The Engaged Classroom: Powerpoint Free[*]

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Abstract

Student passivity is a problem in higher education classrooms. This study contests that much of it may be caused by the presentation style in lectures. The ubiquitous use of PowerPoint has negatively affected student engagement in higher education classrooms. Accordingly, research was conducted into the removal of PowerPoint as a transmission medium. The location was in two undergraduate modules at an Irish university. A total of 136 students were involved over a 12-week period. Data following the interventions were collected the survey method. Results showed a positive response to the removal of PowerPoint resulting in increased engagement by students.

Keywords: PowerPoint, Engagement, Students, Higher Education, Passivity.

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1. Introduction

Student engagement is recognised as a 'core ethos' to the success of our Higher Educational Institutions (HEA & IUA, 2017)with focus on students' engagement with their learning and their learning environments. However, despite this realisation, the existence of student passivity at higher education has led to a lack of student engagement in the classroom. Passive learning implies that students sit in a classroom without much engagement with the process, listening to lecturers, taking notes and memorizing these notes for the final examination. A lack of student engagement, furthermore, has become prevalent across University classrooms with Cutler (2007) acknowledging this 'creeping passivity' and highlighting a real concern that students may be 'coming to believe that they are not intellectually responsible for themselves' (Cutler, 2007). This creates challenges not only for the student but also for the educators. We seek to find attribution for this problem in the student experience, one in which students encounter their education principally through transmissivity in the lecture system.

1.1   Lecture system and assessment (process).

In the lecture system, PowerPoint has become ubiquitous as a presentation tool (Penciner, 2013). There is, however, controversy regarding its use. Criticisms range from charges that it reduces the analytical quality of presentations to a claim that it inhibits presenter–audience interaction (Driessnack, 2005). Some researchers have suggested that the conflict may be resolved by its "intelligent use" applying more thought, variation and creativity to the use of slides for learning and citing student preference as justification for retaining and improving the use of the tool (Mayer & Moreno, 2003).

1.2   The use of Powerpoint.

Despite its popularity, PowerPoint has been roundly criticised. Its detractors describe how it affects the nature of the learning interaction and teacher and student performance. Tufte (2003) describes the deleterious effects the tool has on the analytical quality of presentations and declares how harmful PowerPoint is to spatial reasoning and graphical communication. Adams (2006) delivers a comprehensive and thoughtful piece on the silent, non-conscious effects of PowerPoint on unsuspecting lecturers. She argues that the tool subtly affects the practice of the unwary, that even the most reflective of lecturers may be unaware of being seduced into the world of the "pitch" and ultimately a form of positivist epistemology that

conflates teacher presentation with learning.

PowerPoint, initially, was not designed for teaching purposes but for business presentations. On examining the default templates in PowerPoint, it is inevitable that usage is high due to its purposeful design reflecting the hierarchical organisational structure in the world of business. In that world, functionaries summarise data in bullet point format and present to their seniors for decision. Knowledge, therefore, is to be apprehended, distilled in essence, and delivered quickly and in précis form to a passive audience using PowerPoint slides. The elements of the PowerPoint tool, which make it so apposite for the summary and the briefing note, seem ill-suited to the needs of the academic teacher and learner. It is understandable that social constructivist lecturers problematize the use of PowerPoint in teaching situations. The tool, in its use as a presentation medium, emphasises roles for both student and teacher, which are seemingly incompatible with constructivist pedagogy.

There are other alternatives to PowerPoint, one being Padlet which this research proposes to experiment with in order to establish whether this offers a potential solution to the passive role of the student that PowerPoint is perceived to have facilitated (Adams, 2006).

1.3   Purpose of this research.

Passivity and a lack of engagement is a problem in higher education and must be addressed (Cutler, 2007). This paper identifies transmissivity in the lecture system as a significant issue. It is vital that we, as educators, should examine how we may employ a constructivist pedagogy in modern university classrooms. It will not be without challenges. Adams (2006) discusses the habits of mind as 'that which we as humans find ourselves doing. We become accustomed, habituated to things, we get used to them over time'. Students entering third level education have become accustomed to modes of teaching such as the delivery of lecture notes by PowerPoint and the testing of knowledge through summative assessment or a formal examination. This mode of teaching and learning becomes so engrained in the student's mindset with a focus on a good grade performance / degree classification (Kuh, 2001). However, any changes should lead to both good engagement and good grades and according to Chaves (2006), student engagement is linked to academic success.

