



Module Code: ECAD5014

Assignment Title: Design and conduct a small-scale research study, and critically evaluate the chosen research tools, and the impact of your findings on your professional practice.

Student Name: Lara Curtis

Student Number: 2206392

BA Primary Education (QTS)

AI Acknowledgement

I acknowledge the use of ChatGPT on [28/03/25] to plan my work. I used the prompt(s):

1. Please use the following bullet points and align them with the correct subheadings.
2. Does the following flow correctly

I confirm that I have not presented any AI generated text as my own work.

I confirm that I have copies of my drafts, notes, and other resources I used before and after the use of AI tools which I may be asked to provide in evidence.

Targets from previous module	How I have worked on these?	An example can be seen on...
Carefully plan out your assignment	I attended a study skills session which assisted me on this. After I had written the assignment, I used tools available to me to ensure it flowed right.	The discussion and findings, \i feel the use of subheadings have really helped.
Proofread your work	I have gone through this work much more than I usually would. I feel the writing and grammar is much better as I have been working on this with study skills and support from tutors.	This is clear in my short but effective sentences.

Research Question - How does gamified learning - specifically using Kahoot, impact student engagement and formative feedback (AfL) in Key Stage Two classrooms?"

This study has looked at the impact of Kahoot, a game-based tool, on student motivation and formative assessment in Key Stage two (KS2) classrooms. The objective is to examine Kahoot's efficacy as an Assessment for Learning (AfL) tool and determine whether it has a positive impact on learning outcomes and engagement.

AfL is a teaching approach that uses assessment to support learning rather than just measuring progress. It offers constant feedback to help students understand strengths, areas for improvement, and next steps (Black & Wiliam, 1998). In Wales, AfL is key in the national curriculum, aligning with the Welsh Government's focus on developing independent and reflective learners. The Curriculum for Wales encourages the use of AfL strategies daily to provide helpful feedback (Welsh Government, 2022).

Kahoot, which incorporates quizzes, leaderboards, and instant feedback, aims to make learning more interactive and engaging (Wang, 2015). Previous research says that gamified learning enhances motivation, participation, and improves information retention (Deterding, 2011). For teachers in Wales, AfL is integral to promoting a deeper understanding and independent learners. It helps identify misconceptions and tailor lessons. For students, AfL clarifies how to improve, making learning more reflective and personalised.

This research looked at both the benefits and limitations of using Kahoot in the classroom. Kahoot is expected to improve engagement and help teachers identify learners that need support. However, challenges exist, such as over reliance on multiple choice questions and potential accessibility issues. Throughout this assignment I aim to look deeper at these things and look at recommendations on how to enhance its use in the classroom.

The study was conducted in a split-site school in Port Talbot, focusing on KS2 students at the KS2 site. All data collection followed the British Educational Research Association (BERA) ethical guidelines (2024), and the school is referred to as 'School X' for anonymity.

Literature Review

Formative feedback not only helps students understand what they do well but also highlights areas that need improvement, helping them along their learning journey (Black & Wiliam, 1998). When feedback is given immediately and in a way that students can act on it, it helps further their understanding and performance (Shute, 2008). Nicol and Macfarlane-Dick (2006) comment that formative assessment should be a two-way conversation, where students are involved with the feedback rather than just receiving it. Through games like Kahoot, both teachers and pupils can gain an instant insight into strengths and weaknesses, ensuring self-assessment and reflection.

In alignment with the Welsh Government's Curriculum for Wales (2015), formative feedback can be seen as a tool to help students and place them at the centre of their learning process. The curriculum aims to create an environment that promotes a wide range of authentic experiences, and formative feedback plays a vital role in this by enabling students to make informed decisions about their learning pathways (Welsh Government, 2015). Additionally, the new curriculum emphasizes the importance of assessment for learning (AfL), where feedback is used not only to measure but to support students. Kahoot fits into this vision by providing instant feedback, allowing students to reflect on their answers and deepen their understanding.

Hattie and Timperley (2007) argue that the most effective feedback shows where students currently are, what their next goal is, and how they can bridge that gap and complete the next level. This approach aligns with the Welsh Government's emphasis on developing a clear progression framework in the curriculum, where learning is seen as a continuous process. As well as aiming to close the attainment gap within schools. As Wiliam (2011) points out, placing feedback into daily classroom practices creates a culture of ongoing improvement. This is reflected in the Curriculum for Wales, which promotes an approach where teachers continually assess, and refine their teaching based on the needs of the students.

