'Chained and Engrained' – Breaking the PowerPoint Dependency Cycle in English Education

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Abstract

This paper investigates the over-dependency on PowerPoint within English education. Taking an action research approach with a group of first year students, the authors taught one unit of an initial teacher training programme employing a range of teaching strategies excluding PowerPoint.

Data was gathered using semi-structured interviews at the end of the taught unit. The findings suggest that teachers were aware of the limitations of PowerPoint as a teaching tool yet still chose to use it. The justification for this was that it provided structure for the lesson and was what students and in some cases, employers, had come to expect.

Despite being positive towards the teaching strategies employed in this research, the majority of participants were mindful of the need to meet the expectations of others and as a result were reluctant to change their approach.

Background to the study

'*Is the PowerPoint on the VLE*?' Is a recognisable phrase for many lecturers in Higher Education and one which is likely to prompt relief or annoyance depending on the individual's viewpoint. In this case, the VLE (Virtual Learning Environment) was a Blackboard-based tool used mostly as a repository for teaching materials and additional notes and articles. Accessing the VLE does suggest that students are taking some ownership of their learning, likewise, questions about the lesson notes make also be construed as '*I fully intend to switch off in this lesson so need to know where the notes are.*'

Despite research findings which suggest that presenting information using media such as PowerPoint is not the most effective way of enhancing learning, this remains the established orthodoxy for many lecturers in both Higher and Further Education (Bartsch and Cobern (2003), Brandl et al (2015)). Subsequently, the expectation of students in these settings is that a set of 'slides' which outline learning objectives and key content will be provided, normally in advance of the taught lesson. It could be argued that this expectation is further encouraged by the marketization of English education, a process which has reinforced the notion of the student as a 'customer' who is entitled to learning resources as part of the learning package (Mark 2013).

Enhancing learning is something we would certainly uphold in terms of student entitlement and there are many examples which could be provided to evidence the ways in which HEI's have attempted to do this. The purpose of this research is to investigate whether or not the regular (in some cases omnipresent) use of PowerPoint does indeed enhance the learning experience. Recent evidence suggests that this approach promotes a belief that learning may be achieved by collecting notes to be used in the required assessment and there is no real necessity to participate in lessons (Worthington and Levasseur 2015). In this way, students have become used to being passive vessels in lectures, safe in the knowledge that the

slides contain the information that they need to pass the relevant portion of learning (Hill et al, 2012). This approach has been further reinforced by previous learning experiences which had a focus on learning for achievement with exam results being the prime (and perhaps only) goal, a scenario which has been described as an 'exam factory' (Coffield and Williamson, 2011). It is not difficult to imagine how a culture driven by exam results develops when lecturers are also judged by achievement outcomes.

The purpose of this research was not to suggest that PowerPoint should not be used but to assess its effectiveness in enhancing learning within a Higher Education setting. Indeed there is plentiful evidence to suggest that when used effectively, interactively and perhaps sparingly it can be of great benefit to the learning process (Clark, 2010), especially when used in the context of a 'flipped classroom' that encourages interactivity (Roehl et al, 2013).

The basis of this research was the presupposition that a group of students, studying to become qualified teachers within the lifelong learning sector, had become used to a set style of teaching. This view of what teaching 'looked like' had been inculcated through their experiences prior to starting the course, but also during their first two units on the course. The students had become accustomed to receiving a set of PowerPoint slides each week and this had evolved into something of a comfort blanket, as well as the framework upon which they based their evidence for summative assessment. Their role was to ensure that they understood these slides rather than taking ownership of their learning. The demarcation of roles (Beynon (1974)) was such that the students were comfortable with this approach, yet the perceived danger was that they would become used to this style and see this as the one way to teach. Thus creating a rigidity to their teaching that would not necessarily help them in their future careers.

The Research Process
The students participating in this research were a group of year one teacher training students who were studying for either a Certificate in Education or a Professional Graduate Certificate in Education in Post Compulsory Education. The students were studying on a part time basis and all were engaged in teaching in addition to their studies. When questioned, all used PowerPoint extensively in their own teaching and they were able to list a wide range of perceived benefits to using this form of presentation. The most commonly occurring answer was that the slides provided structure for both the students and also themselves. A response which mirrored previous research highlighting the use of PowerPoint slides as a 'guide' for both students and staff (Bartsch and Cobern, 2003).