Based on this review of relevant literature, this research, therefore, challenges the trend of the 'creeping passivity' by introducing a more active learning approach. In doing so, this study seeks to eschew PowerPoint as a transmission medium. Accordingly, this research is guided by the following research questions:

RQ1 - Does the PowerPoint-free classroom increase student engagement?

RQ2 - Does the use of a PowerPoint substitute, i.e. Padlet, increase student engagement and learning in the classroom?

Classroom technology, such as student response systems or electronic voting systems has been used to engage students particularly in larger class size settings but ultimately to augment or enhance student learning (Draper & Brown, 2004; Latessa & Mouw, 2005). This initiative advances this notion, and utilizes technology in the form of a proprietary file sharing tool, Padlet, to engage students and to replace the over-reliance on PowerPoint.

2. Method

2.1 Context.

The sample population comprises final year undergraduate learners pursuing a business degree in two modules, MN321, Change Management and Organisation Development and MN317, Negotiation Skills and Conflict Management, conducted at a third level Irish Institution. There were approximately 136 registered students between the two modules.The breakdown between male and female was roughly equal with 48% being female. The majority of the students were indigenous Irish with 18% of the group coming from other countries studying in Maynooth on Erasmus or similar programmes. Both modules were 5 ECTS credit events running for 12 weeks in Semester Two 2015/2016. Each class ran for the duration of 2 hours each week. The consistency of delivery was ensured as both courses were conducted by the same tutor (one of the co-authors). Both modules were taught without the use of PowerPoint by lecturer or students.

2.2 Design and Participants.

In both modules, lecturer and students used a substitute presentation system - the proprietary file sharing system, Padlet, to present work. Padlet was adopted by students to capture their thoughts and ideas on a topic of choice and presented back to the lecturer and students each week in the lecture. The Padlet visual could be likened to an online notepad. In the classroom the lecturer begins by sharing the link to the Padlet web page with students and projecting the Padlet work page to the main screen. Using tablets and working in groups, students may use the Padlet to upload their ideas and artifacts. The Padlet page becomes similar to a giant, common, electronic flip chart page. The lecturer can then control which images are prioritized

and discuss with students their work without them having to leave their seats in class.

In preparation for the gathering of student reactions to the entire process, two focus groups were conducted, mid semester, to understand what was going on as students were experiencing this new form of teaching and learning. Two focus groups were carried out with 4/5 persons, consisting of both male and female students taking either one or both of the aforementioned modules. Questions generated for the focus group derived from literature on student engagement (Dancer & Kamvounias, 2005; Kuh, 2001; Savoy, Proctor, & Salvendy, 2008). Data was analysed using a thematic coding (Braun & Clarke, 2006) which complemented the rich discussion of the students. These focus group findings generated further learning issues which assisted in the preparation of a survey at the end of the module designed to collect perceptions from the wider group.

The survey was designed immediately following the focus group and was administered using the proprietary software tool, Survey Monkey. This was done at the end of the semester with an email notification about the survey being released to students to prompt completion. In total surveys were issued to 136 students, with 39 students completing. This is a response rate of 30%. The survey was designed to be applicable to all students whether they followed either or both of the modules in question. The sampling technique was aimed at students in final year who were undertaking either module, therefore the sampling was purposive (Bryman & Bell, 2007).

2.3   Ethics.

Ethical approval was sought and obtained with all students' who participated in both the focus groups and or the survey were made aware of the voluntary nature of their participation and that failure to complete would not affect their module grade in any way. In addition, each student was informed of the confidentiality of participation and that all data collected were for research purposes only. They were informed they could opt out at any time and pass on any question or topic (Bryman & Bell, 2007).