Research by Carless (2006) and Nicol (2007) further shows that when students actively use feedback to set personal goals and monitor progress, they are more motivated and develop stronger self-regulation skills. This is directly connected to the Welsh Government's goals of fostering learners who are independent, self-motivated, and capable of reflecting on their learning. Effective formative feedback in

this context becomes a tool to support students in becoming "enterprising and creative contributors," one of the four key purposes outlined in the curriculum (Welsh Government, 2015, p. 8).

The Constructivist learning theory Piaget, 1950, Vygotsky, 1978, says that knowledge is constructed through active participation and meaningful experiences. This also aligns with the principles of the Welsh curriculum. By incorporating gamified learning tools like Kahoot, students are encouraged to participate actively, solve problems, and collaborate, all of which foster a deeper engagement with the subject matter. This is again in line with the Welsh Government's drive to incorporate digital literacy and interactive technologies in the classroom, ensuring that learners are well-prepared for the digital future (Welsh Government, 2015).

Several studies have explored the impact of Kahoot on student engagement and motivation. Wang (2015) found that Kahoot's real-time quizzes and leaderboard rankings significantly boosted student motivation and participation. Licorish (2018) reported that students enjoyed using Kahoot, leading to higher levels of attentiveness and enthusiasm in lessons. This mirrors the Welsh Government's focus on making learning engaging and relevant, ensuring that students find joy in their education. By incorporating such tools, teachers can tap into their pupils' interests, keeping them engaged and motivated throughout their learning process (Zarzycka-Piskorz, 2016).

Despite its benefits, Kahoot does have limitations. Some theorists argue that it primarily fosters extrinsic motivation by emphasizing rewards rather than deep learning (Nicholson, 2015). Moreover, Kahoot's reliance on multiple-choice questions may limit students' opportunities to engage in higher-order thinking skills, such as critical analysis and problem-solving (Wang, 2015). These concerns echo broader discussions within the Welsh curriculum about ensuring that assessment methods promote deep thinking. The question is are multiple choice questions deep thinking?

The use of technology in classrooms, including Kahoot, also raises concerns about accessibility and the digital availability. Not all students have equal access to devices and reliable internet connections, which can lead to differences in learning opportunities (Selwyn, 2016). While the Welsh Government has invested in enhancing digital literacy and access across schools, this issue remains a challenge, as students' technological ability and availability varies. Addressing these issues is crucial for ensuring that all students benefit equally from gamified learning tools.

In summary, the literature shows that Kahoot can be a valuable tool for formative feedback and student engagement, aligning with constructivist learning theories and the goals of the Welsh curriculum. However, challenges remain, such as the reliance on extrinsic motivation, question format limitations, and accessibility issues.

Methodology

This study used a mixed approach to gather a comprehensive understanding of how Kahoot impacts student engagement and formative feedback in Key Stage 2 (KS2) classrooms. By integrating both quantitative and qualitative research methods, the study aimed to provide a well-rounded analysis of

Kahoot's effects on student motivation, learning outcomes, and classroom dynamics. The methods design is particularly effective for this research as it allowed for the collection of numerical data to identify trends while also exploring deeper insights through interviews.

The study was conducted in a KS2 setting, with participants including thirty KS2 students and eight KS2 teachers. The students will engage with Kahoot over a period before completing a questionnaire which assessed their engagement and perceptions of formative feedback.

The student questionnaire included both closed and open-ended questions. It allowed for the collection of quantitative data (scale responses on engagement levels) and qualitative insights (student opinions on Kahoot). Questions focused on students' perceived engagement, motivation, and use of formative feedback. (See appendix 1)

Similarly, the teacher questionnaire examined the frequency of Kahoot use, its role in formative assessment, and perceived challenges. (See appendix 2) A key limitation in the questionnaire design was that it did not explicitly ask whether Kahoot was being used specifically for Assessment for Learning (AfL). This may have led to some responses reflecting general gameplay rather than structured formative assessment practices.

To complement the questionnaire data, semi-structured interviews were conducted with four teachers. These interviews explored teachers' perspectives on the advantages and challenges of using Kahoot in the classroom, particularly in relation to its effectiveness as a formative feedback tool. The semi-structured format allowed teachers to provide a deeper insight and examples of where Kahoot has supported or hindered student learning. (See appendix 3)

The quantitative data was used to identify trends from student and teacher responses. This analysis helped determine whether there were changes in student engagement or learning outcomes after using Kahoot. The qualitative data was analysed to find key themes such as engagement, motivation, and feedback quality. Also, any potential challenges associated with Kahoot's use in the classroom were identified.

