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Kahoot vs. Mentimeter for Active Learning in Computer and Engineering Education – Who Won? Who's Next?

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Abstract

Active learning (AL) is a well-established pedagogical technique that promotes active student participation in traditionally passive settings, such as lectures. Two widely used AL tools in higher education are Kahoot, a game-based platform more commonly associated with K–12 education, and Mentimeter, a tool designed to enhance audience engagement but not originally built for AL. Despite their popularity, these tools are often adopted by universities without thorough evaluation. Our study offers a comparative analysis of Kahoot and Mentimeter, based on several years of teaching experience and data from AL quizzes conducted in a large introductory computer networking course. We examine key features relevant to AL integration, such as tool functionalities, question transitions, presentation formats, and gamification elements. Empirical data from five years and eight course instances includes statistics such as student participation and performance, as well as student feedback. Our findings reveal important differences in tool design and student engagement, highlighting key areas for improvement in both tools to match the needs of our computer and engineering education. We further provide essential recommendations for better use of those AL tools within our computer courses.

CCS Concepts

• **Social and professional topics** → **Computing education**; *Computer engineering education*; • **Networks**;

Keywords

Active Learning (AL), Gamification, Student Engagement, Kahoot, Mentimeter, Quiz-based Learning

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1 Introduction

Active learning (AL) [10, 11, 28] is a well-established pedagogical approach that has gained significant attention in higher education. By encouraging students to actively engage in course activities, AL shifts the traditional passive role of students in lectures, leading to improved learning outcomes across various disciplines, including computer engineering [2, 3, 9, 14, 16, 24]. AL methods range from classroom discussions and problem-solving exercises to the integration of digital tools, which have become increasingly popular for enhancing engagement in large classrooms through creating active learning environments [10, 17, 22, 25]. Gamification [6, 15, 26, 31], the application of game-design elements in non-game contexts, is often combined with AL to boost student motivation and participation. In engineering education, where classes are typically large and lecture-heavy, gamified AL tools can be particularly valuable for capturing student attention and promoting interaction [19, 21]. Among the most widely used digital tools for this purpose Kahoot![1] and Mentimeter[2]. Kahoot is a colorful, game-based platform that often evokes the feel of a K–12 classroom, while Mentimeter, a more sober tool targeting audience engagement, helps to transform presentations into more interactive "TED Talk-like" experiences but was not originally designed with AL in mind.

Motivations. The effectiveness of Kahoot and Mentimeter in fostering AL in higher education, especially in large engineering classrooms, remains underexplored despite their widespread use. Universities often adopt these tools as official partners without thoroughly evaluating their suitability for promoting AL. As institutions strive to enhance student engagement and learning through digital tools, a data-driven assessment of how well these tools align with AL practices becomes essential. This study addresses this gap by conducting a detailed comparative analysis of Kahoot and Mentimeter within a computer engineering education context. By examining the functionalities, strengths, and limitations of each tool, we aim to provide insights that can help educators and institutions make informed decisions about their use in large classrooms. Our work builds on existing studies that have examined these AL tools side by side for enhancing student learning [12], e.g. [1, 13] comparing Kahoot and Quizizz from the student perspective, but we take the perspective of computer engineering educators selecting the most appropriate tool for their own lectures. While the teacher's perspective has been explored, studies like [20] have primarily focused on non-engineering disciplines, such as English language teaching. Our study further strengthens its conclusions by grounding them in empirical data collected over eight course instances.