3.   Findings

3.1   Focus groups

The focus groups were conducted to understand current learning and teaching experiences. There was an acute awareness by students that they had become 'normalized' to learning in certain ways due to their previous educational experience at primary and secondary level. They did state the 'culture shock' when this normalized learning was tested in any way. This was evident when students discussed their expectations within the lecture system and assessment process. It was clear from discussions that the provision of PowerPoint slides afforded students the ability to 'switch off', take less notes and to not listen as efficiently as they otherwise might do. However, interestingly the majority of participants acknowledged the importance and role of engagement in the learning experience. They noted the more enjoyable classroom experience, improved attendance and ultimately engagement led to perceived higher marks. Please see Table 1.0 overleaf for overview of Focus Group findings.

Table 1: Summary of focus group findings.

Normalised to learning	Preconditioned by previous educational experience.	*"we have been conditioned to learn that way for like the whole, 18 to 20 years, so it's a bit hard to change that...'*
	Preconditioned by previous educational experience.	*"Yeah, you come from secondary school, you're not taught to think about learning, you're just, read this and just vomit on to another page, and that's what first and second year was as well".*
	Change in learning.	*"And then we're now put into a completely, total different scenario where we're now, now we have to think how we're going about this and then it's just, it's different but you adapt to it pretty quickly but sometimes I would define it as a culture shock".*
Attitudes to learning	Expectations.	*"The delivery of information like the lectures are chronological, they're uploaded the week before or whatever and the information is then, there's no new information in class, well to the extent there's no surprises and it's easy to follow, it's just simple and organized".*
	Approach to learning.	*"I like it a lot, when PowerPoint's up I feel like it's a lazy man's game like you just sit back and say, aw just going to copy this down at home like, do you know what I mean, and I can do them neater at home... whereas PowerPoint's kind of you tend to zone out a bit more and might not pick up anything as easy like".*
	Disengagement.	*"Yeah, it does, it's your comfort blanket, you're like, oh it's grand, I've got my PowerPoint, I don't really need to listen today".*
Attitudes to engagement	Enhanced learning experience.	*"Engagement as well is a big thing, I mean especially like, say for, some lecturers we have they're really engaging so they make the learning experience easier for students".*
	Enhanced grades and attendance.	*"You see your grades go high as well, with the more engaged lecturers and you see the attendance higher as well".*

3.2   Survey questions.

Based on this initial focus group, questions were formulated, some in the format of statements, to assist in the survey of all students attending one or two of the discussed modules. The first, addressed engagement and the absence of PowerPoint.
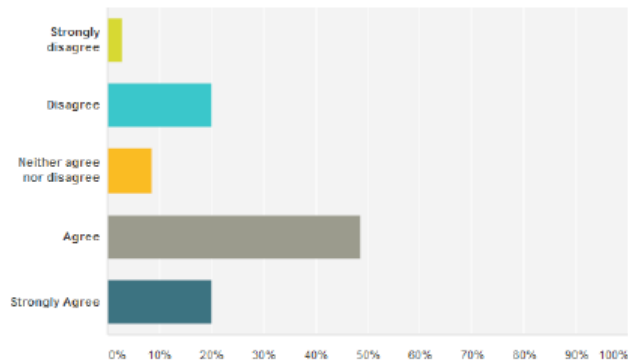

Figure 1 Survey Question: Does peer and collaborative assessment boost your engagement in the classroom?

Over 50% of students agreed that engagement was enhanced however, over 27%, disagreed with this suggesting an affinity with PowerPoint existed for some. Interestingly 20% remained unsure with respect to their engagement without the tool.

The research also sought to enquire about the link between the use of Padlet and student learning and engagement in the classroom. This is represented in Figure 2.
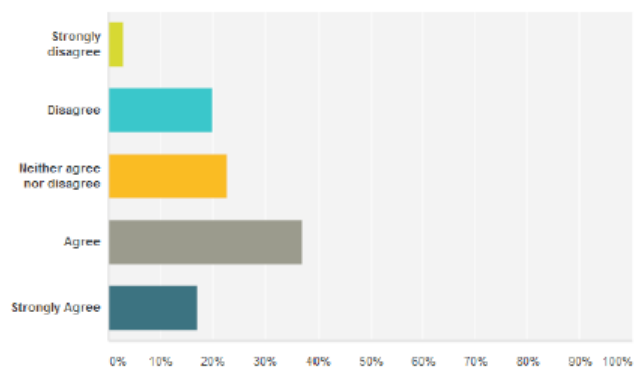

Figure 2 Survey Question: Does peer and collaborative assessment increase your motivation to learn?