The teacher training course that the students are taking is modelled on the spiral curriculum (Bruner, 1960) whereby topics are revisited throughout the course in an increasing amount of depth. One advantage of this model is that students can engage in learning experiences knowing that topics will be revisited and examined in greater depth later in the course. Conversely, a disadvantage is that students may feel over confident when they believe they have already 'done' a topic , therefore have 'learnt' it without fully appreciating the benefits of revisiting a topic in order to generate a deeper level of understanding (Murray, 2016), in addition, as the first run through the topic was at a lower level of understanding, it can be difficult to ensure students are able to think more deeply about a topic when it is revisited.

This research was based on a unit of the course which was taught from January to April 2016. The first two units were taught using a standard, PowerPoint-centred approach and covered a general introduction and also the theories of teaching. The third unit centred on assessment and evaluation, topics that had been covered in the first unit, but only on a comparatively superficial level.

Students were told at the start of the unit that no PowerPoint slides would be used, instead a variety of teaching techniques would be utilised including discussion activities, student and teacher-led seminars, online resources and games. At the end of the unit students would be interviewed about their experiences and their feelings towards the teaching techniques used. They were told that they would also be asked about the implications for their own teaching and whether they would be changing their own teaching because of the research.

It is acknowledged that there are a number of limitations to the process. Firstly the authors might well be seen as insider researchers. The definition of insider research, '*that which is conducted within a social*

group, organization or culture of which the researcher is also a member' (Greene 2014: 2), is applicable to this research as one of the researchers is the course co-ordinator for the programme. This means that there is the potential for bias to occur. To help prevent this, the course co-ordinator did not conduct the final interviews.

In total seven students were interviewed (out of a total of ten who would normally attend the class), these consisted of 2 males and 5 females. Two out of the seven worked in the compulsory sector, one in an HE setting and another in the prison service. The remaining three worked within a military training base.

Findings
'The Way We Do Things'
The concept of a safe environment in an educational context is well established (Hutchinson, 2003) and the data in this research suggests this was also true for the participants in this research who are in turn teachers and lecturers. The predominant response when they were asked about the research was that of concern about how the lesson was going to be structured and how that would impact on their own learning. In part this was due to earlier experience of the course which had generated a set of 'norms' in relation to how classes would be structured. It may also have been based on decisions they had made about how to structure their own teaching, which in turn may be influenced by their own students' expectations. Ginette's response was typical; a competent lecturer who has completed a degree, successfully passed the first two units on the course and appears outwardly confident, she suggested that the different approach to the classes was taking her out of her comfort zone.

> It was a really strange feeling. When you told us that this is what you were doing I was really worried, I thought what would I be able to take away without a PowerPoint. I was not happy.

The idea that the PowerPoint would allow her to take away the key points is an interesting one. Returning to Worthington and Levasseur (2015), it seems to be that she saw the role of the teacher as one of letting her know what was important, and her role was as someone who would note these key points. Instead, she was having to take more responsibility in ensuring she took away key information from the class. A fact acknowledged by her follow up answer:

> Although I didn't like it at the start, it challenged me far more, I had to work harder and I got a lot out of it.

The interview responses suggested that most of the participants were heavily influenced by the teaching cultures within their own organisations and this had a significant impact on whether or not they were willing to experiment with new approaches. For example, Gareth works at a military training base and teaches on a variety of courses to students who are serving members of the armed forces. Although he was very positive about the benefits of removing the use of PowerPoint from lessons, his answers revealed that the courses he teaches have been structured in a way which makes the use of alternative strategies extremely difficult. He is required to use a PowerPoint for each lesson and any changes to the lesson must be approved in advance by a separate department. In addition to this static approach to lesson planning, the classrooms he uses are also organised in such a way that it encourages him to use a presentation based method of teaching:

> To be honest I nearly always use PowerPoint, not because I like it but because our building was designed with this in mind. There is a projector and a screen at the front and thirty five desks all facing forward. I tried to move them once but they were all bolted to the floor so groupwork is difficult. Our bosses want us to deliver in this manner.

At a superficial level it does appear that Gareth's teaching is controlled by a number of outside factors which he did justify by explaining the issues of training within a military environment. Although valid arguments were provided in relation to consistency between lessons, the 'high risk' nature of some of the material being covered and the high turnover of military instructors, the lack of autonomy as a teacher was evident. Gareth's use of the word 'delivered' is also interesting. The implication in the wording is that he sees himself as a transmitter rather than a teacher, a suggestion backed up by the fact that he does

not have control over the classroom or the material. This reduction in authority has been identified by Pring (2015) as being closely connected to the achievement of key performance indicators.