Contributions. Our primary contributions are as follows:

(1) We conduct both qualitative and quantitative analyses of Kahoot and Mentimeter, based on several years of teaching

[1] Spelled hereafter as "Kahoot". https://kahoot.com/
[2] https://www.mentimeter.com/

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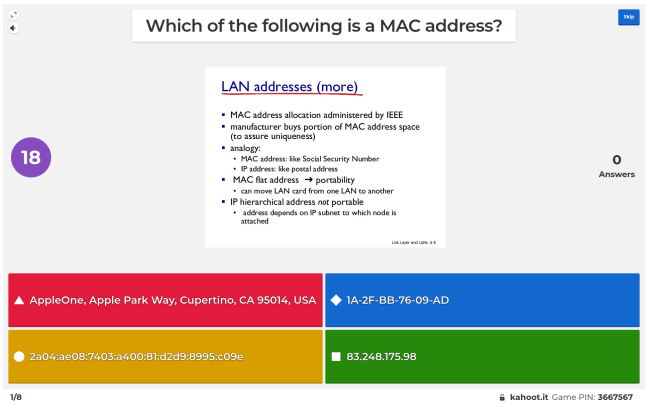

Figure 1: A question on the projected screen with Kahoot.

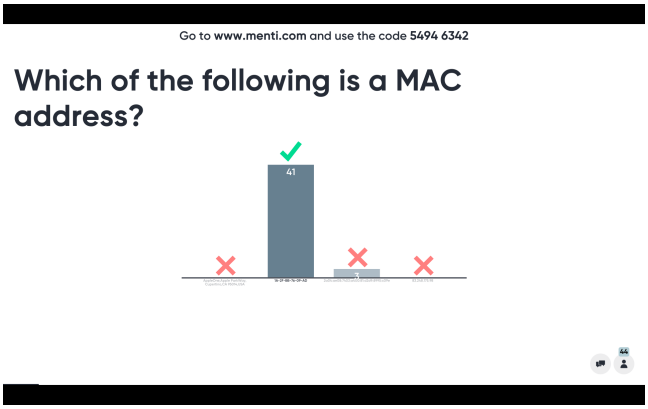

Figure 2: A question on the projected screen with Mentimeter.

experience and empirical data from an introductory computer engineering course with ca. 200 registered students.

(2) Our analysis evaluates key features essential for AL integration, including key tool functionalities, projected and on-device views, transitions between questions, presentation of correct answers, and gamification elements.

(3) We provide insights drawn from 5 years of data, including student participation rates, performance metrics, and feedback, gathered from 8 course instances where these tools were used for brief multiple-choice quizzes. Our empirical data is based on ca. 100 different AL questions over 75 lectures, encompassing over 22.5k individual student answers (average of 50 "AL students" and 6 AL questions per lecture).

(4) Our findings reveal key differences between Kahoot and Mentimeter in terms of their interface design, engagement strategies, and student feedback, while also highlighting areas in need of improvement for engineering education.

Outline. Section 2 provides an overview of the background on AL, gamification, and the studied tools. Section 3 details the methodology used in our comparative analysis, including the course context, data collection methods, and analytical framework. Section 4 presents our results focusing on the key features of Kahoot and Mentimeter that impact AL integration, coupled with a quantitative analysis. Section 5 concludes the paper by summarizing our findings and discussing further the tool selection process by universities.

2 Background and Related Work

2.1 Active Learning

Active Learning (AL) [28] refers to instructional strategies that actively involve students in the learning process, shifting from passive reception of information to more interactive and participatory learning experiences. Research in the field [10, 11, 23] has shown that AL can improve student engagement, retention, and overall academic performance. Various AL techniques, such as think-pair-share, peer teaching, and quizzes, have been widely adopted across different disciplines to promote deeper understanding and critical thinking. AL is particularly effective in large and lecture-heavy courses [4, 17, 22], where traditional teaching methods often struggle to maintain student attention and participation. The integration of technology and tools has further enhanced the implementation of AL in engineering education [16, 30] by providing interactive platforms for real-time quizzes and feedback. The aforecited studies have highlighted the potential of AL to increase student motivation, provide immediate formative assessment, and foster a more dynamic classroom environment. However, the effectiveness of AL tools depends on many factors, including the design of the activities, the context in which they are applied, and the specific learning objectives (LO). Consequently, ongoing research continues to investigate best practices for using AL in various educational settings and specifically in Computer Science (CS) education [2–4, 9, 14, 24, 25], aiming to optimize student engagement and LO.

