

A Case Study of Stakeholder Perspectives on a Flipped Classroom Initiative Using an Organizational Routines Lens

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Abstract

This case study of a flipped classroom initiative considers multiple stakeholder perspectives on themes of pedagogy, digitization, and organizational issues. We found that all the stakeholders were enthusiastic about flipped classrooms in principle. However, at a detailed level, there were tensions and differences between the groups with regard to the extent to which they preferred the new initiative or the status quo. The underlying explanation for these differences was explained using organizational practice theory. Stakeholders were more inclined to prefer the status quo when practices that were important to their performance were disrupted. We conclude that resistance associated with tensions arising from disruptions to organizational practices should not be dismissed as “change resistance” but accepted as an opportunity to develop new routines

Keywords (flipped classrooms, case study, organizational practices, stakeholders)

1. Introduction

The 'Millennial Student', born between 1982 and 2002, has been showing a decrease in attention to the traditional style of university teaching, with predictions of the death of the lecture. One of the solutions proposed is the 'Flipped Classroom'. This involves taking the tasks that have traditionally taken place inside the classroom to outside the classroom, and vice versa Lage, Platt and Treglia (2000). The benefits claimed include greater student engagement (Roehl, Reddy and Shannon, 2013), and potentially, more use of the technology tools and environments preferred by millennials, and more flexible management of student time.

While flipped classrooms are being considered a solution to the increasing problem of students not being engaged in the lecture setting (Roehl, Reddy and Shannon, 2013), very little research has looked at the benefits and challenges of flipped classrooms beyond the experiences of student. This case study will explore the tensions, benefits and challenges when implementing flipped classrooms from the perspective of four different stakeholders of a university course: students, teachers, administrators and the organisational level. Thus, the research question is as follows: *In the Flipped Classroom, what tensions exist between the perspectives of students, staff, university administration, and academic line management?*

In the rest of the paper, we offer a literature review which contextualizes the flipped classroom and other salient aspects of the case study. This is followed by a description of the case, the methodology, results, discussion and conclusion. Please note, IS and technology have been deemphasized in this discussion in order to build the flipped classroom model. The model can be adapted to suit organizational needs and requirements.

2. Literature Review

2.1. Stakeholder Theory

The Stakeholder Perspective is a framework that encapsulates many different viewpoints, and allows for a comparison of the different conflicts that each group has with each other in the decision making of a university. The stakeholder is any group or individual who can, or is, affected by the achievement of the organisations objectives (Mitchell, Agle & Wood, 1997). Stakeholders can be analysed from three perspectives: power, legitimacy, and urgency. Power is defined as the probability that one actor within a social relationship would be in a position to carry out his own will despite resistance. Legitimacy is a generalized perception or assumption that the actions of an entity are desirable, proper or appropriate within some socially constructed system of norms, values, beliefs, and definitions. Urgency is the degree to which stakeholder claims call for immediate action (Mitchell et al., 1997). These dimensions allow the categorization of stakeholder groups into eight categories (Figure 1).



Figure 1: Stakeholder Typology (Mitchell et al., 1997).

The stakeholder perspective provides an interesting viewpoint to be able to consider the different stakeholders of a flipped classroom course. The flipped classroom literature at present places particular emphasis on two stakeholders of a flipped classroom: teachers and students. However, as suggested by Chickering and Gamson (1987) the administrator, or a school administrator who works outside of the central university, can play a crucial role in a course. A fourth stakeholder to be considered is the Academic Line Management, represented by a senior staff member, such as the head of a school. Line Management are important because they determine the strategic and long-range planning of a university.

