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Online video and YouTube in education

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One of the biggest struggles I have faced as a teacher is engaging students in their learning in a productive manner. As someone who uses a lot of digital technology, the role of it in the classroom has always been of great interest to me. To this end, I started a YouTube channel ([Mr Pashler Science](#)) 3 years ago in order to try to use it as a method to engage students in revision.

Theory

Given the current situation, the role of digital distance learning has been put into a stark context. Live lessons on Teams have proven very useful tools. However, YouTube has some advantages for students:

- It is a platform that they are intimately familiar with and access regularly. According to Ofcom (Online Nation 2019), more than a third of time spent online is on a platform owned by google (YouTube) or Facebook (Instagram) with around 27 minutes per day spent on YouTube.
- The barrier to accessing content is very low. One issue I have faced with Teams amongst our students is lack of device to easily use Teams. Every device that has access to the internet has access to YouTube – including most TVs.
- Students respond positively to your presence on the platform – having a YouTube channel has been seen as a badge of honour (students will often ask me about my subscriber count).
- Students prefer “on-demand” sources of information. Presky (2004) describes a “twitch speed” generation – expecting instant responses and feedback. They expect to be in constant communication with their friends and so carry over the same expectations.

Experiences

The first content I produced were revision podcasts. Initially, these were designed to be released on Apple podcasts but I found a majority preferred to listen to them through YouTube. These generated a modest amount of views.

The most well received piece of content has been revision live streams. I performed these before every exam last year. At its peak, I had 200 concurrent viewers. Whilst some of these were not Westbourne students, most of them were. I have to acknowledge that this is before Teams has acquired widespread usage. The YouTube livestreams are automatically recorded and saved to the channel to be easily replayed – another advantage over the recording system of Teams.

More recently and inspired by the content from last year, I have begun 3 new types of videos: experiment at home videos, exam paper walkthroughs, and keyword explainers.

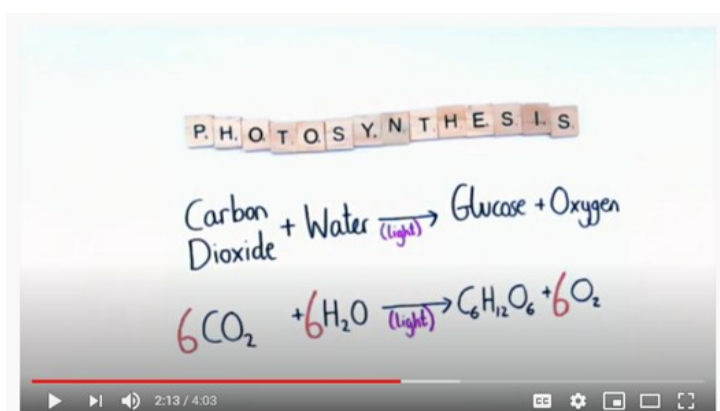
The experiment at home videos have been well received (and thank you to those of you who watched them and did them with your own kids!) with the first one having around 400 views and had some pupils sent me their own results!