This is an emphatic result for the correlation between Padlet, learning and engagement in the classroom with over 70% in agreement.

The research also aimed to understand the comparison between the module in question and other modules these students were taking. The students were asked how this level of engagement (in either module undertaken) compares with that of other modules. In this, almost 63% voted higher, with just under 26% lower, see Figure 3. This is an interesting comparison to the other modules in the final year for these students which were delivered using the conventional means of PowerPoint presentation.
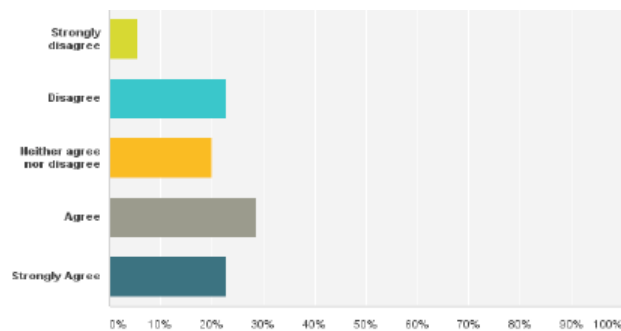

Figure 3 Survey Question: Does the absence of PowerPoint increase your engagement in the classroom?

The fourth question in Figure 4 queried the link between students' learning and engagement seeking to establish if such a link was experienced by students.
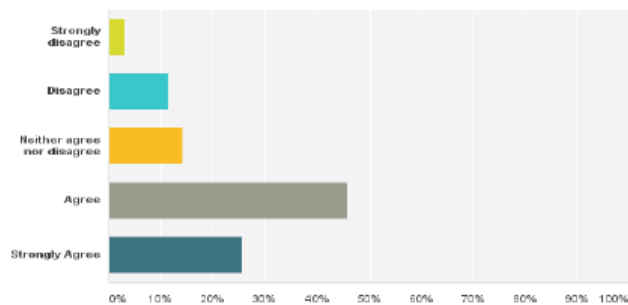

Figure 4 Survey Question: Does the use of Padlet increase your learning and engagement in the classroom?

The next question sought to make a comparison between the module in question and other modules these students were taking. The students were asked how this level of engagement (in either module undertaken) compares with that of other modules. In this, 63% voted higher, with 26% lower, see Figure 5.
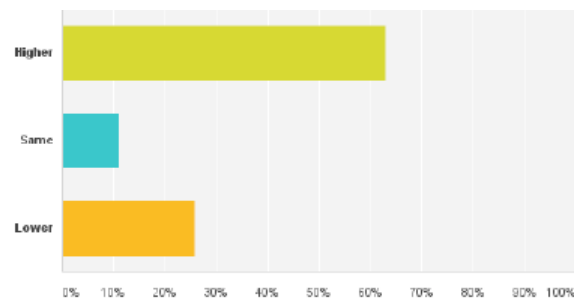
Figure 5 Survey Question: How does this level of engagement compare with your other modules?

The final question was an open question asking students their opinions on what they believe causes passivity in undergraduate classrooms. The central themes emerging around PowerPoint design/ format, lack of clarity of module and examinations, relevance of content to industry / student and or lecturer's enthusiasm and communication style with students. Suggestions also emerged to address passivity and these included student presentations and the use of technology, such as Padlet, in this research study, "P*adlet really helped curb passivity in the classroom*".

4. Discussion.

This study has posed two research questions:

RQ1 - Does the PowerPoint- free classroom increase student engagement?

RQ2 - Does the use of a PowerPoint substitute, i.e. Padlet, increase student engagement and learning in the classroom?