2.2. The Pedagogy of Flipped Classrooms

Bishop and Verleger (2013) believe there is a significant need for the flipped classrooms to increase student engagement. Roehl, Reddy and Shannon (2013) believe that the modern, or millennial, student desire learning environments which support group learning, multi-tasking, and deeper integration of social aspects of learning. The traditional lecture appears to have made students less involved in their learning. There is a perceived need to move beyond the current form of content delivery, where the teacher is treated as the 'Sage on the Stage': pouring their knowledge into students who are assumed to have empty brains and assume they are passive learners (King, 1993). The 'Guide on the Side' is the metaphor used in flipped classrooms, where the teacher does not lecture the class, but instead works with students, in groups or individually, to explore content. This form of learning encourages active learning, where the student is engaged in the learning process (Bishop & Verleger, 2013), allowing for students to engage in "deep learning". With deep learning, students actively think about what they are learning through interactions with other students and thinking actively about what they are learning. This is opposed to "surface learning", where students are just memorising concepts (Roehl et al., 2013), which is perceived as a likely outcome of passively consuming lecture content. The general notion of student engagement in flipped classrooms has been quite extensively studied (Abeysekera and Dawson, 2015) and the weight of evidence is that millennial students prefer and are more engaged in flipped classroom environments supported by technology.

Given that there are many models for flipped classrooms, we argue that "flipping" by itself does not increase engagement. Delivery methods for flipped classrooms vary, with some including "full-length" video lectures, while other favour shorter "mini-lectures". A variety of other approaches and technology tools may optionally be used. We examine two specific approaches that were used in our case context, mini-lectures and web curation tools.

2.2.1. Digitized Mini-lectures

Mini-lectures have been found to maintain attention and reduce distraction (Gilboy et al, 2014). Flexibility in learning is crucial for students, who are increasingly working while studying, and need new modes of teaching to allow students to continue being engaged (Roehl et al., 2013). However, the extent to which flipped classrooms really provide beneficial flexibility is debated. Strayer (2012) demonstrated the negative aspects of experimentation on students and found that many students did not adjust well to the flipped classroom. However, Gilboy et al. (2014) found the opposite, finding that students felt they could work at their own pace with mini-lectures. Some researchers have found that outlining the expectations to students in an introductory lecture on course workload expectations and learning strategies for flipped classroom courses can improve students' success (Roehl et al., 2013).

2.2.2. Storify and web curation tools

One method of engaging students and academic staff, but is through collaborative learning tools, such as web curation/social bookmarking tools (Beach, 2012). Social bookmarking allows for individuals to bookmark websites they find relevant, which can be tagged with keywords, allowing users to define sources in one, or multiple, categories they find relevant for a source (Millen, Feinberg & Kerr, 2006). This allows for knowledge to be built collaboratively between academic staff, students and researchers, allowing for readings to be organised, communicated and updated dynamically between people (Estellés & del Moral, 2010). The group based work of flipped classrooms and integration of technology, and the cognitive load on students to decide on tags (Farwell & Waters, 201) mean the use of social bookmarking potentially has significant impacts on facilitating active learning in students in flipped classrooms, both inside and outside of the classroom. This provides an opportunity to facilitate active learning beyond the classroom. The use of web curation tools in flipped classrooms is relatively unexplored in literature. The web curation tool Storify was used in this case.

2.3. Digitization and Reuse

Preparation of (often digital) materials ahead of time for students to engage in self-study also offers opportunities for efficiency in teaching practice through reuse Tate and Hoshek (2009). The challenge with this is that courses do change instructors, and considering the experimental nature of flipped classrooms, which need to learn from the feedback of previous iterations, it is important to be able to encapsulate feedback from previous course iterations when making decisions on re-using content. A related factor is the extent to which materials are planned for reuse. For example, higher production values in video content, and more extensive assessment materials might be expected in materials that are planned to have a long life and be extensively reused than materials that will be used once.

Another issue is that once digitized, course materials assume the properties of digital artifacts, including being persistent and available on an ongoing basis (Faulkner and Runde, 2009), rather than heard once as a classroom lecture is, and editable and recombinable with other digital objects (Nelson and Allen, 2002), and therefore vulnerable to selective representation, or potentially, satire.

