discrepancies through discussion.

4. RESULTS

4.1. High frequency of Kahoot! use in the classrooms

A clear pattern in the data was the frequent use of Kahoot! in class, but its limited use outside the class. As seen in Table 1, 75% of participants reported that Kahoot! was used often or very often in their ESP classes, which aligns with interview data, where four participants reported its occasional use, and six reported frequent use. However, Kahoot! use was limited outside class. Most surveyed participants reported never (55%) or rarely using Kahoot! at home in Table 2, mainly attributed to the lack of teacher encouragement.

Table 1. Frequency of Kahoot! use in classrooms (n=87)

How often do your teachers use Kahoot! to assist English learning in your ESP classes?	Responses (% (n))
Very often	21 (19)
Often	52.8 (46)
Sometimes	18.4 (16)
Rarely	6.9 (6)
Never	0

Table 2. Frequency of Kahoot! use outside classrooms (n=87)

How often do you use Kahoot! at home to learn English?	Responses (% (n))
Very often	0 (0)
Often	8 (7)
Sometimes	17.2 (15)
Rarely	19.5 (17)
Never	55.2 (48)

Notably, students' comments suggested that home study was considered an individual activity while Kahoot! was viewed as a collaborative classroom tool, limiting its use beyond class. For instance, S3 noted that 30% of her blended ESP course consisted of at-home "individual tasks", "*so our teachers do not design anything using Kahoot!.*" Similarly, S6 stated that "*Kahoot! is an app for classroom activities, not for home learning.*" These views suggest that collaboration in outside-class learning using Kahoot! were overlooked.

However, in such a scenario, S1 shared a different experience that demonstrates the potential of using Kahoot! for self-directed learning and peer collaboration outside the classroom:

"...as technical students, my friends and I feel kind of struggling to remember English vocabulary. When knowing about Kahoot!, I tried making a game to practice vocab with my friends, and we all liked it... so we keep using it until now. It is interesting. ... And we don't feel like we are studying, but we can remember our lessons more effectively ..."

As such, by leveraging their technical skills, students like S1 not only reinforced their knowledge but also found enjoyment in the process. Therefore, this reported experience showcases Kahoot!'s potential for fostering engagement and collaboration in informal learning settings.

4.2. Aspects of English assisted with the use of Kahoot!

Both data sources showed that Kahoot! was used unevenly to support different ESP learning areas. Table 3 shows that Kahoot! was most frequently used for English grammar and vocabulary learning (indicated by 96.5% and 100% of participants, respectively), but much less for writing skills (15%) and content knowledge (18%). These findings were strongly illuminated by interview data.

However, interview data revealed students' mixed views on satisfaction with the frequency of Kahoot! use in class. Most students (S3, S4, S5, S6, S8, S9, and S10) reported satisfaction, whereas S1, S2, and S7 were less enthusiastic about its frequent use for grammar learning, considering it unnecessary. S7 remarked, "*focusing Kahoot! use too much on grammar feels too traditional.*" S1 added that students could find many effective online grammar sources, and that "*Kahoot! time should be saved for some more*

challenging aspects, such as vocabulary and also content knowledge.” S2 also expressed dissatisfaction with its limited use for content-knowledge learning, emphasizing that:

“In this course, English is the means to convey technical knowledge in our field [IT]. I think if we remember the content more quickly, we could be more fluent in the medium, English. However, my teachers never use the games [on Kahoot!] to help us with the content knowledge.”

Many surveyed students may share this point with S2, given that fewer than 20% indicated that Kahoot! was used to assist the learning of content knowledge.

Table 3. Use of Kahoot! for learning different aspects of English (n=87)

Which aspects of English do your teachers often design Kahoot! activities to help you learn? (Please tick all relevant aspects)?	Responses (%) (n)
Grammar	96.5 (84)
Reading	0 (0)
Writing	14.9 (13)
Content knowledge	18.4 (16)
Vocabulary	100 (87)
Others	0 (0)

4.3. Students' satisfaction level with teachers' exploitation of Kahoot!

4.3.1. Positive attitudes towards the inclusion of Kahoot! activities

Students were generally satisfied with Kahoot! activities. As seen in Table 4, 69% found them interesting and 76% considered them useful. Focus group data reinforced these findings, revealing overwhelmingly positive attitudes. All participants described the activities as interesting, and all (except S4) considered them helpful for learning English. Common descriptors included “interesting” (S3), “fun” (S6, S9, and S10), “relaxing” (S6, S1, and S2), and “useful” (S1, S2, S3, S7, S9, and S10). As S9 shared:

“When joining the games on Kahoot!, I play, and it is fun, but I can also revise and consolidate the knowledge I have learned. Games on Kahoot! are competitive, and it is fun when competing with my friends.”

