

What happens to assignment submission numbers when a digital quiz is used as a tool for engagement?

Graeme Wells

Group Secondary N

Rationale

In January 2021 Scotland made the change from face-to-face teaching and learning to remote learning for a second time within a year due to the pandemic following an initial period of digital learning from March-June 2020. Studies within the initial period showed while teachers were in regular contact with 60% of pupils, only 42% of pupils returned their last piece of work (Lucas, et al., 2020). This has improved in the current period of remote learning as 40% of secondary teachers said over three quarters had returned work compared to 21% last March (Montacute & Cullinane, 2021). Thus, there was a clear difference between engagement with lessons and teachers and submissions of assignment.

The attainment gap has also been affected in this time, with 33% of teachers of the opinion that covid-related disruption will substantially increase the attainment gap (Montacute & Cullinane, 2021). Improving assignment submission numbers will allow for more opportunity for assessment, a key driver in the National Improvement plan (Scottish Government, 2019) and feedback, which has a high impact on improving attainment (Education Endowment Foundation, 2018).

An online quiz, specifically the Kahoot platform, was chosen to encourage engagement as it “can provide an engaging environment that supports learning and adds active participation in the classroom” (Plump & LaRosa, 2017). In addition, pupils are familiar with the platform and allows asynchronous participation, both of which reduce barriers to participation.

Aims

The aim of this inquiry was to introduce an online quiz to digital lessons to engage pupils to complete and submit assignments issued during the lesson. The enquiry focused on the volume of assignments submitted by those present in the lesson, not the quality of the work submitted.

Methodology

The inquiry took place over four lessons within a five-week period with an S1 Design and Technology class of 16 pupils. Each lesson was a double lesson lasting 1 hour 40 minutes with the first 50 minutes being held ‘live’ over Microsoft Teams and the latter 50 mins being independent working of issued assignments. Three of the lessons were classed as ‘classroom’ lessons and one a ‘practical’ lesson; however, due to being unable to conduct practical workshop activities via remote learning both will be treated equally.

At the beginning of the first lesson those live in the class were informed that there would be a Kahoot quiz at the end of the lesson. They were informed that for their scores to count all

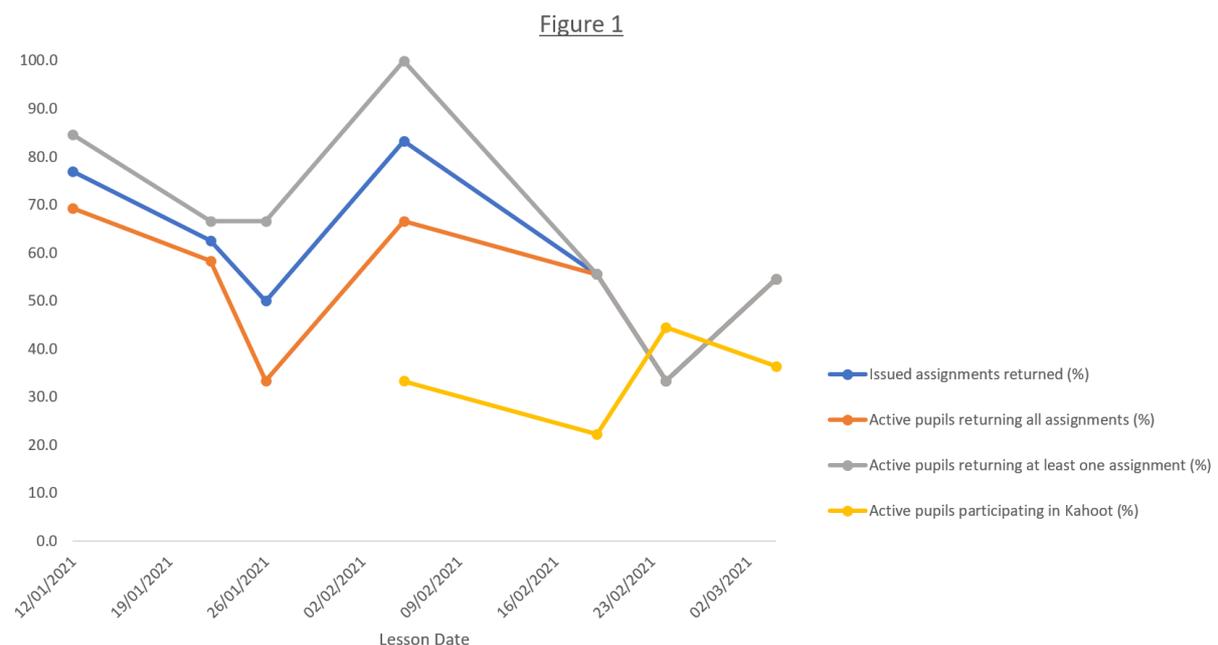
primary tasks would need to be submitted for the score to count. To enable greater inclusion, extension tasks were excluded. The quiz was open for 3 days, allowing those not able to access the lesson on the day to complete the tasks and take part. Learners were not informed of the aim or rationale behind the introduction of the quiz, just that the quiz would be carried out for several weeks. In subsequent weeks, pupils were presented with the top 3 scores at the start of the lesson. Upon issuing each task in the lesson, pupils were reminded that they were required to complete the task to take part in the online quiz and upon issuing the final task pupils were issued the link and code to access the quiz. Pupils were reminded they needed to complete all tasks for their score to be counted in the leader board.