2.4. Organizational Issues

2.4.1. Risk

Change and experimentation are not guaranteed to be successful, and this can risk the university's brand and reputation. To manage risk, universities often resort to bureaucracy and regulation. O'Flaherty and Phillips (2015), noted that recognising the viability of flipped classrooms as a university-wide pedagogy will disrupt the existing classroom, and recognition needs to be given to the pedagogy in a wider context of university, including an understanding of the risks it could bring. More generally, innovation and experimentation involve some level of risk, and many universities are unwilling to expose their brand to the risk of bad publicity (Power et al, 2009)

2.4.2. Organizational routines

Organizational routines are the collective patterns organizations use to get things done. They are often embedded in processes and activities, are shared and collectively performed and understood, are recurrent, embedded in a specific context, and usually triggered by some event, such as the start of the semester or academic year (Becker, 2004). Understanding of organizational routines allows organizations to co-ordinate themselves - they allow multiple simultaneous processes (for example the delivery of hundreds of different courses) to be mutually consistent (Becker, 2004). Organizational routines can provide stability, store knowledge, and reduce uncertainty. They can reduce cognitive load for organizational actors, and economize on the effort and time required to achieve routine tasks and activities (Becker, 2004). Large institutions, especially those like hospitals and universities that deliver multiple instances of the same or similar services (e.g. courses) tend to have well established and deeply embedded routines, including for teaching delivery. This not only affects the way resources are managed (for example room timetabling, exam scheduling), but the way people think about their tasks (for example academic staff are accustomed to dividing their course material into weekly delivery and 50-minute lectures). Changes in practices – such as the move to flipped classroom delivery – are frequently highly disruptive to organizational routines (Taylor and Newton, 2013)

3. Case Description

This case study took place at a major university in New Zealand. The university has been experimenting with new models of learning using technology, including deeper integration of blended learning, building classrooms which encourage collaborative work with students, and flipped classrooms, but implementation of fully “flipped” classrooms was still in its infancy. The course was a first year course offered over the summer semester, focussing on personal and social strategies for digital living. The course began with an introductory lecture that outlined what a flipped classroom is, and the expectations from students on how to prepare. This is consistent with Pye, Holt, Salzman, Bellucci and Lombardi (2015) who recommended that the first lecture should outline the learning expectations of students on how much work students should do in the first week. The students were told to prepare for weekly tutorials by going on Blackboard, the Online Learning System used by the university. Here students would watch mini-lectures, interviews, TED talks and read articles. The mini-lectures were a length of anywhere from 7-20 minutes, and would take students about an hour to complete the prescribed number of mini-lectures (3-5). Students were expected to prepare weekly for tutorials, with a quiz at the beginning of each tutorial testing students on the content for that week's module. These

quizzes were worth 4% each, with 5 quizzes making 20% of the student's final course grade. The quizzes were also to ensure that students come to class prepared: a key component of the flipped pedagogy (Abeysekera & Dawson, 2015). The remaining 80% of the course grade came from two assignments. The first assignment is the most experimental of this course. Students were expected to write three Storify essays: each worth 33% of a 40% assignment. Storify allows the aggregation of online content from different types of online sources including social media and news websites. Storify then allows the user to annotate around articles, and make their own story around the aggregated web link. Students were expected to write two different Storify essays on subjects related to digital living and the third essay on a reflection of how they searched for sources in relation to their mental model. The second assignment was a journal of the student adopting a new technology, and documenting their progress in adopting a new technology.

4. Methodology

This study employs a Realism approach and acknowledges that there is a reality beyond the researchers' minds, the external reality, which are born of people's minds, but exist independently of any individual (Sohb & Perry, 2005). People's perceptions are a window to that blurry reality, where structures who interrelate with each other through different mechanisms (Sohb & Perry, 2005). Realism allows for this case study of interaction between each of the different stakeholder groups to be observed, and perceive a potential reality. The ontology, or reality, of realism, assumes that reality is real, but needs triangulation from many sources are used to confirm this. Realism will respect literature as one of many "windows" into this reality (Healy & Perry, 2000). This study will form one of the first "windows" into the stakeholder perspective. The epistemology, or the relationship between the researcher and this reality, assumes that the findings are probably true, but need to be triangulated, as the researchers are aware they need to do this (Sohb & Perry, 2005) to triangulate multiple perceptions into one reality (Healy & Perry, 2000). This will require additional studies to build onto the "window" created by this study. The methodology is used to confirm the researchers' perception of this reality.

This research is informed by a single case study perspective of the INFO 131 class of summer 2016. This case study takes an interpretative case study approach, where a phenomenon, INFO 131, is examined in its real life context (Myers, 1997). Stakeholder theory informs the case analysis.