2.2 Gamification

Gamification [6] refers to the application of game-design elements and principles in non-game contexts to enhance engagement, motivation, and learning outcomes. In educational settings and in particular CS education [19, 21], gamification often involves incorporating elements such as points, levels, badges, leaderboards, and challenges into the learning process. These elements aim to make learning more interactive, enjoyable and rewarding, thus increasing student participation and fostering a competitive, yet collaborative environment. Research has demonstrated [15, 26, 31] that gamification can improve student motivation, promote sustained attention, and encourage active participation. In higher education, tools like Kahoot, Quizizz [5], and Mentimeter have capitalized on gamification by integrating features such as time-based challenges, real-time feedback, and competitive leaderboards into quizzes and interactive learning activities. However, the effectiveness of gamification is influenced by the design and alignment of game mechanics with LO, as well as students' individual preferences and perceptions of the gamified experience. As such, careful consideration is needed to ensure that gamification supports rather than detracts from educational goals [15, 26, 31].

2.3 Studied Platforms

Kahoot [7, 18, 27, 32] (cf. Fig. 1) is a game-based learning platform widely used in educational settings to increase student engagement through interactive quizzes and competitions. Launched in 2013, Kahoot allows instructors to create custom quizzes, which students participate in using their personal devices. The platform's colorful, gamified interface and competitive elements, such as point-based rankings and timers, are designed to enhance motivation and active participation, particularly in large classrooms. While Kahoot has gained popularity in K–12 education for its fun, accessible design, its use in higher education, especially in large engineering classrooms, may raise questions about its appropriateness for older students.

Mentimeter [17, 22, 29] (cf. Fig. 2), or *menti* for short, is an interactive presentation tool designed to enhance audience engagement through real-time polling, quizzes, word clouds, and feedback collection. Launched in 2014, it allows instructors to create live, interactive content that students or audience members can respond to using their personal devices. Originally developed to foster engagement during business presentations and conferences, Mentimeter has found increasing use in higher education classrooms, where it transforms lectures into more dynamic, interactive experiences. Although not specifically designed with AL in mind, its flexibility and user-friendly interface may support various AL strategies by encouraging student participation and offering anonymous input.

Due to brevity, limited experience, lack of institutional support, and insufficient empirical data, we omit Quizizz from this study.

3 Methodology

We describe here our evaluation approach to evaluate both tools, covering data collection, feature analysis, and AL impact metrics.

3.1 Scope and Limitations

This study focuses specifically on the gamification aspect of the two tools, primarily examining their use in competitive quiz formats featuring a leaderboard. We evaluate how each tool leverages gamified elements, such as real-time scoring, time-based challenges, and student rankings, to enhance AL moments during lectures. While both tools offer a wide range of interactive question types—such as surveys, word clouds, and open-ended questions—these features are not investigated further in this study. Our primary interest lies in comparing how the competitive, quiz-based elements of Kahoot and Mentimeter impact student engagement and LO. Additionally, this study does not compare in detail the pricing models or service tiers of the two platforms, which, although similar in structure, offer different plans for teachers. Current monthly prices for educators are €4.99-€31.49 for Kahoot and €12-25 for Mentimeter with a plan requiring 100-200 participants costing €9.99/month for Kahoot and €12/month for Mentimeter. Both platforms are globally available.

3.2 AL Feature Analysis

We conduct a comparative feature analysis of Kahoot and Mentimeter, focusing on their core functionalities for supporting AL through gamification in computer enginering classes. Key features examined include quiz creation and customization, leaderboard functionality, student participation tracking, and real-time feedback mechanisms. We also assess the flexibility of each platform in terms of interactivity during lectures. Our goal is to understand how each tool supports the engagement and motivation of students, highlighting strengths and areas for improvement for both tools.