The Insights and Grades functions on Microsoft Teams were used to judge how many pupils were interacting with the lesson and completing assignments. Pupils were classed as ‘active’ in the lesson if they had either taken part in a meeting for any length of time or viewed any assignment in the lesson. This eliminates the element of variable participation in lessons due to long-term distance learning.

Data was collected from three lessons prior to the enquiry and the four lessons during the enquiry using to allow for comparison. Throughout the enquiry, any observations or communication regarding the quiz was noted. At the end of the four lessons pupils were asked to complete a questionnaire and a focus group was carried out. A focus group was used as it not only allows for generation of ideas but also provides a learning experience for pupils (Breen, 2007).

Findings

By looking at figure 1 it shows that prior to the enquiry, on the first week on remote learning, there was high engagement with pupils submitting multiple assignments, something that would be expected given it was the first week of a new schooling experience. By the third lesson attendance had a drop of 8% however there was a 18% decrease in number of pupils submitting any work with a 26% decrease in overall number of submissions, thus while pupils were engaging with the lesson, they were less likely to engage with the assignments.



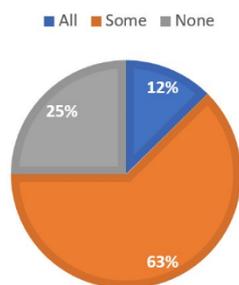
Throughout the course of the enquiry, it can be seen in figure 1 that there was a variation in the number of pupils who were active in the class yet did not engage with any assignments. This may be due to the type of assignment, IT issues or other non-class related reasons. The results from the final three lessons of the enquiry showed that while the number of pupils engaging in assignments varied, 100% of those that completed the first assignment also completed all remaining assignments. This compares to only 67% in the previous 2 lessons. Relating the number of pupils engaging in any assignment with the number of pupils participating in the online quiz shows no direct correlation.

As the quiz results only counted if all assignments were submitted there may be a link relating the quiz to the increased completion of all assignments, with the first lesson having pupils unsure, possibly not believing that this was the case. As a pupil's score was excluded from the first weeks results due to non-competition and pupils' reactions at the time were clear that they understood the rules.

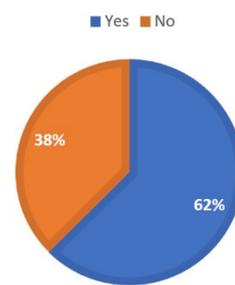
Observations of the submitted assignments showed that all pupils had attempted each assignment, not simply submitted a blank assignment for it to count.

The results from the questionnaire following the enquiry showed that 75% of pupils had participated in 1 or more online quizzes with 63% enjoying online quizzes. From the focus group reasons for not participating or enjoying these included "it is long and boring" "its [sic] boring" and "extra work". Focus group discussions on the positives of online quizzes included "They are simple, fun", "you get to learn a lot more", "we don't need to work" and "It's competitive and I like competitive things". The competitive element appears to be a factor in participation with 2 pupils noting in the focus group that the most enjoyable part was "Competition" and "Kahoot is just fun cause it's intense and a battle to win". This was also seen in informal observations in lessons with pupils commenting on how they are going to beat their classmate.

Did you take part in any of the Kahoot quizzes?

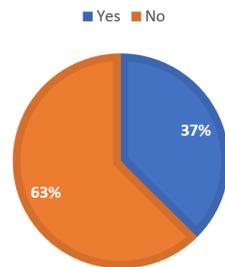


Did you enjoy taking part in the Kahoot quizzes?

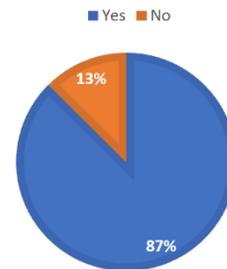


When questioned "Did you complete any assignments to allow your score on the Kahoot leader board? 37% of respondents gave a 'yes' reply, showing that the quiz did have a positive effect on assignment submissions. This was further reinforced by 87% responding yes to "Would take part in future Kahoots if you had to complete all assignments given?".

Did you complete any assignments to allow your score on the Kahoot leader board?



Would take part in future Kahoots if you had to complete all assignments given?



The quizzes also had a positive effect on learning in addition to increased submission numbers. 37% of participants responded that the quiz ‘improved understanding’ of the lesson content with the focus group giving comments including “It made the lesson more fun” and ‘make it more exciting since it’s just a fun activity after class’.