The four groups to be consulted included: students, administrators, staff and organisation. The first group of respondents, students, consisted of six respondents who were consulted together in a single focus group. They were in their early 20's in at least their second year of studying at university and were all regular attendants of the classes. Semi-structured individual interviews were held with the other stakeholder groups; three academic staff members; the administrator was responsible for setting up room and equipment bookings, arranging marketing and marshalling all the required organizational resources; and the Head of School with a role including setting the strategic direction of the school.

Once the focus group and interviews were completed, they were transcribed. The transcriptions were then imported into NVivo 11 to be coded. Coding allows for a meaning to be added to interviews, allowing for a deep reflection and interpretation of data and its meaning (Miles & Huberman, 1984). The coding process involved picking codes from each of the respondent groups that developed initial themes, where the process followed an iterative process. Based on the collection of data's approach in seeking themes, this study takes a thematic analysis approach, where themes are identified through the patterns through the data, where emerging themes become the categories for analysis (Aronson, 1995). This process was followed the steps Aronson (1995) conducted for their thematic analysis of nurses in focus groups. The five-stage methodology was based on Aronson (1995) but adjusted to fit the process of this study. The first stage involved developing the coding manual based on collection of different themes used to organize similar or related text to assist in the interpretation of data (Aronson, 1995). Provisional codes were create inductively with no pre-defined theory. (Miles & Huberman, 1984). Stage 2 involved sub-coding. Further codes were created based on themes in the data. Second order codes were added to existing codes, allowing for different viewpoints to be collated (Miles & Huberman, 1984). The third stage involved connecting codes and identifying themes. This stage built upon codes from the sub-stage and connected the different codes to create themes. In the fourth stage we corroborated and scrutinized the themes to surface the underlying meanings of this data. The challenge came with comparing the different stakeholder perspectives, and recognising that benefits to one stakeholder might provide challenges to another stakeholder. This gave rise to an understanding of tensions between stakeholder groups around the themes identified in the case study. Finally we legitimated the

themes to ensure that the latent themes did in fact, reflect the coded data and negotiated a shared understanding between all the researchers.

Once all the coding had been completed, and considering the underlying meanings, we identified that there was a continuum of opinion amongst the stakeholders from a more conservative position of preferring the status quo in teaching delivery, to a more innovative position that welcomed the changes in teaching practice associated with flipped classrooms. For example, for materials and assessments, the status quo is represented by traditional essays, while the experimental end is represented by use of web curation tools such as Storify. We then re-examined all the coded text segments investigate the strength of the sentiments expressed. Due to the difficulty in making nuanced distinctions a simple, three point Likert scale was used. These codes were then averaged for each stakeholder or stakeholder group to give an overall impression of the degree to which they were positive about aspects of the change.

5. Results

5.1. Flipped Classroom Pedagogy

Students felt motivated to come to class in order to learn from their peers, and grow the knowledge they already had. This was where a lot of the learning took place: *“And with normal lectures I usually don’t go, but this it is easy to do the lectures, just watch them. And you feel obliged to watch them because you feel like the odd one out if you come to classes and you are the only one that is not prepared.”* Students also appreciated the diversity of different perspectives in class discussions: *Sigma valued “bringing [other students] to awareness and how we think in a different way.”* Students gained new skills from each other, as this is where they found a lot of their learning came from as they came to class to discuss the course content they had prepared for before.

Staff also valued the flipped approach, but found some difficulty adjusting, Lecturer 2: *“I recorded four hours of material in the early stages of preparing the course I didn’t end up using because I wasn’t happy with it”.*

5.2. Digitized Mini-Lectures

Students in general were very positive about the quality of the mini-lectures, and some said that the course adjusted their expectations of what to expect in terms of lecture quality, compared to traditional lectures.

Staff appreciated the sharp focus provided by the mini-lecture format. Lecturer 2: *I found that breaking that up, and saying “okay, I am going to introduce this one key idea...helped focused my own thinking, focusing on what was really important.”*

The **line manager** emphasized it is not sufficient to just place a traditional lecture on the internet and call it flipped learning. *We have to change our view of the lecture. If we are [just] switching it [to a digital format], we are not doing what is required.”*

5.3. Storify and Web Curation Tools

Students enjoyed the use of Storify for course content delivery to supplement the mini-lectures. *“I think what (Lecturer 2) uses it (Storify) for with a point, and then a source, was really good.”* However, when they were asked to use it to create their own curations for an assignment, many were uncomfortable, Kappa: *“it was called an essay in the course outline, but we had never been asked to do anything like that before”.* Some student pushback against the Storify assignment resulted in the lecturing staff producing annotated exemplars, which reassured the students.