3.3 Empirical Data

The data for this study was collected from eight instances of an introductory computer networking course conducted in academic Quarter 3 (Q3) and Quarter 4 (Q4) from 2019 to 2023. This course [8], compulsory in a 5-year Computer Engineering (CE) program, awards 7.5 higher education credits (HEC), with 5.5 HEC allocated to the final exam and 2 HEC to laboratory assignments. It is taken by approximately 170–200 students annually, including around 20 students from a partner university. The course content focuses on understanding how packet-switched networks function and explores the basic structure of the Internet, emphasizing widely-used networking protocols such as HTTP, DNS, TCP, IP, Ethernet, and IEEE 802.11. Additionally, the same material is offered in Q3 to different student groups, as an elective for other engineering programs and a compulsory course for a 3-year CE program. Due to shared teaching responsibilities among instructors, AL quizzes were not included in all lectures in Q3. To evaluate the tools, we gathered data from lectures incorporating brief multiple-choice quizzes using Kahoot and Mentimeter. This analysis supports our qualitative assessment with quantitative insights into student participation, performance, and engagement. The dataset represents a significant sample size (ca. 100 multichoice questions over 75 lectures), offering valuable observations on how these tools perform in real classroom settings.

4 Results

We present the findings from our feature analysis and empirical data, highlighting key trends in student participation and performance.

4.1 AL Feature Analysis

We survey both basic and specific features focusing exclusively on those most relevant for enhancing AL in higher education engineering lectures. Table 1 summarizes the different selected key features (denoted by F1 to F15) related to AL between the two studied tools.

Common essential AL features. Let us first examine the common features shared by both tools. Both Kahoot and Mentimeter allow the teacher to control the progression of a quiz session, with timed questions and the ability to decide when to transition to the next question (F1). This key feature ensures seamless quiz flow without requiring students to rejoin. This flexibility enables instructors to integrate quizzes in various ways. For example, questions can be grouped and asked collectively, either at the end of a lecture segment or before a break. Alternatively, quizzes can be interspersed throughout the lecture, with short teaching intervals of around 20 minutes followed by 1–2 AL questions—a practice widely recommended to maintain student engagement [11]. Both tools incorporate a gamification element by displaying a ranking of the top-scoring students during the quiz (F2). This feature introduces an element of competition, motivating high-performing students to aim for a top-10 position or even win the lecture quiz. Additionally, both tools conclude the quiz with a podium animation (F3) to "reward" the best-performing students, showcasing their achievements to the rest of the class. In this regard, both tools effectively

	Feature	Kahoot!	Mentimeter
F1	Teacher-controlled timed quiz	✓	✓
F2	Leaderboard animation	✓	✓
F3	Podium animation	✓	✓
F4	Ability to go backward	✓	✗
F5	Ability to zoom on media	✗	✗
F6	Highly visible progress bar	✓	✗
F7	Ability to skip questions	≈	✓
F8	Ability to stop the timer	✗	✗
F9	Pre-question animation	ca. 3-9 sec	ca. 9 sec
F10	Right answer animation	None	ca. 4 sec
F11	Leaderboard time	ca. 3-4 sec	ca. 12 sec
F12	Answers on device	✓	✓
F13	Question time customization	≈ (10 fixed times)	✓
F14	Export answer report	✓	✓
F15	Easy (re)-joining the quiz	✓	✓

Table 1: AL features analysis between Kahoot and menti.

fulfill their primary purpose: providing an AL quiz platform with timed questions, teacher-controlled transitions, and gamification elements designed to enhance student engagement.