It is apparent from the research findings that passivity is an issue for students at third level (Sidelinger, 2008). Reasons offered in the literature include, a lack of clarity (Titsworth, 2004) lack of lecturer enthusiasm , and ready-made lecture notes that fail to stimulate students. These are just some examples of how lecturers contribute to passivity (Cutler, 2007). Active learning is believed to involve interpersonal interaction between students and others (Chi, 2009) with student control, autonomy, self-regulation and power relationships often seen as important.

The question of the PowerPoint- free classroom reducing passivity received a positive response – 50% of participants agreeing, 20% could neither agree nor disagree with the remainder disagreeing. It is clear from this research that some students have become conditioned if not reliant on this form of lecture delivery to the extent that it was described as 'a comfort blanket' and presents 'no surprises' to students. The findings support Adams' (2006) belief that PowerPoint facilitates 'a clear, concise and complete lecture from start to finish' but indicate also that students are using the clearly structured lecture notes as preparation for examinations at a later stage and are 'zoning out' in the classroom as a result of not seeing the immediate need to learn (Tufte, 2003). Also, worryingly it was the lecturer's delivery of the PowerPoint that appeared to disengage students, with students citing lecturers' communication of material as 'not entertaining', 'boring' or 'regurgitation' as reasons for students switching off. Again, this refers to the belief that "while students are ultimately responsible for their own learning and level of engagement, effective student engagement also depends on institutional conditions, policies, and culture that enable and encourage students to get involved" (O'Brien, 2016). It is therefore important that the lecturer is responsible for making sure that the environment is right and encourages learning using a variety of teaching methods (Baer, 1997).

The role of technology and the use of Padlet, as a substitute, in this research were perceived by participants as positive, one participant commenting that "Padlet really helped curb passivity in the classroom". The technology seemed to be successful as it allowed students an interactive and powerful alternative to PowerPoint. The affordances of Padlet contribute to dynamic presentations by students and faculty including video, audio, still images and material generated during the presentation (Ellis, 2015). It also allowed for a persistent record of all presentations made each week on one single web page, thus making it easier for all students to revise the work produced each week from a single site.

4.1   Limitations and future research.

The sample is a convenience sample and not fully representative of all undergraduate business students or the student population in general. There is also the limitation of being located in Ireland. Future studies should extend the research to other settings. Comparisons of examination results with non-participating classes may also yield interesting results. The population were in their final year and it was evident that they were heavily preoccupied with their 'end result', which did taint the discussion of the early focus group discussions. Therefore, future research should focus on different year groups at undergraduate level (Year

1 and Year 2) and or possibly consider the impact this research might have on online/ off-campus students. Changes to the normal class procedure with these modules also included the use of collaborative peer evaluation and this may have had an effect on student perceptions. Further research could also examine why these approaches seem to have positive effects on student engagement.

In terms of technology, this approach, (using Padlet as a substitute for PowerPoint) etc. requires Wi-Fi in classrooms, Survey Monkey, or similar, availability at the university, and students' access to smartphones and similar devices. Increases in mobile technology and internet connectivity speeds are key enablers for the technology to succeed. The research suggests that in order for changes such as this to succeed, students must feel a part of the decision-making process. One other aspect that was not addressed in this research but emerged as a critical factor in eradicating passivity and building engagement was that of the lecturer. Future research should provide an opportunity for lecturer's voice in providing feedback in the engagement process going forward.

4.2 Conclusion.

The purpose of this research study was to tackle the issue of creeping passivity (Cutler, 2007) in our classroom through the disposal of the ubiquitous PowerPoint tool. The research demonstrated a higher level of cognitive and behavioural engagement through the passage of the modules concerned. Further work is required in addressing the joint responsibility of lecturer and student in the facilitation of a learning environment. As Pearse, 100 years ago, stated that, 'The teacher should not bring his pupil a set of ready-made opinions or a stock of information, but so infectious an enthusiasm as shall kindle new enthusiasm' (Nolan, 2016). This research suggests that the extensive use of PowerPoint in our higher education classes should be again examined within a spirit of inclusion and engagement of students.

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