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Learning Technologists - changing a culture or preaching to the converted?

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Introduction

The role of a learning technologist is varied (Hopkins, 2013), we are involved in lots of different activities, and no two days are ever the same. We are constantly meeting and working with a variety of people, especially those of us who are based in a central unit. In any particular day, we may be involved in meetings, phone calls, online sessions, workshops, seminars, training sessions and events for professional development. But does it ever feel like we are seeing the same faces all the time? When we run events, is it the same reliable few that participate. Are we preaching to the converted?

There is no doubt that learning technologists are busy people, but is all our activity making a real difference to the institution as a whole? Is good practice in the use of technology really being embedded in teaching and learning activities. Are we changing the culture of our institutions?

In this chapter we argue that culture, in different forms, has a significant effect on the work of learning technologists and that it can be a barrier to the adoption of new technologies. We consider the work of the learning technologist and what opportunities may exist to change culture. Finally, a case study is presented which attempts to measure the longer term impact of a professional development module in the area of Learning Technologies, and to answer the question - are we changing a culture or preaching to the converted?

The Significance of Culture

Culture can be defined as (from dictionary.com):

The sum of attitudes, customs, and beliefs that distinguishes one group of people from another. Culture is transmitted, through language, material objects, ritual, institutions, and art, from one generation to the next.

When we examine our work as learning technologists, and the context within which it takes place, we can see that there are many cultures that affect what we do. Some of those cultures are certainly department/discipline based, where teaching methods and approaches have been passed from generation to generation. “*We teach this way because we’ve always taught this way*” or “*We teach this way because that’s how X is taught*” are common sentiments, if not always expressed explicitly.

The work of a learning technologist takes place within a culture - which may vary from discipline to discipline, project to project. Oliver (2010) describes the relationship between an academic and a learning technologist, when involved in a collaborative project. Initially, the learning technologist must understand the context (of the discipline) within which the project is to take place. Oliver notes that “*the academic may realise, through this dialogue, that certain of their take-for-granted practices and values may be culturally determined rather than being general truths*”.

There are also institutional cultures at work. For example, my own institution sees itself as research-focussed, and although it states a parity of esteem between research and teaching activities, in practice most academic staff see a clear message that research is more highly valued.

At another level, the economic situation of the country (Ireland), and subsequent government policies, have a significant effect on the culture within the institution. Increased focus on productivity and measurement drives a cultural shift. On the one hand, strategic decisions are taken around the use of technology to increase productivity, which almost always has a negative effect on the environment within which we work. But for those academic staff who are willing to try something new, perhaps to evaluate the use of a new technology, or to work in partnership with the learning technologies team, their efforts are not always recognised or rewarded.

Culture as a barrier to adopting new technologies

Many papers have been written about barriers to adopting technologies for teaching and learning. Reid (2014) provides a review of the literature and identifies five categories for barriers: technology, process, administration, environment, and faculty. On examination, many of the barriers, particularly in the environment category, are a result of departmental or institutional culture.

Many faculty members work in a culture that has not included technology in its definition of effective teaching. The institution's culture and norms around instructional technology use are still being formed, and acceptance of use is only gradually growing. (Reid 2014)

In our experience, the most common reason given by academic staff for not engaging with technology in their teaching is lack of time. Reid (2014) points out that it's not just a matter of time for learning a new technology, but also investment in adapting teaching methods and approaches, reconsidering evaluation, preparing resources and frequent upskilling can be a disincentive. The culture of a discipline or an institution may determine whether this time and effort is recognised and incentivised. For many staff, it's not clear whether the investment of effort is worthwhile, either to the teaching environment or to their own career progression.

Changing a culture?

The title of this chapter asks if we are changing a culture? So then, what is the culture that we might want to change through our work?

I propose that we want to enable and empower staff to use technologies in their teaching and learning. We want to move away from a perception where technology is difficult, time-consuming, of little real value, or unproven. We want to remove perceived barriers, and address real barriers, where we can. Changing a culture takes time.

How learning technologists might effect a change in culture

Learning technologists carry out many different types of activities, which can be described as support (reactive), professional development or strategic.

Support activities are often responsive in nature, responding to an email or phone call where the academic (or academic support) has a particular problem and just wants to know how to fix it. Often there is little opportunity for the learning technologist to even understand the context and an immediate response is required.

Sharon, it's that time of year again. I wonder if you could tell me how to move last years Blackboard stuff into this years? - email from academic in September 2014

If, however, the situation is not urgent, and the academic can be persuaded to step back and explain the context and the desired learning outcomes, there can be small opportunities to empower to make a real difference. If the academic has a positive experience through her interactions with the learning technologist, this opens the possibilities of being involved in future projects.