Answer explanations. A key aspect of effective AL is the tool's ability to support the teacher's explanation during and after a quiz. Kahoot provides a simple yet impactful feature—a "show media" button on the answering screen—that allows the teacher to quickly display the image or media used in the question. This seemingly minor difference between the tools has substantial implications for AL. By enabling the teacher to revisit the media, Kahoot supports critical post-question teaching moments, such as explaining the correct answer, pointing out details with a mouse or digital pen, or annotating the screen using external tools like Zoom. This process helps students who answered incorrectly to understand their mistakes and reinforces learning for the entire class. Mentimeter, however, undermines this potential by completely preventing backward navigation (F4) in its quiz format. To address this limitation, teachers must resort to workarounds, such as having the relevant image pre-loaded on their computer, inserting it as a separate slide after the question, or manually replicating the figure on a whiteboard. These additional steps disrupt the flow of the session and diminish the tool's AL effectiveness. We note that both tools lack the ability to zoom on the question's media (F5). More specifically, the asked question may often feature a problem that the students may need to resolve and the ability to zoom on the image will likely improve the teacher's explanation for some AL questions.

Quiz progression. Both tools display quiz progression, but their presentation methods differ significantly. Mentimeter includes a subtle progress bar at the bottom of the screen (cf. Fig. 2) but omits question numbers during the quiz. This design choice suits Mentimeter's focus on minimal distractions and limited questions but is less ideal for lectures. Engineering lectures benefit from prominent question numbering (F6) to maintain flow and avoid mistakes, as Mentimeter lacks a backtracking option. Lecturers often rely on detailed notes to manage quizzes effectively, adding to preparation efforts. Kahoot, in contrast, prominently displays the question number on the screen (see Fig. 1), which aids navigation and reduces errors, ensuring smoother integration of AL moments. Both tools, however, offer limited flexibility for dynamic lecture pacing. Engineering lectures often require adjustments based on explanations or student questions, necessitating precise quiz control, i.e., to control which questions are played—and potentially skip some if needed (F7). Kahoot's "skip" button advances to the next question after a brief delay (3-9 seconds), which can frustrate students as they see the question without fully engaging with it. Skipped questions can be revisited for display but not replayed. Mentimeter allows skipping questions entirely before they are shown, reducing disruption. However, without displaying skipped question details, the teacher risks accidental errors, potentially frustrating students, especially in graded settings. An improvement for both tools would be the ability to pause the timer mid-question (F8), addressing timing issues and interruptions to enhance the quiz experience.

Animation timings. Both tools feature animations, an engaging element to enhance audience interest and alleviate the monotony of university lectures. The animations can be divided into three phases: *pre-question time* (F9), before the countdown starts; *correct-answer animation* (F10), showing the right answer and student response distribution; and *leaderboard animation* (F11), updating the top scores. Mentimeter allocates approximately 10 seconds for F9, with 5 seconds displaying the question on-screen and on devices. F10 features a brief 3–4 second animation, while F11 uses a 12-second leaderboard update. However, with around 100 participants, Mentimeter's leaderboard often lags, even on modern laptops. Kahoot uses 3–9 seconds for F9, depending on question length, with less than 2 seconds of pre-question time. For F10, no animation is shown, and response counts are displayed immediately. F11's leaderboard animation takes about 3–4 seconds. Kahoot's concise animations help maintain lecture pacing, whereas Mentimeter's longer leaderboard animation often disrupts flow, possibly leading many teachers to skip it. Kahoot's brief animations of about 3 seconds are more adaptable, ensuring time is not wasted. Both tools feature a final animation lasting about 15 seconds, summarizing the quiz and highlighting top performers. While these animations add gamification and reward active participation, overly long sequences can frustrate students when skipped, disrupting their focus.

On device and on screen answers. Both tools allow answers to appear on device (F12). By default, Kahoot displays only symbols as answer options, mimicking a remote with four buttons on the answering device (typically a student's smartphone) but can be configured to display the full answer text instead (see Fig. 3). In contrast, Mentimeter struggles with displaying long answers. These appear very small on the "answer" screen (see Fig. 2) and lack a wrap-around option, which is particularly problematic for lengthy inputs like IPv6 addresses. Such answers often become completely illegible on the shared screen, preventing students from verifying which answers were correct or incorrect. Kahoot, on the other hand, ensures that answers remain visible, even from the back of a lecture hall. This is achieved through a strict character limit: 75 characters for answers and 120 characters for questions. While this constraint might require the teacher to creatively rephrase answers, it significantly enhances readability and accessibility during lectures.