Owen, another teacher within the armed forces, Owen, talked about the consequences of deviating from what students (and senior managers) expected in relation to lesson structure and outcomes. These ranged from a reminder from line managers of the need for consistency of approach and the expectation that all instructors use the same slides, to a negative response from students when they were not provided with PowerPoint slides:

> The need for PowerPoint slides is engrained in people, if you do a lesson without them, they demand them and they expect them. They get annoyed when they are not there. I know this is wrong but it is a fact.

These responses suggest that the decision not to use PowerPoint has altered the dynamic between teacher and students. Whilst Gareth's and others experiences have cast them in the role of deliverer of information, Ginette's comments suggest that the removal of the safety blanket that PowerPoint sometimes becomes, does not always detrimentally affect the learning of students.

Supporting the Lesson, not Being the Lesson
It can be very easy to label PowerPoint as something that is negative and to be avoided at all costs. Tufte (2003) produced a list of reasons why PowerPoint should be avoided at all costs. Prime amongst his list was the way in which it encouraged a relentlessly sequential approach to any lesson. The slides moved from point to point in a linear fashion and allowed for little deviation as well as little discussion as ideas are distilled into around 80 words per slide. There have been many criticisms of Tufte's polemic (Doumont, 2005, Adams, 2006) and the responses from participants in this research echo many of these. Amongst other interviewees there was a consensus that the use of PowerPoint provided a structure for lessons and that was helpful to both students and teachers. Sandra's response explained the dilemma many teachers face. She teaches at both a further education college and also a university and uses the medium extensively:

> It is useful for giving structure to the lesson. It gives clear instructions to students about what should happen. I teach a lot of material that is legislation and statistical based. It is quite intense and it is best to show it visually rather than just talk about it.

This description of how the slides provide structure seemed to resonate with other respondents. Owen described how PowerPoint 'gives structure', the response was reiterated by Ginette, 'without it, I find it difficult to structure things'. The most revealing explanation came from Diana, a lecturer who teaches students who teaches students in a pupil referral unit:

> I use it as a crutch for my teaching, it is there as a support when I don't know what I am doing.

Diana went on to describe how it also helped students who needed to be kept 'on track' as it provided a step by step approach to the lesson. In contrast to Tufte's (2003) criticism, the sequential nature of a PowerPoint presentation was viewed as beneficial, rather than limiting as it provided a focal point:

> It is a visual aid and useful for visual learners, it gives the students structure and it gives them something to focus on.

In many ways the key word here is 'aid'. Diana, when asked to describe PowerPoint in either one word or two chose 'boring' and 'predictable' but explained that she still used it as it was the best tool for this group of learners, whilst recognising that other learners might respond more positively to other resources.

A consistent finding within the interviews was the way in which the respondents justified their use of PowerPoint in terms of lesson structure. They were aware of the tendency towards a formulaic approach if this were adopted, but reluctant to change because of a fear of losing structure. It seemed that most were willing to try different strategies but concerned about the loss of a 'tried and trusted' methods. This

is illustrated by Beatrice, a competent teacher who is working in a similar, controlled environment to Gareth:

> I've tried to move away from PowerPoint but not all the time, it still has its place…..I have used flipcharts, maps, lots of kinaesthetic activities, it worked, they liked the interaction but PowerPoint still has its place.

The responses suggest that, despite being aware of its limitations, the use of PowerPoint seems to be the default option for many of the participants. Anecdotally, this is reinforced by the researchers who faced their own challenges in teaching a completely 'PowerPoint-free' unit. Owen's words sum this up presciently when asked about alternatives to PowerPoint:

> It really is an easy option, this is not an excuse but it is easy. Previous lessons have been on PowerPoint so it is easier to pick them up, change anything and run with them.

Conversely, the recognition of the usefulness and 'ease' created by teaching through PowerPoint, was not prominent when participants were asked to sum up their views using one or two words. With the exception of one respondent who chose the words 'useful' and 'stimulating', the other responses painted a slightly different picture by describing the resource as:

> 'Normal'
> 'Inflexible'
> 'Boring'

And perhaps more evocatively:

> 'Handcuffed',
> 'Engrained'.

Changing the Paradigm

The final question asked of respondents was about what they would take from the research and use in their own teaching. Given that the achievement data for this unit was statistically similar to previous units, it is clear that the academic work has not suffered. Student satisfaction with the unit was measured using the standard unit survey and this showed a slight increase in overall satisfaction (5%).