Professional development can be through stand-alone seminars and technical training workshops, where the academic, by being present at the event, has already indicated an interest in learning something new. While many staff are satisfied with the skills they pick up on the day, usually sufficient to progress with a technology on a need-to-know basis, others will feel empowered to define a new project based on their new knowledge and may become future collaborators.

Formal, credit-bearing modules offer lots of opportunity. For example, our unit offers a full module (10 ECTS) on Learning Technologies, which is part of a PostGraduate Diploma in Academic Practice. Because participants sign up for a full module, there is more space and time to consider and demonstrate a range of technologies in context.

At the strategic level, our unit actively looks for opportunities to work with a programme, discipline or school on particular topics (e.g. flipped learning, student engagement, plagiarism awareness) where the focus is on the pedagogical context, and a range of technologies relevant to that context can be considered. While Oliver (2010) warns that such projects may not always be successful

However, not all projects are successful. One deciding feature seems to be the readiness of the departments involved – the participating academics must already see the need and value of the development, or else they will not engage with it effectively.

in practice our experience suggests that this approach, coupled with strong leadership within the group, can be very effective.

A note on champions

As learning technologists, we can all identify and describe our technology champions - those members of academic staff who have successfully integrated a particular technology into their teaching, who have evaluated its effectiveness and who are willing to describe and share their experiences. It is certainly true that academics are more likely to engage with technology if it is being promoted by their peers, somebody who is one of their own.

Technology champions are one of the most useful resources that we have, and so it's worth considering exactly what we mean by a "champion", and aiming to identify potential champions with a view to developing and supporting them.

A technology champion is certainly somebody who has integrated a particular technology (e.g. flipped learning, clickers, video, podcasts, ...) into their teaching, but moreover, somebody who has really considered the pedagogic implications of this. Usually they will have performed some sort of critical evaluation, and be in a position to discuss both the positive and the negative effects. A champion is usually not a technology geek, in fact, the best champions are those who may have been sceptical initially, or certainly have struggled with aspects of the implementation.

In most cases, the use of the technology is evolving or expanding. The champion may have piloted it with a certain group of students and is now considering further rollout, or has seen some opportunity to vary the approach to be more beneficial (to students, to herself, to the discipline or to the institution). Sometimes, having success with one technology will lead to increased confidence to experiment with another.

Most importantly, for learning technologists at least, a champion is willing to share her story, not as an expert, but as somebody who tried, who overcame problems, and has had some success. Such people are excellent collaborators and may be persuaded to tell their story beyond the immediate discipline.

With regard to changing a culture, a champion is particularly valuable because they are already part of the culture. They can help to ease a learning technologist's initial induction to a particular cultural context, within the practice of *legitimate peripheral participation* described by Oliver (2010). They can also legitimise the use of a given technology within the culture of a discipline, because they have already demonstrated the value to the discipline.

Finally, in the case where the champion is in a leadership position within a programme or discipline, there can be a very real opportunity to support a change in culture from within.

Measuring effectiveness - a case study

How can we tell if we are making a difference? All units within an institution produce annual reports, measuring aspects of their work. For the learning technologies team, we produce metrics such as: how many support tickets were raised; how many workshops and events were run; what was the average attendance at workshops; how many projects completed; how many conference papers given. We can also easily generate information about which disciplines engaged with us the most. While these demonstrate that we were busy, they don't tell us a lot about how effective our work is.

In 2012, we attempted to measure the impact of the Learning Technologies Module, offered as part of the PostGraduate Diploma in Academic Practice and available to academic staff. At the time, we had 4 classes of graduates of the module, almost 40 academics. We wanted to evaluate the longer term effects of the module and measure the impact it was having on the use of technology in teaching at the university. Had we started to address a change of culture, or are we simply supporting those academics who are already technology enthusiasts?

Analysing the participants

Before we can claim any sort of change in culture, we need to consider the starting point. About 60% of the academics who take this module are taking it as part of the PG Diploma, having completed a PG Certificate in Teaching and Learning in Higher Education. As such they have limited module choice and so it can certainly be argued that they are not necessarily enthusiastic about the topic - just that it was a better choice than something else. The remaining 40% of participants are taking it as a standalone module, and so may be assumed to have a pre-disposition towards technology.