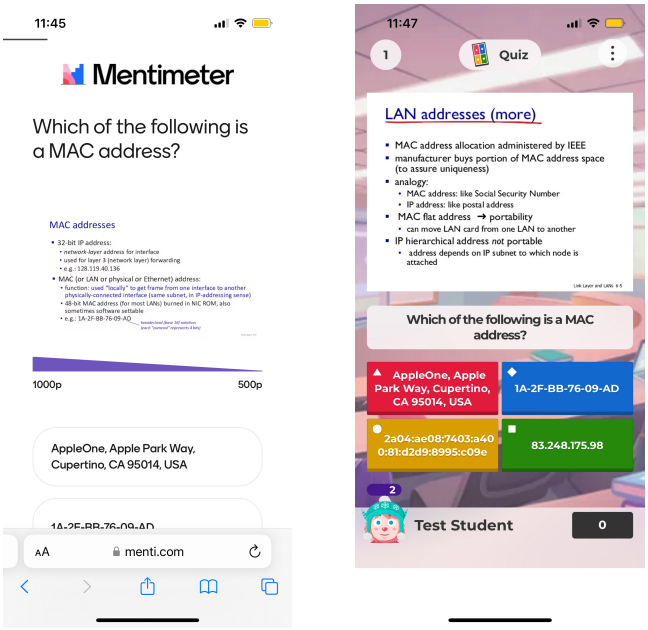

Figure 3: An on device question: (left) menti, (right) Kahoot.

Question duration. A key feature of AL tools is the ability to customize the time students have to answer questions (F13). This flexibility can greatly assist teachers in utilizing AL moments in diverse and effective ways: from quick, simple multiple-choice questions designed to recapture student attention to more complex questions that may even encourage peer discussion. In this regard, Mentimeter allows more personalized time settings ranging from 5 to 1000 seconds, while Kahoot provides a fixed set of predetermined durations[3] which is sufficient for most purposes. Teachers can thus fine-tune the time allotted for each question based on their experience, ensuring students have enough time to reflect without disrupting the lecture's pace or losing the attention of faster students due to overly generous time limits. Questions lasting longer than a few minutes are not well suited to these pedagogical tools.

Reporting. The two tools take distinctly different approaches to reporting student results (F14), likely influenced by their original objectives and target audiences. Mentimeter saves responses directly within the presentation, meaning that by default, the presentation retains the cumulative answers from previous sessions. This design can be useful for tracking longitudinal data but requires manual resetting if a fresh session is desired. In contrast, Kahoot's reporting system is entirely decoupled from the quiz itself. Each session generates an independent report within the system, which can be analyzed online or exported as an Excel document for offline use. While Mentimeter also allows answer exports (in higher-tier licenses) and the option to reset responses, Kahoot's streamlined reporting makes it particularly convenient for quick session-based evaluations. Both tools, therefore, provide viable methods for tracking student scores and analyzing responses, however, the ease and flexibility of these processes vary significantly between the tools.

[3]As of 2024: 5s, 10s, 20s, 30s, 45s, 1min, 1min30, 2min, 3min, 4min.

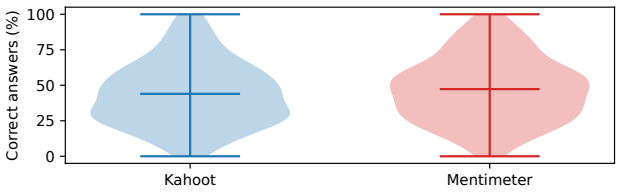

Figure 4: Correct answers (%) over all 441 AL questions.