The use of Storify allowed for the course **staff** to not only be able to aggregate resources, but to also gain a new appreciation of critiquing different kinds of sources. Lecturer 2: *[Storify] enables me to narrate the things that I collect [on the web] and I think it is a fabulous tool.”* Storify also allowed **staff** to experiment with the introduction of, and appreciation of, a wide range of media for instructional purposes: *“as someone who has always been a reader, my appreciation of other media for conveying information has improved a lot.”*

The **line manager** recommended that the teacher embraces their position as a facilitator of content, but made sure the student had clear directions: *“[we are] changing the way we provide the information*

and you can ask [students] to actually search for the information if you tell them where they could find it. Its re-thinking how we make students cover material.”

5.4. Digitization and reuse

Students were comfortable with some degree of reuse even in a rapidly changing subject-area, Nu: “...[topics like] *public shaming on social media, I feel like that will be an ongoing thing that won't be dated so you can continue to use the same materials.*”

However, **staff** were concerned about the persistence of digital materials, Lecturer 1: “*there is nothing to stop a student from downloading a ten-minute talk that a lecturer gives and putting it on Facebook, or making a screen capture, or playing it back and forth to find the quote that could damage your reputation if they wanted to do that.*” On the same theme, lecturer 2 felt that the also felt that the persistence of digital materials, and the possibility of recombination or reuse, created different (and higher) expectations about the material. Lecturer 2 reflected that in traditional lectures the teacher can easily correct themselves if they may a small mistake “*because a classroom is quite an ephemeral experience: you do it and it is gone, and it is only what people remember, which is probably not a lot.*”

It was unclear to what extent the materials prepared for the course would be reused. The existing **staff** were not even sure if incoming staff would want to use their content: “*If the people teaching it were completely different? Did they want to do their own recording? Its hard to say isn't it.*” They had not planned for a high degree of reuse (although they were happy to make their materials available), Lecturer 1: “*So really thinking about the lifespan and adjusting your expectations of the production values accordingly is probably something I didn't do, and could have done.*”

5.5. Organisational Risk and Change

In order for the universities to change to less traditional pedagogies, they need to be willing to experiment. The **administrator** recognised this course was intended to lead to the opportunity for future courses to be able to implement these changes: “*Yes, absolutely totally and utterly and experiment. So whether it is run the same way this coming summer, I am not sure.*”

Line management reflected that staff see challenges with deeper integration with flipped classrooms. They believed that flipped classrooms caused a movement from their position as a lecturer to a facilitator and that this is a significant change to teachers' existing teaching, and would be met with some resistance: “*...it is a two-way conversation suddenly... You have to be ready to follow, and it is much more challenging for staff... Some people will love it, and some people will be terribly afraid. It depends on the actual personalities*”

However, **staff** in this course did not show resistance to implementing flipped classrooms, but their anxiety about the quality, permanence, and future use of their digitized materials indicated some concern about reputational risk at a personal level. They were also concerned about the scalability and the degree to which this model could be used more generally without a serious risk of quality breakdowns, student issues and pushback. Lecturer 2: “*It was OK because it was the summer and we had a fairly small group that were on board. I would not want to do this with 300 first-years*”.

5.6. Organizational Routines

The **administrator** in particular experienced many issues with organizational routines. The collective processes and interaction patterns of various parts of the university are still oriented mainly towards twelve week, lecture-based courses offered during the main teaching trimesters. Marketing, room booking, IT support, timetabling, and from the point of view of **line management** even identifying academic staff available to teach the course, were all challenging. For example, it has been intended to market the course to school-leavers, to allow them to have a taste of university study before enrolling full-time, but inflexible organizational processes and routines meant it proved nearly impossible to market to this cohort, or to matriculate them before the start of the next academic year.