S4, the only exception, considered Kahoot! unhelpful, attributing this to his teacher's using the games immediately after each lesson. S4 remarked, *“I don't see the benefit of the games.”* This suggests that teachers' implementation may influence students' perceptions of Kahoot!'s usefulness, a point discussed later.

4.3.2. Limited satisfaction with teachers' pedagogical practice

Despite high overall satisfaction with Kahoot! activities, students were less positive about teachers' pedagogical practices, as in Table 4. 51% of the participants were satisfied with teachers' support. Meanwhile, the remainder reported dissatisfaction or uncertainty (Item 7). Satisfaction was even lower with the design and implementation of Kahoot! activities (48.3%), with nearly 30% expressing dissatisfaction (Item 6).

Table 4. Students' satisfaction with Kahoot! activities in ESP classes (n=87)

Statements	Responses (%) (n)				
	SA	A	U	DA	SD
4. Kahoot! activities in your classes are interesting.	23 (20)	46 (40)	21.8 (19)	6.9 (6)	2.3 (2)
5. Kahoot! activities in your classes are useful.	32.2 (28)	43.7 (38)	5.7 (5)	5.7 (5)	12.6 (11)
6. You are happy with the way your teachers design and conduct Kahoot! activities in your English classes (colors, music, speed of activities, content of questions/activities...).	20.7 (18)	27.6 (24)	20.7 (18)	21.8 (19)	9.2 (8)
7. You are happy with your teachers' support during and after Kahoot! activities.	11.5 (10)	40.2 (35)	29.9 (26)	14.9 (13)	3.4 (3)

Note: SA=strongly agree; A=agree; U=unsure; DA=disagree; and SD=strongly disagree

Focus group data offered a slightly different perspective. While all participants expressed general satisfaction with their teachers' use of Kahoot!, some concerns were identified, including inappropriate timing, insufficient explanation, and inappropriate game speed. As noted earlier, S4 and S2 mentioned that teachers introduced Kahoot! too soon after instruction, leaving insufficient time to absorb lesson content. This approach reduced both the effectiveness and students' enjoyment of the games (S2):

“Kahoot! games are competitive and so fun. I love the Kahoot! music and the feelings of competing and winning. But sometimes, the enjoyment was reduced when my teacher designed games too soon after the lessons. We do not have time to remember the knowledge to really participate.” (S2)

On her part, S10 said that her teacher did not give a sufficient explanation after Kahoot! games:

“I think if my teacher stops after each game question to explain why the answer is this or that, we can learn more. But generally, I like Kahoot! games. It is so much fun.”

S1 and S10, however, found game speed the most problematic:

“I enjoy the game, but sometimes questions are too difficult for me, or possibly the time to respond is too short, so I often fall to the bottom of the game board. At these times, I am often a bit discouraged and demotivated.” (S1)

5. DISCUSSION

5.1. RQ1: how frequently is Kahoot! used within and outside English for specific purposes classes?

As gamification is relatively new in English education in Vietnam [10], this study examined Vietnamese ESP teachers' use of Kahoot! at a state-run university. The findings showed that Kahoot! was frequently used in class but rarely integrated into out-of-class learning despite students' high technological access and digital competence. This limited use appeared to stem from insufficient teacher support as students reported few opportunities for independent learning, little guidance for autonomous use, and limited follow-up feedback. Access to game sessions also *“depended largely on teachers' initiation”* (S2) through the provision of PINs or links (S2, S5). These findings suggest that effective teacher support involves both technical facilitation and pedagogical scaffolding. This aligns with prior research emphasizing that Kahoot!'s effectiveness depends on how teachers structure and facilitate the activities rather than its mere availability [18], [24]. Sustained engagement in gamified learning also often requires purposeful integration aligned with learning objectives, rather than ad hoc use [29]. However, some students reported using Kahoot! independently for collaborative learning, supporting previous findings on Kahoot!'s potential for cooperative learning [21], [27] and indicating opportunities to extend its use beyond classrooms with appropriate facilitation.