Additional features. A minor yet impactful feature is how easily students can join the quiz (F15), as difficulties in this process may discourage participation and lead some students to remain passive. Mentimeter now allows for the generation of a QR code that can be integrated directly into the title slide, a feature introduced in recent updates (2024) which brings it on par with Kahoot that includes an expandable QR code on the title slide by default. Kahoot, despite its colorful themes suggesting a primary focus on younger audiences, is undoubtedly a robust tool for AL. Beyond the features discussed, Kahoot includes several additional functionalities that enhance its effectiveness as a learning tool. Notably, it allows students to replay their mistakes for up to six days after a quiz session, reinforcing learning through repetition. Additionally, Kahoot facilitates assigning AL quizzes as review material, enabling students to revisit key concepts in preparation for exams. In contrast, Mentimeter offers limited options for sharing quizzes post-lecture, making Kahoot's "challenge mode" particularly valuable. This mode allows teachers to share quizzes with students for asynchronous engagement, fostering deeper interaction with the material. These features underscore Kahoot's versatility and potential to support AL both during and beyond the classroom.

4.2 Quantitative and Feedback Analysis

Student participation. Fig. 4 displays student scores when aggregated over all surveyed course instances. Fig. 5 presents student participation and performance during AL quizzes conducted between 2020 and 2023, with largely identical questions across the course instances. The figure aggregates responses to 82 questions (averaging 6.13 questions per lecture) from 12 different lectures, totaling over 18k student answers (roughly half for each platform). Although drawing insights from empirical data in education can be challenging due to many uncontrolled variables, the large volume of student responses provides an indication of overall trends. Let us first note that we did not note any noticeable difference in answering scores between the two studied tools (cf. Fig. 4). Clustered by lecture, Fig. 5 reveals that both tools show similar levels of participation (measured as the percentage of students present in the lecture who joined the quiz) and score (measured as the percentage of correct answers). Participation and performance appear to be more closely correlated with the specific lectures than the tools themselves, as some topics are more challenging or abstract for students, and attendance tends to wane towards the end of the course. In this regard, we note that both overall relative participation in lectures (a non-graded course element) and in the AL quizzes decreased over time. Mentimeter shows slightly lower (-6% compared with Kahoot) AL participation rates over the surveyed years.

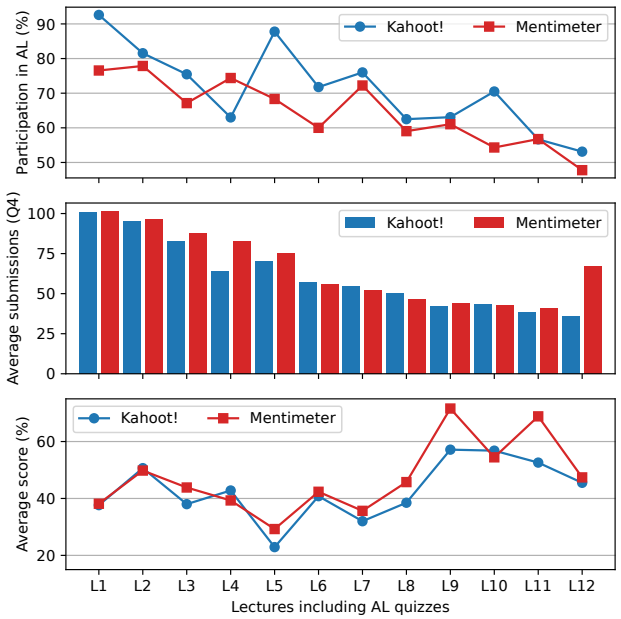

Figure 5: Comparison between AL student participation and scores with Kahoot! (2020 & 2021) and Mentimeter (2022 & 2023); upper plot: average % of the students attending the lectures who took part in the AL quizzes (over 2021 and 2022), middle plot: average no. of students taking part in AL quizzes (in Q4); lower plot: average % of correct answers.