Staff concerns about the different requirements of course preparation, and uncertainty about the future use of their digital materials also indicate a general level of uncertainty and lack of established organizational routines for this type of teaching. **Students** also, in expressing concerns about unfamiliar assessment forms, were to varying degrees voicing discomfort with the disruption to their normal study and assessment routines.

6. Discussion

6.1. Stakeholders in the a flipped classroom course

Based on our case, the different interests of stakeholders in flipped classrooms can be represented as follows. Students are dependent stakeholders; they have urgent needs in flipped classes, and legitimately as they are part of the course, but do not have sufficient immediate power to make changes. Academic staff can be considered dominant stakeholders; their power and legitimacy make their voice important, but management may choose not to act immediately. However, a general institution-wide move towards a flipped classroom model could disempower staff. Administrative staff are definitive stakeholders provided they have appropriate *power* to command resources; administrators require power to ensure they can acquire necessary resources for the course and have legitimacy with other departments in the university to implement decisions. Administrators are also frequently responsible for marshalling resources in urgent timeframes. Line managers are definitive stakeholders, they hold the power to make decisions on whether to implement flipped classrooms further, and this legitimacy can flow from trusted advice of staff. They can reflect perceived urgency for change in tertiary delivery models in requirements for change from the faculty they manage. Most research on flipped classrooms has focussed on the student experience and to a lesser extent, the staff experience. To our knowledge, this is the first study to take a broader stakeholder context, and examine the complexities of their interactions

6.2. Tensions between the old and the new

Considering the results overall, from a stakeholder perspective, it is clear that in the various themes emerging from our case study, the stakeholders held various positions on a continuum between embracing the changes associated with implementing flipped classrooms, and preferring the status quo. In some areas, the various stakeholder groups were well aligned, in others, there were differences and tensions in their perspectives. A summary of the themes emerging from the case study is included as figure 2. They are organized into three main themes – flipped classroom pedagogy, with sub-themes of mini-lectures and user of web curation tools; digitization; and organizational issues, with sub-themes of organizational routines and experimentation. For each theme and sub-theme the two end of the continuum are also shown where relevant. Note that “organizational issues” emerged as a high-level theme from the data analysis, but all responses on this theme were eventually coded to one of the two sub-themes.

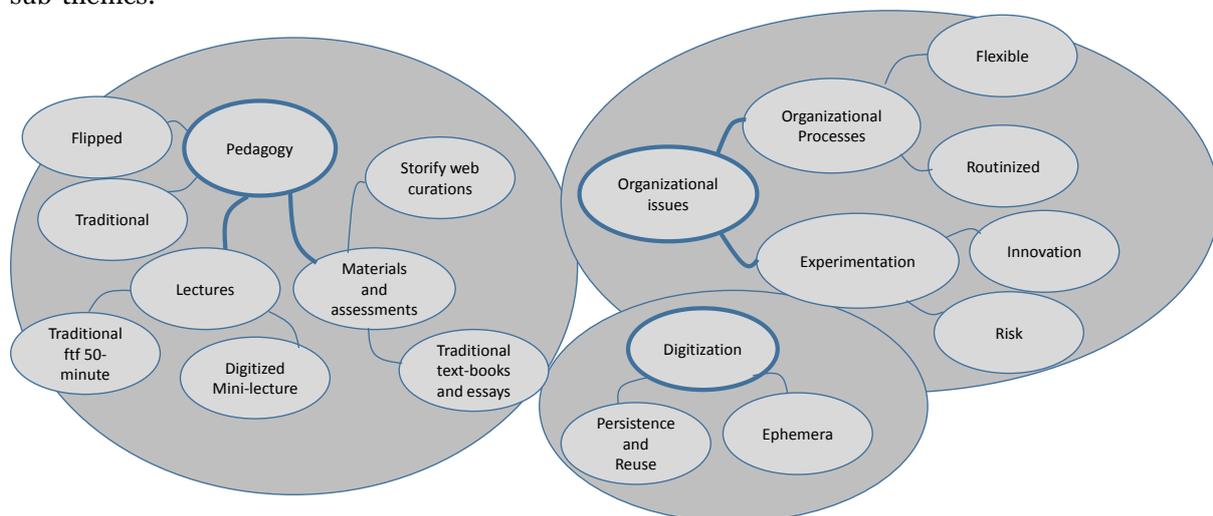


Figure 2: Overview of themes

6.3. Flipped Classroom Pedagogy

Stakeholders were aligned and positive towards the flipped classroom **pedagogy** in general. Students enjoyed it once expectations were made clear, were motivated to prepare for class, and benefitted from class discussions, confirming previous studies on the benefits of flipped classrooms.

