Dr Nick Rolfe

Can the Use of Technology Increase Participation in PSHE Lessons?

Abstract

An investigation was carried out to see if the interactive application “Nearpod” could be used to increase participation in PSHE lessons. Two classes in a four-class year group were taught using Nearpod, while the other two classes formed the control group. Statistically, the effect on the participation of pupils was negligible, but a number of qualitative benefits were observed, such as an increased efficiency in discussion and gave valuable insights into the views of pupils.

Introduction

The national curriculum states that “all schools should make provision for personal, social, health and economic education (PSHE)” [1], and that this provision should be driven by best practice. A 2015 report by the Department of Education outlined key aspects of effective PSHE [2], one of which was:

> include lessons which are interactive, participative and engaging; pupils’ views should be sought and older children can be involved in the development of curriculum programmes

In my experience, this has been a difficult goal to realise in PSHE teaching. Issues covered can often be contentious, and some students may feel uncomfortable sharing their ideas. Equally, other students who are more confident can, if left unchecked, dominate the conversation and inadvertently force a consensus on the class. In addition, the latter group of students can have more influence on the development of the curriculum. Making a level playing field, therefore, is a priority in PSHE lessons.

As Putney High School has adopted a one-to-one device policy [3], I have had the opportunity to experiment with many digital learning tools in my Physics lessons. I felt that the use of technology might give me a way to address the above-mentioned problems, and settled on the use of an application called “Nearpod,” [4] which will be described in the next section. This application had increased the interactivity in my

Physics lessons, and I was curious to see if the same could happen in my PSHE lessons.

There has not been a large amount of research in this area. There have been studies in the use of technology in education in general, a meta-analysis of which [5] suggest that use of technology has a small positive effect as long as “the activity is effectively aligned with what is to be learned.” Research on PSHE tends to focus which content should be delivered rather than the manner of the delivery. There are very few analyses of digital schemes for PSHE (of which [6] is an example), so this project adds to an area of PSHE teaching which has not yet been fully researched.

Intervention

The Nearpod application offers many features, of which the following were used:

1. Uploading pre-existing slideshows to be displayed on pupil tablets.
2. Interactive opinion polls, for which the teacher can reveal results anonymously.
3. Multiple choice quizzes, which gives the pupils a percentage score
4. A drawing tool whereby pupils can share pictures with the teacher. The drawings can be added to a pre-existing background. The teacher may then decide which drawings can be shared with the class.

The second feature on the list was useful for quickly gauging overall views of the class, and allowed comparison of the beginning and end of lessons. The third feature was used rarely, but was useful for checking that pupils understood information in videos or reading material.

The final feature on the list was the one that I used the most often, as I felt that giving pupils time to draw allowed them to express their ideas and feelings more completely. One potential problem was that pupils might not be willing to share their drawings with the class if they were too personal – my solution to this was to ask the pupils to draw or include the 'smiley' emoticon to their drawing if they were happy to share it with the class.

I produced Nearpod presentations using the school's pre-existing PSHE materials. The lessons were the same as those used by other teachers, but activities on Nearpod were built into lessons. Paper-based activities were replaced with interactive equivalents, and opportunities were added for pupils to record and share the outcomes of small-group discussions. Any activities that worked better without Nearpod (such as role-plays) were left as they were, so Nearpod was not used for the entirety of any one lesson.

Data Collection

The data collected fell into two groups – qualitative and quantitative. To assess the quantitative impact of Nearpod on class involvement, I simply asked pupils to recall how many PSHE lessons they felt that they had contributed to in the previous term. This revealed the overall engagement of pupils, but also the variation across a form. I also asked pupils to say whether they felt their contributions were understood, and whether they felt their opinions were respected; I used the number of pupils choosing each option to gauge the feelings of the from.

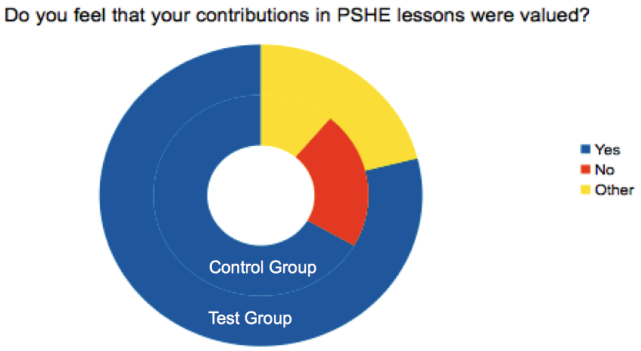
The quantitative data were collected in two surveys, one pre- and one post-intervention. This allowed the effect size of the intervention to be measured. The text of the survey is provided in Appendix A.

While I was interested in the quantitative outcome, my overall impression was that the effect was not something that could be measured statistically alone. For example, one pupil in my class had not interacted with others in PSHE lessons at the beginning of the year, and was starting to struggle in her other lessons. I was interested to see if Nearpod helped to get her more involved. For this reason, I also wanted to collect the views on pupils (and staff) on the interactive lessons.

Half of the year group (two form groups) were given the interactive lessons, while the other half formed the control group. The groups were not told that a study was taking place in order to avoid the data being invalidated by the Hawthorne effect.