Ethically, the study adheres to BERA (2024) and GDPR guidelines. Informed consent was obtained from all participants, with teacher consent required for students. (Appendix 4a) Participants were fully informed of the purpose, their role, and their right to withdraw at any time without consequence. (See appendix 4b) Confidentiality was ensured by anonymising all data, and no identifiable information was recorded. Data is securely stored in compliance with university ethical standards and GDPR regulations. The PG2 form in Appendix highlights all the risks that the study posed to myself, the participants, and the university. (See appendix 6)

While the mixed-methods approach provided a good analysis, certain limitations must be acknowledged. The relatively small sample size limits the generalisability of findings across other KS2 settings. Additionally, bias may have influenced results, particularly in teacher interviews, where participants might have felt inclined to provide positive feedback about Kahoot as the pupil knows the

teacher loves using it in class. The idea of a direct question on whether Kahoot was used for AfL also presents a limitation, as some responses may reflect its use purely for entertainment rather than formative assessment.

The findings provided valuable insights into how Kahoot influences student engagement and formative feedback. Additionally, by using both student and teacher perspectives, this research will contribute to an understanding of game-based learning in KS2 classrooms. The results will also inform future AfL strategies in Welsh primary education, offering guidance on how digital tools can support formative assessment practices in alignment with the Welsh curriculum.

Discussion

The expected findings of this study suggest that Kahoot will positively impact student engagement and formative feedback in Key Stage 2 classrooms. Based on prior research, Kahoot is anticipated to significantly enhance student engagement, making learning more interactive and enjoyable (Wang, 2015; Licorish, 2018). The competitive environment created by Kahoot's leaderboards and real-time quizzes is expected to foster a more dynamic classroom, increasing student motivation and participation (Plump & LaRosa, 2017). In terms of formative feedback, the instant feedback provided by Kahoot will enable students to identify and correct mistakes immediately, supporting the principles of AfL (Black & Wiliam, 1998; Shute, 2008). It is anticipated that students will demonstrate improved learning outcomes due to this quick feedback loop, allowing them to track their progress and refine their understanding (Sadler, 1989).

Despite these positive outcomes, potential challenges may arise. The competitive nature of Kahoot could cause stress for some students, particularly those who struggle with competition (Plump & LaRosa, 2017). This will be mitigated by emphasizing participation over scores and adjusting settings to reduce competition where needed. Digital access may also be an issue, but steps will be taken to ensure equal access to devices for all students (Selwyn, 2016).

In summary, this study expects to find that Kahoot enhances student engagement and formative feedback. The next section will present the actual findings of the study.

Findings

The findings indicate that Kahoot is a highly engaging tool for both students and teachers in Key Stage 2 (KS2) classrooms. Students overwhelmingly reported preferring Kahoot over traditional worksheets or tests, with many highlighting its fast-paced, interactive nature as a key factor in their enjoyment. One student commented, "I like that it's fun, and I want to get the answers right quickly," reflecting research that supports the motivational benefits of gamified learning (Deterding, 2011; Licorish, 2018). However, while the competitive element increased engagement, it also diverted focus from formative feedback. Many students admitted they were more concerned with achieving a high score than reflecting on their mistakes, raising concerns about the depth of learning (see Appendix 5a).

Kahoot is widely used in KS2 classrooms, particularly among older year groups (see Appendix 5b). The pie chart in Appendix 5b further demonstrates that Kahoot is embedded in classroom practice. However, a key issue arises regarding whether Kahoot is explicitly used for Assessment for Learning (AfL) or simply as a fun activity. The questionnaire did not ask whether teachers used Kahoot specifically for AfL, meaning responses may reflect general gameplay rather than structured formative assessment. This distinction is important within the Curriculum for Wales, where AfL is central in ensuring learners receive high-quality, ongoing feedback (Welsh Government, 2022).

Though, the results confirm that student engagement is significantly higher when using Kahoot than traditional teaching methods (see Appendix 5c). The fact that every pupil completed the Kahoot suggests it encourages participation more effectively than a written worksheet (see Appendix 5d).

However, most teachers stated they do not prefer Kahoot over worksheets but use them for different purposes (see Appendix 5e). Additionally, 42% of students focused more on scores rather than feedback, potentially limiting Kahoot's effectiveness in promoting deep learning (see Appendix 5e). This is a concern in relation to the Welsh Government's emphasis on formative assessment, which encourages pupils to engage meaningfully with feedback rather than focus solely on performance (Welsh Government, 2021).