Given students' high technological access, digital competence, and Kahoot!'s positive impact on learning outcomes [2], the platform should be more actively promoted for collaborative learning outside ESP classes. However, effective implementation requires not only teachers' encouragement but also their clear guidance for students' independent engagement. For example, teachers can assign Kahoot!-based revision tasks on technical vocabulary, encourage small-group discussion of incorrect answers, or have students create Kahoot! quizzes based on weekly course content to promote peer teaching and deeper learning. To sustain participation, teachers should set clear deadlines, assign roles, and require brief reflections or evidence of task completion. Such scaffolds can transform out-of-class Kahoot! use from casual gameplay to purposeful collaborative learning. At the same time, gamification integration is still emerging in Vietnamese education [10]. The use of Kahoot! and similar gamified tools may be limited by financial, technological, and methodological barriers [30], which requires sustained institutional and policy support to be addressed.

5.2. RQ 2: what are students' perceptions of their teachers' pedagogical approaches to using Kahoot!?

Resonating with prior studies [2], [24], students acknowledged the enjoyment and usefulness of Kahoot! in ESP classrooms. However, its effectiveness was constrained by several pedagogical issues, most notably a mismatch between instructional practices and students' expectations. While Kahoot! was mainly used to reinforce vocabulary and grammar, students preferred activities focused on discipline-related content knowledge. This reflects broader tensions in Vietnamese English education and underscores the need for more context-based gamified task design in ESP settings. The emphasis on vocabulary and grammar likely results from the interaction of platform affordances, teachers' preference for easily assessable content, and curricular pressures that prioritize measurable outcomes over discipline-specific learning [10].

Students also reported lower engagement due to pedagogical limitations, including inappropriate task difficulty, overly rapid game speed, insufficient time between instruction and assessment, and limited teacher feedback. These issues reduced both students' enjoyment and perceived learning value of Kahoot!. From a self-determination theory perspective [31], insufficient feedback and instructional support may undermine Kahoot! pedagogical potential [32]. The findings further suggest that ESP-oriented Kahoot!

activities should target technical terminology, conceptual understanding, and scenario-based knowledge relevant to students' fields alongside language development to better support ESP learning goals.

In addition, Kahoot! built-in analytics appeared underutilized. Students' participation and performance could help teachers adjust task difficulty, provide targeted feedback, and better accommodate diverse learning needs. As prior research suggests, sustaining learners' interest and the perceived usefulness of Kahoot! depends on thoughtful pedagogical design [23], [27]. Therefore, maximizing Kahoot!'s benefits requires not only classroom integration but also more effective pedagogical implementation.

6. CONCLUSION

This study examined technical students' views on Kahoot! use in ESP courses in Vietnamese higher education. The results reveal that Kahoot! was widely used and positively received, although its role in supporting out-of-class learning remains limited. Several pedagogical issues were identified, including a mismatch between instructional focus and students' needs, poorly scheduled assessments, insufficient explanations, and inappropriate task difficulty. Based on the findings, ESP instructors should align Kahoot! activities with discipline-specific learning goals, carefully manage pacing and difficulty, provide timely feedback and post-game discussion, extend use through collaborative out-of-class tasks, and utilize platform analytics to identify learning gaps and adapt instruction.

The study highlights the importance of aligning gamified activities with students' preferences and leveraging their technological competence to maximize Kahoot!'s educational potential. By addressing these issues, teachers can better support technical students' learning and improve their engagement and satisfaction in gamified ESP classes. However, the study is limited by its exclusive focus on students' perspectives. Future research should explore teachers' viewpoints to provide a more comprehensive understanding of effective Kahoot! implementation in ESP courses and inform innovative uses of gamified learning platforms in EFL settings.

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Thi Duyen Phuong	✓	✓		✓	✓	✓	✓	✓	✓	✓				
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C : Conceptualization

M : Methodology

So : Software

Va : Validation

Fo : Formal analysis

I : Investigation

R : Resources

D : Data Curation

O : Writing - Original Draft

E : Writing - Review & Editing

Vi : Visualization

Su : Supervision

P : Project administration

Fu : Funding acquisition

CONFLICT OF INTEREST STATEMENT

Authors state no conflict of interest.

INFORMED CONSENT

We have obtained informed consent from all individuals included in this study.

ETHICAL APPROVAL

No ethics approval number was obtained because the authors' universities do not yet have a formal institutional ethics review board. However, the study followed general ethical principles for human research.

DATA AVAILABILITY

The data supporting this study's findings are available on reasonable request from the corresponding author [TTHP], but not publicly available due to participants' privacy restrictions.

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