Results

In terms of statistics, the number of pupils responding to the survey was very low – around 30 pupils. There was also an imbalance between the number of respondents in the control and test groups, reducing the significance of any results. While the pupils' recorded participation was greater in the test group than in the control group, this was well within confidence limits. Similarly, the test group was more likely to feel that their contributions in PSHE were valued than the control group (79% vs 67%), but this is not a significant result given the small sample size. Interestingly, though, no-one in the large group of test group respondents reported that they felt that their contributions were not valued.



The other strand of the research was observing the effect of using Nearpod on individual pupils. Pupils were asked to comment on their PSHE lessons, and a number of pupils commented positively on Nearpod. Examples of feedback are given below:

"It was a really fun lesson and using Nearpod made us all much more engaged in the lesson. The drawing aspect is very fun as well and we all joined together to discuss the topic more than usually."

"I liked the careers topic as it was interesting and fun and we used our iPads to learn about jobs we would like to do and we also used Nearpod to make a slide of what we would like to be when we are older."

“I enjoy using Nearpod because if somebody is afraid or nervous about sharing their ideas, Nearpod encourages them to share their ideas more. When that person does share their ideas the whole class doesn't need and can't see it unless the teacher shows it on Nearpod.”

I have also included some responses to Nearpod activities in Appendix B; these show that a large amount of information about a pupil can be collected using this application.

Overall, the experiences related by the pupils in the test group seem very positive. Similarly, the tutor of the other form in the test group felt that the use of Nearpod enhanced the enjoyment of her class. Personally, I found it easier to prepare a lesson on Nearpod, as it allowed me to build assessment opportunities into the lesson materials.

Evaluation

As stated above, the low number of participants in the research makes the statistical significance of any differences very small. If this study were to be repeated it would be necessary to ensure that all pupils responded to the survey – and even then, the number of pupils may still be too small.

Another limitation of the study was that a number of other factors could not be controlled. PSHE is taught in four separate form groups by the form tutors, so some differences in participation can be down to the tutor rather than the use of technology. This could be overcome by having the same tutor teach the control and test groups, but this would be impossible within the school timetable as the PSHE lessons are simultaneous. Another option would be to teach the same class alternate lessons with and without Nearpod, but this would introduce timing as another independent variable. Similarly, the topics taught before and after the intervention may account for some difference.

Another problem was that an intervention for another research project took place at

the same time – in future, it would be beneficial for action research to be scheduled to avoid these sorts of clashes. Also, we should not forget that the novelty of a different method in itself can lead to an increase in student participation.

I would add that the original research question was about the use of technology in general, but after some research my intervention focussed on the use of Nearpod. This means that I do not have a definitive answer about the use of technology in PSHE lessons. I do, however, believe that Nearpod gives a fairly full range of digital tools for teaching.

Conclusion

The data indicate that the use of Nearpod in PSHE has a statistically insignificant effect on the participation of a class in PSHE lessons. This suggests that there is no benefit to introducing this digital tool if the intended reason is to encourage participation in class discussion.

However, I did notice the improvement in the number and quality of contributions in individual pupils who had struggled to get their viewpoints across (the impact of digital technology on these individuals rather than a whole class might form the basis of a new study). Additionally, the technology gave an interesting insight into the feelings and needs of the pupils.

While the changes to the test statistics were minimal, the use of Nearpod had other advantages – it was enjoyed by the pupils, allowed pupils to raise issue anonymously, and made it easier for the teacher to control group discussions. While further study is required, these benefits justify the position that digital technology is a useful tool to add to a teacher's repertoire in PSHE lessons.

Bibliography

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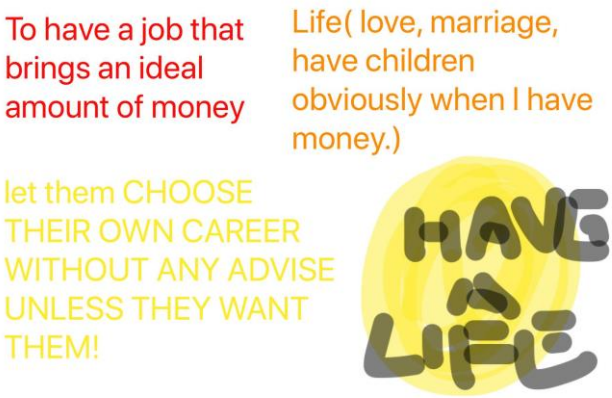
Appendix A – Survey

(The same survey was used before and after the intervention.)

1) Which form group are you in?
2) Which PSHE lesson have you enjoyed the most this year? Explain your answer.
3) What did you enjoy most about PSHE lessons?
4) Thinking back to the previous 5 PSHE lessons, how many do you think you participated in? This includes answering or asking a question, or sharing your point of view in a discussion.
5) When you did say something in class, did you feel what you said was valued?
6) When you did say something in class, did you feel that you were able to express yourself clearly?
7) Do you have any other comments about PSHE lessons, positive or negative?

Appendix B – Pupil drawings obtained using Nearpod

Pupil response to the question, “Think about one other person in this class – which career do you think would suit them?”



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Pupil response to the question, “What does fulfilment mean to you?”

Pupil response to the question, “Which acts of kindness do you remember?”

Thank you for taking this survey!