Responses to the question about whether they would take anything from the research did vary. Owen's was the most enthusiastic when asked about whether he had learnt anything from the experience:

> Yes, yes, yes, you don't need to use it!

Whilst the most measured came from Ginette:

> I might try it, my learners are so used to it though, they expect it but I want to get away from it.

This response reinforces the earlier descriptions of the engrained predominance of PowerPoint, suggesting being chained to the approach as a result of the expectation of students (Mark 2013). Despite Ginette being one of the most enthusiastic about the research, she was markedly reluctant to take a risk as a comparatively new teacher. This was reinforced by the responses of others who were very aware of the need to ensure their students achieved to 'keep them on track to pass'. The repetition of this phrase in all the interviews illustrates the predominance of the 'exam factory' (Coffield and Williamson, 2011).

In some cases the reluctance to make any changes could be traced back to organisational norms, in other cases there are more pragmatic reasons such as the layout of the room or the specific educational needs of the students. However, the most common response was the fear of making a change that might not work, when tried and tested methods could be employed. This is clearly articulated by Sandra, who, on the surface was very enthusiastic about making changes to her teaching .... but ... with a caveat:

I have done! I think it's great to change it up – I used it in my last lesson, I did the same with my last group, it got them interacting and I got them using a mind map. It worked! Half liked it and the other half though preferred the taught version so I might need to do that.

When asked for her overall response to the use of PowerPoint as a teaching tool, Sandra's choice of word was 'inflexible'. This suggests at best ambivalence, yet her explanation about the alternative strategies she had tried indicates an unwillingness to adopt a different approach as some of her students had indicated a preference for being 'taught' through the use of a presentation tool.

Final Thoughts – Implications for the Future
It is very easy to simplify the arguments regarding PowerPoint into one that merely decides whether it is a good thing or a bad thing. This has not been the purpose of this research and indeed the findings show that decisions about the use of PowerPoint are more nuanced than whether or not it is an effective teaching tool.

The educational establishment within which all participants (including the authors) work is of vital importance when understanding the use of PowerPoint as a tool. Whilst some interviewees had almost no choice at all as to the teaching methods used, most had a degree of autonomy and actively chose to use it. In part that appears to have been related to their own previous frames of reference and experiences of education (Mezirow, 1997) but it also relates to the changing relationship between lecturer and students detailed by Mark (2013).

There is great pressure on educators in all phases of English education to ensure that students are put at the centre of the lesson and are given every chance to pass the summative assessment. Students see presentation slides as part of this process (Worthington and Levasseur, 2015) and when they are not present they are likely to query their absence. In short PowerPoint is a highly effective way of showing that you are passing on the relevant information to students to enable them to pass the assessment. In this sense it becomes a form of evidence of a teacher's diligence. In a world dominated by the achievement of key performance indicators, this is likely to breed a conservatism not present in a less data driven culture.

It is also clear that PowerPoint is of some benefit to students and teachers in providing structure in lessons a finding which reflects previous research (Bartsch and Cobern, 2003). Other methods, even those designed to support lesson structure such as lesson plans, were only mentioned in passing and were not valued to the same extent. This is despite the documented research (Bartsch and Cobern, (2003), Brandl et al (2015)) that the use of PowerPoint presentations are not the most effective way of ensuring that learning takes place.

Whilst PowerPoint undoubtedly has a place in education, its ubiquity should be challenged. Many teachers appear reluctant to remove the crutch provided by a PowerPoint presentation even though they are well aware of its limitations. Despite this finding, the research has provided some cause for optimism as all the respondents expressed an interest in trying out new approaches. As outlined by Diana, lessons without PowerPoint are not necessarily something to be feared:

It made me not afraid not to use PowerPoint

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Longitudinal Investigation of Medical Student Perceptions of a Video-based Guided Study Resource used to Facilitate an Eight Week Module in Medicine

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Abstract:

We use an action research approach to evaluate three successive cohorts of medical student perceptions of using a multi-faceted video-based guided study resource which provides academic (skills-based), social (motivation-based) and professional (clinical-based) interventions aimed at facilitating and enriching learning across an eight week module in the second year of the MBChB medical degree. Our findings show that whilst students value these video resources both as a revision tool and an aid to learning during the semester, they have specific critiques about several areas which would improve the project. We interpret our data to evidence a tangible beneficial argument for the use video-based learning objects to support student learning that is reliably reaffirmed by our longitudinal data.

Introduction:

Using video technology to aid medical education is an idea that has been around for a long time and there are now a range of video formats available to learners; from professional commercial products to low