Teachers view Kahoot positively, with 100% agreeing they would recommend its use in the classroom (see Appendix 5f). However, it is important to note that only seven teachers responded instead of the expected eight. Several challenges were identified, including digital accessibility, particularly in classrooms where not all students have immediate access to devices. This aligns with concerns raised in the Welsh Government's Digital Competence Framework (DCF), which highlights the need for equal access to technology to ensure all learners can develop digital skills (Welsh Government, 2018).

Additionally, reading and processing speeds vary among students, meaning some children struggle to keep up, leading to disengagement. Teachers frequently mentioned this in open-ended responses (see Appendix 5g). This links to the Welsh Government's commitment to inclusive education, ensuring that all learners, regardless of ability, can access and benefit from digital tools in the classroom (Welsh Government, 2023). Some teachers noted that students need explicit instruction on using Kahoot effectively and that managing the game can take up valuable teaching time.

When asked whether they would like to use Kahoot more, responses were positive. Four teacher responses included:

- "Yes, as it's a much more fun way to engage the students."
- "I use Blooket more now, as I can tailor the content to suit my learning. Kahoot needs constant monitoring from teachers. Sometimes learners disengage if they cannot read/respond as quickly as peers."
- "Yes, I would, but it can be difficult due to access to devices."
- "Yes, although there isn't always time, and some topics don't lend themselves to a Kahoot."

Additionally, the use of Kahoot before and after the lesson provided valuable insights into student understanding. The pre lesson Kahoot (see Appendix 5f) helped gauge students' prior knowledge, allowing lessons to be tailored to address specific gaps. The post lesson Kahoot (see Appendix 5i) showed clear learning and demonstrated progress in understanding. Reviewing individual student responses allowed for identification of learning needs, supporting effective differentiation.

This data was important in forming groups for the experiment, ensuring that students received appropriate support based on their abilities.

In summary, the findings suggest that while Kahoot enhances engagement and is widely used in KS2 classrooms, its effectiveness as an AfL tool is limited by factors such as competitive distractions, digital access issues, and differences in student processing speeds. However, with correct implementation such as emphasizing feedback over competition, ensuring equal access to devices, and incorporating reflection activities, Kahoot has the potential to be closer with the Welsh Government's points in digital competence, inclusive learning, and formative assessment.

Conclusion

This study demonstrates that Kahoot enhances student engagement in Key Stage 2 classrooms, which aligns with the Welsh Government's focus on digital competency and formative assessment within the Curriculum for Wales. The Digital Competence Framework (DCF) promotes technological integration to improve learning, and this research supports Kahoot as a tool that makes assessment more engaging. However, challenges emerged, particularly the competitive nature of Kahoot, which often led students to focus on scores rather than feedback. Digital access issues also highlight the need for equitable technology provision in Welsh schools.

While Kahoot supports active learning and digital literacy, teachers must ensure that students engage meaningfully with feedback rather than viewing it purely as a game. Strategies such as reflection activities and adjusting settings to reduce competition could help its effectiveness. These adaptations align with Welsh policies, which ensure student well-being alongside academic progression.

This study had limitations, including a small sample size and potential response bias. A broader study across multiple Welsh schools would provide a more comprehensive understanding of Kahoot's impact. Additionally, exploring how Kahoot compares to other digital assessment tools could offer further insights.

Future research should focus on strategies to encourage deeper engagement with feedback rather than competition. Further studies could also examine how different age groups and subjects respond to Kahoot.

In conclusion, Kahoot is a valuable tool for digital learning, supporting engagement and formative assessment in line with Welsh educational priorities. By addressing its challenges and refining its implementation, Kahoot can contribute to a modern, student-centered education system in Wales.