Student score. Regarding scores, Mentimeter shows slightly better performance, with an average of 47% of correct answers compared to 43% for Kahoot. Given the lower participation rate with Mentimeter, a possible explanation for those differences could be that some of the weaker students chose not to participate in the Mentimeter quiz, remaining passive during the lecture, while the same students may have chosen to engage with Kahoot, despite achieving lower scores. This could be due to the tool interface, as Mentimeter's leaderboard includes more pseudonyms than Kahoot's, possibly discouraging some students from participating.

Student feedback. Students have frequently praised the use of quizzes during lectures for several reasons. They view them as an engaging way to introduce brief breaks, maintain their focus throughout the session, and reinforce teaching and learning by actively engaging with the material. For instance, students often mention that these quizzes help clarify complex concepts, provide immediate feedback on their understanding, and make the learning experience more interactive and enjoyable, cf. student feedback (concerning AL) extracts from the course evaluation surveys (including all comments mentioning the quizzes), all being positive:

2023-Q3: Good, the Mentimeter thing worked, though I thought the questions were hard.

2022-Q4: I liked that during the lectures, questions on the currently covered topics were asked in a quiz. This assisted in learning the course's contents.

2022-Q4: The quizzes during lectures kept me alert and motivated me to stay focused.

2022-Q4: A big thumbs up for making the lectures interactive with questions, that greatly helped my learning.

2022-Q3: There would sometimes be a Kahoot quiz during lectures. Those were very good at checking if one had understood correctly, and explaining the wrong answers was also very useful.

2022-Q3: (To be kept for the next instance) Kahoot quiz during the lectures.

2021-Q4: I really liked the Kahoot in each lecture.

2021-Q4: The Kahoots (quizzes) during the lecture—honestly, it was SO GOOD that we had them.

2021-Q4: The lectures, with their Kahoots and everything, were perfect.

2021-Q4: Basically, the entire course was good. The Kahoot quizzes, especially, since they force you to stay focused and present during lectures.

2021-Q4: Have the lectures at the start of the week, work on the lab and hand-in, then quizzes to further improve your knowledge. I liked it a lot. I especially liked the lecture structure with Kahoots.

2020-Q4 : I liked the Kahoots as a form of review and key points. It was also very nice that the answers were always explained well.

We note that over four years of conducting nearly identical AL quizzes during lectures, course evaluation surveys revealed three times more positive comments explicitly mentioning the quizzes or suggesting they should be retained in future instances when Kahoot quizzes were used compared to Mentimeter quizzes.

5 Discussion and Conclusions

Both tools have shown to be definitively valuable AL help and both demonstrated a clear increase in student engagement. However, our survey shows that Kahoot, despite its childish interface, is slightly better overall at integrating AL in CS and engineering lectures than Mentimeter. Key advantages lie in the ability to spend effective teaching moments on the quiz's correction, go backward in the quiz, clear progression, shorter animations, asynchronous quizzes and slightly better student's support in our empirical data. Mentimeter has a more neutral "business" look and offers more flexibility in question timings and omissions. Also, our study highlights some important AL features still lacking in both tools: the ability to stop the timer giving full control of the question's durations to the instructor, and the ability to zoom on media to enhance teacher's post-question explanations. Both tools helped students stay engaged and retain information better, while overall student performance was comparable. At last, our evaluation clearly demonstrates that AL tools are not interchangeable. Each tool comes with a distinct theme and a specific set of features that can either foster or hinder their adoption by teachers.

Our findings will be shared with relevant stakeholders, including the companies behind the tools and universities adopting new tools. Universities indeed increasingly promote AL to boost student engagement and learning, often through institution-wide tool adoption. However, a single tool may not suit all teaching contexts, and faculty use of AL varies. We advocate for flexible strategies that combine campus licenses with discounted individual subscriptions, enabling educators to choose tools aligned with their course needs. We believe that by empowering teachers with the flexibility to tailor their AL approach, universities can foster more effective and diverse implementations of AL methodologies across disciplines.

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