There was also general agreement about the value of shorter, more focussed “**mini-lectures**”. Students valued them, and staff enjoyed preparing them once they had got over an initial learning curve, despite their anxiety about the quality and longevity of the materials.

There was less consensus about **materials and assessments**. Students enjoyed exploring the curations prepared by lecturers, but were less comfortable when asked to prepare their own. Consistent with (Cole, 2009) including Storify use in an assessment criterion made the students much more willing to explore the technology, but there was still some degree of conflict and pushback until exemplars were produced, which helped students to minimize their anxiety and develop new assignment forms.

6.4. Digitization and Reuse

There was no evidence of negative issues associated with digitization in this case, but the student cohort was small and characterized by goodwill. Students were satisfied with the course materials. However, academic staff expressed concerns for reputation risk when digitizing what had previously been ephemeral teaching performances, suggesting that the properties of digitization (Faulkner and Runde, 2009; Nelson and Allen, 2002) do have a significant impact on pedagogy and teaching routines. Staff also expressed concern about production values, especially given the high production values of readily-available YouTube videos, including teaching content. A more positive aspect of digitization is the possibility of reuse. However, this is not managed at present, but may represent a future opportunity (Tate and Hoshek, 2009).

There was a general unwillingness among the various stakeholder groups to shoulder the risk associated with innovating teaching practices. While the university line management was very enthusiastic, staff were concerned about reputation risk, and students were concerned about their learning and performance in an explicitly experimental setting. This is consistent with Strayer (2012) where students may struggle to adjust to uncertainty in a class. Setting clear expectations in the first lecture and providing exemplars, was important to achieve buy-in from the student body. While students can be a risk to a universities reputation, whether the experimental setting could have flow on impacts to potentially affect the university cannot be generalised from this study. It was not apparent in this case, as the flipped classroom offering was successful, but there is potential for future conflict between line management and staff in this area. Some innovations may not be successful, and both the wider organization and the staff concerned will be concerned to manage risk and protect their reputations.

6.5. Organizational routines

It was clear to most of the stakeholder groups that the organizational routines were relatively inflexible and did not support changes in teaching practice. Students were generally positive, but concerned about changes to routines such as assessment, that had a direct impact on them. Staff were anxious about the quality of their materials, and the contexts in which it might be copied or reused. The administrator – who was at the sharp end of obtaining resources for the course, was the most negative about many aspects of the change due to the difficulties of liaising resource providers in the wider university.

6.6. Integration

Themes	Stakeholders			
	S	AS	A	LM
Flipped classroom 1---3 Traditional delivery	2	2	2	1
Online Short Materials 1---3 Traditional lectures	1	2	N/A	1
Web Curation Assessment 1---3 Traditional Assessments	3	1	N/A	N/A
Permanence 1---3 Ephemera	2	3	N/A	1
Risk 1---3 Certainty	2	2	3	1
Flexible 1---3 Routinized Organisational Processes	N/A	1	3	1

S=Students; AS=Academic Staff; A=Administrator; LM=Line Manager (Head of School)

Table 1: Summary of Stakeholder sentiments

It is evident from this sentiment analysis summary that there are considerable tensions between the stakeholder perspectives. The line manager was extremely positive – but was at a remove from many of the practicalities. The highest levels of alignment occurred with regard to the general concept of flipped classrooms. Also, short, focussed online materials were preferred, supporting popular press predictions of the gradual death of the lecture and a preference for digital delivery.

However, when the changes created risk or uncertainty for a stakeholder group, their preferences reverted to the status quo. We can see for example that academic staff loved preparing materials using Storify and loved the Storify assessment. Students were less enthusiastic, because the web curations they were asked to prepare looked nothing like the essays they were accustomed to writing. Similarly, academic staff liked the focus of the short lecture, but were anxious about the change from teaching as an ephemeral performance and conversation, to teaching as the creation of persistent digital artefacts with all the properties. They had not intended their recorded lectures to be stand-alone digital teaching materials intended to have a long life.