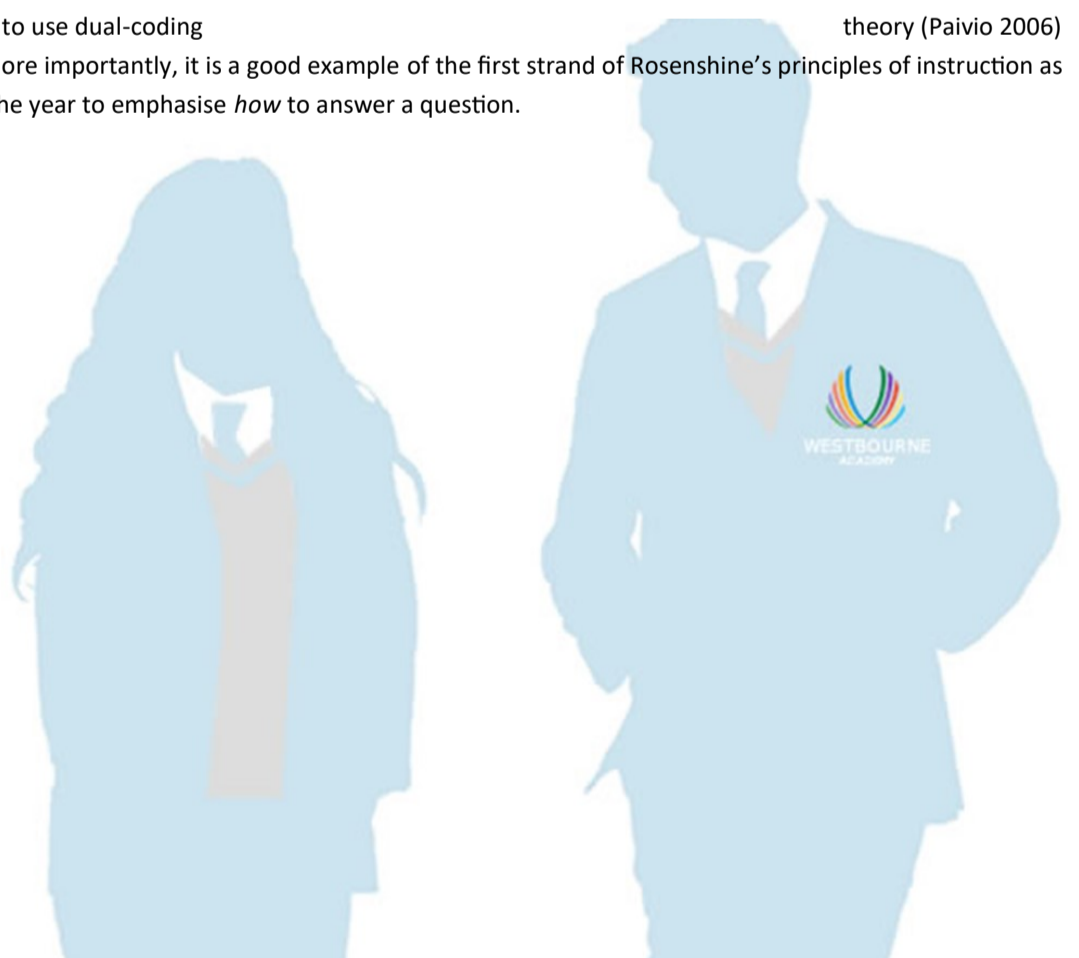
Experiments at home complete with early lockdown beard!

The exam walkthrough and talk-throughs are an investment for the future. My logic was to use dual-coding to ensure that students utilise both imagery and audio channels to retain information. More importantly, it is a good example of the first strand of Rosenshine’s principles of instruction as outlined by Sherrington (2019). I will be utilising them after PRE exams and throughout the year to emphasise *how* to answer a question.

The keyword explainers are meant to be a more digestible video of a short length to explain some of the key concepts around a keyword and increase scientific literacy – a key focus area for the department.



Keyword Explainer video



Method

The biggest barrier to making YouTube videos for myself was seeing professionally made videos and expecting perfection. My videos are nowhere near that level and amateurish. However, less equipment and skills are needed than I first thought. All my livestreams and walkthroughs are simply my phone placed in a clamp stand that we use in science. I later changed my phone for a cheap webcam. This then points to paper and pens – like a cheaper visualiser.



The cheap visualiser setup - apologies for borrowing the clamp stand!

For the videos that film an experiment, or myself, again, a modern smartphone has an excellent camera – there is no need for fancy equipment! Just make sure it's in landscape!

In terms of editing, I utilise iMovie (free on Mac) but Windows Movie Maker would suffice on Windows. Your phone will even have its own rudimentary editing software built in.

It is much simpler than it looks so don't be put off (I'm always happy to help and discuss any technical aspect). If you have an iPad you can film, edit and upload all in one device. Most videos need no editing and just need to be uploaded.

Issues and the future

The main issue with YouTube content is time – it does take extra time to make these. It gets much quicker as you get more experienced, however. Another counter argument is that there already exists lots of great educational content on YouTube, which is completely correct. Students do respond very well to the fact that it is *their teacher* on the screen and engagement is much greater – if anything just to see your bloopers. Furthermore, it is very rare to find a video that is precisely what you'd like and this enables you to completely tailor make the content.

One big area of development in student's use of technology is the advent of TikTok – users have reached 12 million in the UK early in the year (Ofcom 'Online Nation' 2020). I think there is an opportunity for super short video explainers or key facts that could utilise the small digestive videos that frequent TikTok and might be an area to develop.

References

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