

Can ICT enhance questioning?

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1. Identifying, analysing and scoping the perceived learning problem or opportunity:

I wanted to trial using a couple of ICT tools to establish whether iPads could be used to enhance questioning in class discussions. Specifically, I was wanting to find out if using tools available on iPads would increase engagement in a selected class; and whether it would work effectively as a vehicle for better follow-up questioning to deepen understanding.

2. Research /Reading

Existing practice and relevant theory, for insight that could inform the development of a change strategy.

Great Teaching: The Power of Questioning, Tom Sherrington, 2018. "Whole-Class Response:

Principle: Sometimes is useful or even essential to get a response from every single student at the same time. This provides quick feedback to you as the teacher about the success of the relevant teaching and learning exchanges, identifies individuals who need further input and can help direct subsequent questions or exercises as you respond to the feedback you gain"

15 Questions To Ask About Tech Integration In Your Classroom, By Drew Perkins, February 22, 2022

3. Will my students find this tech boring after the initial exposure? Beware that myth about how great technology is at engaging students. Yes, new technology can indeed grab the attention of all of us but how quickly will that wear off?

Technology In The Classroom: Best Questions To Ask Before Integration, Written by Beth Darvell, August 3, 2021

By definition, education technology should always be considered a learning tool, not something to entertain them digitally. So when asking this question, consider how this technology integrates understanding and real-world application.

3. Data Collection – Baseline/Bias/Data corruption.

I wanted to trial two ICT tools with my S1 class to establish whether they would enhance engagement and help facilitate deeper understanding through follow-up questioning. The two tools selected were:

1. Kahoot
2. White-board app provided by Mr Graham@ Inspire Team, SBC

I would record number of pupils who had fully charged iPads and were able to participate.

4. Creation of planned intervention.

Using my S1 class, I intended to incorporate to trial both Kahoot quizzes and the whiteboard app on three separate occasions. These would be a mixture of Starter activities and plenary discussions at the end of lessons. I would record numbers of students who did not participate. I would also ask follow-up questions verbally to determine level of understanding amongst students.

5. Intended Outcomes

I was hoping that the use of ICT tools (Kahoot and whiteboard app) would enable greater participation in whole-class discussions and more engagement generally. I was also hoping that use of the whiteboard app in particular would make prompting for further information from students, given the very obvious visual responses to opening questions.

5. Actual Results / Actual Outcomes – analysis of data needed here.

Mixed results. Kahoot worked exceptionally well as a tool to enhance questioning and engagement on all three occasions trialled. Very few pupils did not have a charged iPad for these quizzes and the vast majority participated. Pupils were also extremely good at answering follow-up questions, using the Kahoot questions as prompts.

The Whiteboard app was not as enthusiastically embraced by students. Though on the first occasion pupils engaged well and were willing to answer follow-up questions, enthusiasm and engagement for this app declined on the next two occasions it was used (more pupils referred to iPads not being charged for example).

6. Reflections /Critique of planned intervention including Limitations & Strengths

Use of Kahoot quizzes proved to be a very effective way to engage with pupils in reviewing content and questioning. Given their levels of enthusiasm to the quizzes themselves, pupils were happy to engage with follow-up questioning. This is definitely a tool I will use with future classes to enhance Starters and Plenary discussions, as well as during Revision of course content.

The white-board was not particularly well received and was a bit of a fuff to use (time to get everyone on the app took longer than it's actual time of use). I don't think this is a feature I will use overly moving forward with junior classes, though I believe it should work better with senior pupils (this is based purely on experience of using physical white boards with senior classes in the past).

7. Recommendations for application in class Sharing with colleagues/pupils/stakeholders

Well planned Kahoots and well-prepared follow-up questions work extremely well with younger students (especially when Merits are offered as incentive to podium places). Levels of participation and engagement were particularly high and these Starter/Plenary quizzes definitely provided opportunity for in-depth review of content covered.

The Whiteboard app didn't really engage youngest students (after the first time using it). This would be better used with older students and with a series of initial questions, rather than just one discussion starter.

Appendix 1- Results

Table 1.

Kahoot 1 – 16/1/23	Starter: recap on Devolved/Reserved powers of the Scottish/UK Governments
Engagement high; lots of students participated in follow-up questions. Only 3 pupils had no iPads	

Table 2.

Kahoot 2 – 24/1/23	Starter: recap on process of voting in elections
Engagement high; lots of follow-up discussion. Pupils scored very highly in the quiz. All pupils had a charged iPad	

Table 3

Kahoot 3 – 25/4/23	Starter: summary of Vietnam unit
All pupils had a charged iPad and participated. Pupils scored highly in the quiz, were very engaged and lots of students offered answers to follow up questions.	

Appendix 1 - Results

Table 4.

White-board app 1 – 17/1/23	Starter – Voting. Pupils asked if they thought they would vote when old enough (Yes or No). Discussion starter
5 pupils had no iPad. Class were very engaged and pupils were happy to answer follow up questions when I asked individuals to explain their choices.	

Table 5.

White-board app 2 – 20/1/23	Plenary. End of voting work. Asked whether they would vote now they knew more about it – A, B, C, D (definitely, probably, prob not, def not)
Engagement was not as good. 7 had no iPad. Pupils not that willing to elaborate on their answers when asked to justify their choices. Mr Angus was in the room however, so may have been a factor?	

Table 6

White-board app 2 – 10/3/23	Plenary. JFK – Warren Commission. Pupils were asked if they agreed with the reports findings – Yes or No
Reasonably good level of engagement in discussion, given nature of content discussed. 7 pupils didn't have a charged iPad.	