Underlying these differences, in our view, is a general uncertainty about the lack of organizational routines for managing the online materials created in flipped-classroom courses. Staff and students were expressing the cognitive load involved in doing things differently. Students found preparing web curations required them to engage with a new way of presenting and narrating their arguments, so they were struggling to master the form as well as the content of the assessment. This contrasted with the more traditional essay, which has a large number of very well established practices associated with developing and presenting an argument, many of which are so habituated and routinized that students barely need to think about the essay itself as an assessment form. Similarly, staff concerns about their digital materials partly reflect the fact that there are no established organizational practices. Do subsequent teaching staff expect to reuse the materials? Are there appropriate controls in place against students misusing the materials? Was the quality good enough? Were they too long or too short? There is no need for such questions in a traditional teaching context – organizational practices exist to manage teaching delivery in such a habituated way that academic staff barely need to think about it, and once again, can focus on the content.

The administrator was the most obviously and explicitly affected by disruption to the normal organizational routines, and was also the most cautious about the changes. The difficulty of marshalling and assembling resources for a different teaching delivery model created problems with event triggers (new students were not matriculated in the summer trimester); cognitive load and effort (an explanation about the course was required every time another organizational unit had to be dealt with); and created uncertainty. The collective performance of all the well-oiled processes involved in delivering a course were disrupted. The administrator was the most deeply affected, and likely, had the greatest degree of insight into the magnitude of organizational change involved.

There are genuine risks to stakeholders participating in an experimental pedagogy which disrupts well-established organizational routines – students risk lack of clear understanding of new assessment forms, and issues with time management in a more flexible study environment. Academic staff risk cognitive load and workload pressure from working with new delivery forms, and serious reputation risk if initial offerings have quality issues. The wider institution is threatened by the declining popularity of traditional delivery, and ostensibly supports innovative practices, but has a low appetite for the risk to its brand that could result from failed innovations. It also has a huge amount invested in processes, practices, routines, and shared understandings associated with traditional courses, semesters, lectures, and assignments. These have frequently built up over many years, and are one of the major factors that enable to organization to deliver many hundreds of courses to thousands or tens of thousands of students simultaneously every semester.

A major learning point from our case study is that some level of negativity or resistance to adopting a flipped classroom pedagogy does not necessarily represent a change-averse, “luddite” mentality. Stakeholders may have legitimate and different concerns, depending on their roles in the initiative, and their stakeholder profile. *All* our stakeholder groups were enthusiastic about the changes in principle, but became more negative about specific aspects of the change when the changes disrupted their own routines and the extensive support, shared understandings, and time and cognitive economies that came with them. For example, the student concern about the Storify assignment was only allayed when staff effectively developed a new “routine” that students could follow, by providing and discussing exemplars

7. Conclusion

We note that this was an exploratory single case study, and the underlying importance of organizational practices in explaining the differences in stakeholder perspectives was emergent as we explored tensions in the sentiments expressed. A more comprehensive study informed by organizational practice

theory is recommended. However, we tentatively conclude that despite a rhetoric of innovation in individual institutions, widespread recognition within the tertiary sector that the traditional lecture is dying, and an appetite amongst a range of stakeholder for the benefits that flipped classrooms bring, universities do not change easily. Our case study found that on a range of dimensions, stakeholders had differing perspectives – usually associated with the degree of change, disruption and risk to their own tasks and established practices. Our stakeholder analysis also suggests that appropriate power to command resources needs to be delegated to those implementing the change. Our findings indicate that university managers and administrators need to be cognisant of the wider context of the move to flipped classrooms, and to recognize that flipped classrooms change the *university* not just the localized course or delivery mechanism. Further, disrupting established routines creates risk, decreases co-ordination and shared understanding, and increases time and cognitive load for stakeholders. Some degree of negativity from stakeholders may be reasonable, and should be acknowledged and embraced as an important step towards developing new routines that reflect new teaching pedagogies.

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