Conclusions

The enquiry has shown that using a digital quiz as a tool for engagement appears to have a positive effect on assignment submission numbers. The reason for this is pupil dependant, many enjoy the competitive element it brings to the class and some simply found it fun. It should be noted that there was no effect on several pupils as they had no interest in the quiz and saw it as additional work. The scale of any positive effect, if any, cannot be accurately quantified or confirmed due to other influences on pupil’s engagement with assignments. In addition, pupil’s general engagement with classes and school has varied throughout this period of remote learning.

Implications for Future Practice

The current remote learning situation is a complex one with numerous barriers to learning and engagement with assignments, therefore there will never be a ‘one size fits all’ approach to improve this. This enquiry suggests that while an online quiz has a positive effect on assignment submission numbers, it would only be one approach that could be used and further work is required to confirm and measure its impact. This enquiry was conducted in a single class and year group over 4 lessons and expanding this to more classes, year groups and over a longer period would allow for more conclusive and in-depth results. There is no way to know when, and if, another prolonged period of digital learning will occur to allow further study. On return to face-to-face teaching, it is likely that digital platforms will continue to be for areas such as digital homework and there is scope to continue this research within that context.

The quantitative data gathered in the enquiry has indicated that there may be a link between the amount of engagement with an assignment and the type of assignment offered within a technical class. The indication being the more the pupil requires to be independently creative the lower the level of submissions. Further research into this may assist how different assignment types are used within a digital environment. There is scope to use existing data gathered during the current digital learning period within the school to study any possible link.

Within my own practice I plan to use online quizzes within any future periods of digital learning and across a wider number of classes, not only to encourage submission of assignments but for the positive learning experience by pupils. I also plan to use the same approach within digital homework assignments for the same reasons.

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Appendix A – Engagement data recorded

Data Collected

Class Date	Kahoot (Y/N)	Registered Pupils	Active pupils (attended meeting or interacted with assignments with 24 hrs of lesson)	No. of tasks issued	No. pupils completed task 1	No. pupils completed task 2	No. pupils completed task 3	No. pupils all task completed	No. Pupils complete Kahoot
12/01/21	N	16	13	2	10	10		9	
22/01/21	N	16	12	2	7	8		7	
26/01/21	N	16	12	3	8	6	4	4	
05/02/21	Y	16	9	2	9	6		6	3
19/02/21	Y	16	9	2	5	5		5	2
24/02/21	y	16	9	2	4	4		4	4
04/03/21	y	16	11	2	6	6		6	4

Results based on active pupils

Attendance (%)	Active pupils completed task 1 (%)	Active pupils completed task 2 (%)	Active pupils completed task 3 (%)	Active pupils completed all tasks (%)	Total active tasks issued (attending pupils x no. tasks)	Active tasks issued completed (%)	Active Kahoot participation (%)
81.3	76.9	76.9		69.2	26.0	76.9	
75.0	58.3	66.7		58.3	24.0	62.5	
75.0	66.7	50.0	33.3	33.3	36.0	50.0	
56.3	100.0	66.7		66.7	18.0	83.3	33.33
56.3	55.6	55.6		55.6	18.0	55.6	22.22
56.3	44.4	44.4		44.4	18.0	44.4	44.44
68.8	54.5	54.5		54.5	22.0	54.5	36.36

Appendix B – Text recorded from MS Teams meeting during focus group

How do you feel about taking part the Kahoot quizzes?

I love it

its fun very fun

i dont like it

I keep forgetting to do them :,)

i think it boring

I find them fun

What were your reasons for taking part
(or not) in the online quiz?

its fun

its boring

I don't know what they're like so I don't really know if they're boring or fun TwT

Itd probably be fun though cause I like kahoots

What were the positive parts of the Kahoot?

Fun

They are simple,fun

you get to learn a lot more

we dont need to work

It's competitive and i like competitive things

What were the negative parts of the Kahoot?

idk

Hmm

Maybe if someone got 4/5 and almost won but didn't?- that could be negative I think

I dont have any problems with kahoot to be honest

its boring

it is long and boring

extra work

What parts of the Kahoots did you enjoy the most?

Competition

nothing

I didn't do these Kahoots but kahoot is just fun cause it's intense and a batt,e to win I guess

TwT

i enjoy it all

All of it

How has your opinion on Kahoots changed over the 4 weeks?

Not at all I've always liked them

they havent

Just the same

it has not changed as i have always enjoyed kahoot

How has your opinion on submitting assignments in this class changed since we have been doing the Kahoots?

It hasn't

it hasent

I forget to hand in a lot of assignments or just get distracted and forget to do them so I need to fix that since it's clearly an issue

I forget to submit it alot

What effect has the Kahoot had on your learning experience in the online lesson?

It made the lesson more fun

nothnig

Better

its better because i now know a lot more

I cant really answer but I feel like it'd make it more exciting since it's just a fun activity after class

Is there anything else that you would change about the quiz format?

Not really nope

It's fine as is

Nope

no not really