The academics who take this module come from all disciplines across the university, and they have differing levels of comfort with the user of technology. Far from all being technology enthusiasts, we were able to classify the participants by techno-culture (Wheeler 2012). Of the group of 38 graduates of the module, just 2 fell into the definition of **technophile** "in that they have an affinity with new technology and perceive no particular threat to their way of working, but rather embrace it as a means to enhance or extend their practice". Even those classified as technophiles admit that they have something to learn. Sample statements from an initial survey of participants include:

I would say that a mixture of inquisitiveness, enthusiasm and willingness to make (silly) mistakes make me one of the early adopters of pretty much every technological development. - Course participant

Based on my background I don't really have any issues using various new technologies ... I am often one of the first to explore a new technology if only for the fun of it. But when it comes to using it in teaching, I find it really challenging to figure out the most strategically useful way of using a particular technology to achieve a specific learning outcome. - Course participant

At the other end of the scale, 2 could be described as **technophobic**, those who rarely adopt a new technology.

It just seems alien and the question I keep asking is "Why?? " It seems mad and chaotic. I really do feel I am on a different planet and my hardwiring is different. I was all excited today when reading earlier blogs where it appeared initially that others in the class were the same but then I realized that while you may equate your knowledge with technology to an elementary level I am not even at a preschooler developmental level yet. Lets face it a preschooler can go to the toilet on their own. - Course participant

The vast majority of our participants can be classified as **technorealists**, those who make deliberate decisions about using technology in teaching and wait until an innovation has been tried and tested. In most cases, these academics will cite lack of time or unclear benefits as reasons for not engaging with technology to date.

In many respects I am somewhat fascinated by new technologies and love to become involved in exploring new methods and ideas. However, I do find I never seem to have

either the time or the attention span to become embedded enough to learn the process fully. I tend to learn enough to 'get me by', which sometimes can be more of a hindrance than a help. - Course participant

We also identified a healthy number of **techno-sceptics** - those who don't lack confidence, but who really question the use of technology at all.

From what I can see, many technologies are created and disseminated primarily for two interrelated purposes – sales and social control. To be honest, I am alarmed that the prevailing view among many is that technologies are largely benign and that it is only the naive who don't appreciate the rules of game. Maybe my anxiety comes from a concern that I simply can't keep up and that I just do not want to admit that to myself or maybe I am turning into a Victor Meldrew before my time. Then again, maybe 'freedom is slavery and ignorance strength' and, I have every reason to be cautious. In summary, I am reasonably confident in learning new technologies, but not at all confident that it is something that I should do in many cases. - Course participant

Our stated aim within the module is to move each individual participant beyond their comfort zone, to try something new in a supported environment.

Assessing the impact

After 4 years of running the module, we were interested in trying to find out what were the longer term effects of the module and what was the impact on the use of technology in teaching and learning at the institution. We devised a questionnaire that would go out to all previous participants - whether they had successfully completed the module (for credit) or not. We felt strongly that exposure to even some of the elements of the module, without completing the final assessment, could have a positive impact.

Overall we received a 56% response rate, or 22 respondents. The questions were all qualitative, though we were able to derive quantitative data from the results, where useful. Some respondents had completed the module 3 years previously, others had only recently completed. Some had moved on to other institutions, but none had left academia.

In the following narrative, we discuss the survey questions, why we asked them, and the responses we received. Since the survey was qualitative, responses are used to illustrate throughout.

Q.1 Have you continued to use technology in your teaching?

We asked this question to try to understand if the momentum created by the course had continued. Within the module, participants try out a range of technologies, but also have to

complete a technology-based project within their own teaching. We wanted to know if they were continuing to innovate within their own area.

Of 22 respondents, just one answered no to this question:

While I did last year during the Diploma course I did not continue doing it this year. This was not due to the lack of interest but rather due to the fact that I have a one year contract so had to prioritise research over teaching. I would use technology again in the future. - Survey respondent

In this example we can clearly see the effect that the institutional culture has on our work, acting as a barrier.

All other (21) answers listed ways in which innovation in technology use was continuing. For example:

Using flip cameras to great effect with first years. Have also used Wikis but it wasn't as successful. They tended to work off-line and then submit their work. I use vodcasts to support laboratory work. I have also encouraged postgrad students to use Twitter to follow professional bodies. Generally I've found that students really like activities that support their learning. - Survey respondent

Yes, I've kept using the blogging thing, and I liked the You Tube and Mp4 bit and am using MP3 audio files extensively to give commentary to students on essays. I have not kept up twitter but that is just a personal preference. - Survey respondent

Of interest was that in a majority of cases respondents were able to list technologies that hadn't worked for them, as well as those they continued to use. This indicates a certain maturity in use, the ability and confidence to recognise when something isn't working, but not to be discouraged.

Q2. Do you continue to upskill?

We asked this question as an indicator of forward momentum: now that they had achieved something through the module, were they continuing to learn new skills?