Reference List

- Black, P. and Wiliam, D. (1998) 'Assessment and classroom learning', *Assessment in Education: Principles, Policy & Practice*, 5(1), pp. 7–74.
- Black, P. and Wiliam, D. (2009) 'Developing the theory of formative assessment', *Educational Assessment, Evaluation and Accountability*, 21(1), pp. 5–31.
- Brookhart, S. M. (2008) *How to Give Effective Feedback to Your Students*. Alexandria, VA: ASCD.
- Burden, K. and Kearney, M. (2017) 'Conceptualising authentic mobile learning', in Herrington, J., Couros, A. and Irvine, V. (eds.) *Emerging Technologies and Authentic Learning in Higher Vocational Education*. IGI Global, pp. 38–58.
- Clark, I. (2012) 'Formative assessment: Assessment is for self-regulated learning', *Educational Psychology Review*, 24(2), pp. 205–249.
- Deterding, S. (2011) 'Situating motivational affordances of game elements: A conceptual model', *Gamification: Using Game Design Elements in Non-Gaming Contexts Workshop*, CHI 2011, Vancouver, Canada.
- Diceva, D., Dichev, C., Agre, G. and Angelova, G. (2015) 'Gamification in education: A systematic mapping study', *Educational Technology & Society*, 18(3), pp. 75–88.
- Education Endowment Foundation (EEF) (2021) *Feedback: Teaching and Learning Toolkit*. Available at: <https://educationendowmentfoundation.org.uk/>
- Great Teaching Toolkit (2020) *Evidence Review*. Available at: <https://www.greatteaching.com/n>
- Hamari, J., Koivisto, J. and Sarsa, H. (2014) 'Does gamification work? A literature review of empirical studies on gamification', *Proceedings of the 47th Hawaii International Conference on System Sciences*, pp. 3025–3034.
- Hattie, J. (2009) *Visible Learning: A Synthesis of Over 800 Meta-Analyses Relating to Achievement*. London: Routledge.
- Hattie, J. and Timperley, H. (2007) 'The power of feedback', *Review of Educational Research*, 77(1), pp. 81–112.
- Licorish, S. A., Owen, H. E., Daniel, B. and George, J. L. (2018) 'Students' perception of Kahoot's influence on teaching and learning', *Research and Practice in Technology Enhanced Learning*, 13(9), pp. 1–23.
- Nicol, D. (2020) 'The power of internal feedback: Exploiting natural comparison processes', *Assessment & Evaluation in Higher Education*, 45(5), pp. 703–714.
- Nicol, D. and Macfarlane-Dick, D. (2006) 'Formative assessment and self-regulated learning: A model and seven principles of good feedback practice', *Studies in Higher Education*, 31(2), pp. 199–218.

- Plump, C. M. and LaRosa, J. (2017) 'Using Kahoot! in the classroom to create engagement and active learning: A game-based technology solution for eLearning novices', *Management Teaching Review*, 2(2), pp. 151–158.
- Reeve, J. (2012) Self-determination theory applied to educational settings. In Ryan, R. (ed.) *The Oxford Handbook of Human Motivation*. Oxford: Oxford University Press, pp. 414–434.
- Sadler, D. R. (1989) 'Formative assessment and the design of instructional systems', *Instructional Science*, 18(2), pp. 119–144.
- Selwyn, N. (2016) *Education and Technology: Key Issues and Debates*. 2nd edn. London: Bloomsbury Academic.
- Shute, V. J. (2008) 'Focus on formative feedback', *Review of Educational Research*, 78(1), pp. 153–189.
- Wang, A. I. (2015) 'The wear-out effect of a game-based student response system', *Computers & Education*, 82, pp. 217–227
- Wang, A. I. and Tahir, R. (2020) 'The effect of using Kahoot! for learning – A literature review', *Computers & Education*, 149, p. 103
- Welsh Government (2015) *A curriculum for Wales – a curriculum for life*. Cardiff: Welsh Government. Available at: <https://www.gov.wales/sites/default/files/publications/2018-02/a-curriculum-for-wales-a-curriculum-for-life.pdf>, page 8.
- Welsh Government (2015) *Successful Futures: Independent Review of Curriculum and Assessment Arrangements in Wales (Donaldson Report)*. Cardiff: Welsh Government. Available at: <https://www.gov.wales/successful-futures>
- Welsh Government (2017) *Education in Wales: Our National Mission 2017–21*. Cardiff: Welsh Government. Available at: <https://www.gov.wales/education-wales-our-national-mission>
- Welsh Government (2018) *Digital Competence Framework (DCF)*. Cardiff: Welsh Government. Available at: <https://hwb.gov.wales/curriculum-for-wales/digital-competence-framework>
- Welsh Government (2020) *Curriculum for Wales guidance*. Cardiff: Welsh Government. Available at: <https://www.gov.wales/curriculum-wales-overview> (Accessed: Accessed 28th March 2025)
- Welsh Government (2022) *Curriculum for Wales: The journey to 2022*. Cardiff: Welsh Government. Available at: <https://www.gov.wales/curriculum-wales-overview> (Accessed: 28th March 2025).
- Welsh Government (2024) *British Educational Research Association (BERA) Ethical Guidelines*. Cardiff: Welsh Government.
- Wiliam, D. (2018) *Embedded Formative Assessment*. 2nd edn. Bloomington, IN: Solution Tree Press.
- Zimmerman, B. J. (2002) 'Becoming a self-regulated learner: An overview', *Theory into Practice*, 41(2), pp. 64–70.