Of the 22 responses, 5 indicated that it was too soon - they had only just completed the module. A further 9 people said that they had continued. Of the 8 people who said no, four mentioned time constraints. Others had more considered reasons:

No. I am 'learning by doing'. I also take advantage of the knowledge of students and alumni. - Survey respondent

No, but mainly because I feel I have what I need and need to spend time implementing rather than learning more. - Survey respondent

As well as organised workshops for continued professional development, some of the group mentioned less formal approaches:

I have [continued to upskill] but I find twitter an excellent resource for updating my skills as participants will highlight learning technology resources. - Survey respondent

The responses to this question were positive, suggesting that participants were self-motivated to continue in formal or informal development and in some cases developing their own Personal Learning Networks (PLNs).

Q3. *Have you presented any of your work with technology in education?*

Have you given a seminar, presented a poster or conference paper, or written an article on your use of technology in teaching? You can include public blogging and other information activities.

This was deliberately left as a very open question, with many possible interpretations. We wanted to know if the participants had felt confident enough to share their work with a group, whether that group be local, discipline-based, or something wider. During the module we had encouraged participants to consider sharing by submitting abstracts to, for example, the annual EdTech conference of the Irish Learning Technology Association (ILTA), which takes place each year.

Of the 22 responses, exactly half indicated that they had presented their work, with 7 having presented at the EdTech conference, which is peer-reviewed. Others mentioned presenting at conferences in their own discipline area.

Four people mentioned less formal presentations within the university such as staff development sessions, while one gave an example of informal presentations:

Only over coffee with friendly colleagues! - Survey respondent

A couple of respondents indicated that they had shared their work through blogging, although one suggested that the practice might not be sustainable for her:

I blogged about my educational practices, including technology, for about a year. I still think of things I'd like to share, but am starting to suspect that there are more valuable ways of spending my limited time, because doing the blog properly would mean more of a commitment than I feel currently able to give. - Survey respondent

Another respondent suggested that she also used social media to present her work:

no, although i would occasionally tweet my delight when something makes work more efficient! - Survey respondent

Three others indicated their intention to present something in the future.

Finally, one participant shared his work, via portfolio, for a prestigious award within his own discipline:

I was awarded the [XX] prize for teaching and learning and that was based on a Teaching portfolio which I put together following the course. The reviewers noted the use of various technologies and reflection on same. I will probably give a presentation at next year's [XX] conference on my teaching portfolio. - Survey respondent

The answers to this question suggest that the participants put some value on this aspect of their work and are confident and willing to share their expertise with others. Leading on to the next question in the survey, the answers also provide some evidence of emerging champions.

Q4. Are you a technology champion?

We qualified this question with the subquestion: *Have you given advice to colleagues about using technology?* Again, this was a question about willingness to share expertise and experience which could have a wider impact.

Only one person answered in the negative:

No, far from it. More like a technology curmudgeon! But I now know how the various technologies can be used with some discrimination to improve things a bit. - Survey respondent

In fact, this came from the same person who had been awarded the prize for teaching and learning in his discipline, and could perhaps be classified as a reluctant champion, despite himself.

All the other respondents indicated that they did support others within the discipline, often with improved use of the VLE:

Yes on an ad hoc basis and usually in relation to the use of Blackboard. - Survey respondent

I offer informal advice to colleagues about ways to customise the VLE to suit their needs. - Survey respondent

This certainly demonstrates a shift in culture where best use of the VLE is being discussed within a department. It could also indicate less basic support calls to the learning technologies team, perhaps replaced with more sophisticated requests.

Others indicated a wider range of technologies that they support:

Yes. I would be one of the first ports of call in my school regarding problems with clickers and on-line homework. - Survey respondent

Yes. Blackboard, laptops, Powerpoint-type presentations, video, Twitter, Wordle,... - Survey respondent

Some other answers suggest that the respondents may be starting to take on technology leadership roles within the discipline:

Yes, to the extent that my colleagues have swiped my flip cameras! - Survey respondent

I have been showing the staff here how to use Google Earth to its full potential - Survey respondent

I am a big fan of technology and try as much as possible to champion it, by increasing the department's visibility on the net and by offering help and support to colleagues. - Survey respondent

We found these responses very encouraging. Not only were people willing to describe themselves as technology champions, but from their descriptions it's clear that discussions around technology use are actually happening within the disciplines, suggesting a shift in culture from within.

Q5. Have you applied for or received funding to support your use of technology?

We asked this question as an indication of innovation with respect to the use of technology in teaching within the discipline. Even the act of making an application for funding, whether successful or not, indicates that institutionally provided resources may not be sufficient and that the person or group making the application is thinking beyond what might be considered conventional for the university.

By applying for research funding around technology, a participant could be moving into the area of scholarship in teaching and learning within their discipline. This area is recognised by the Irish National Forum for the Enhancement of Teaching and Learning in Higher Education as needing to be valued, supported, shared and integrated (National Forum, 2014) and is linked to the culture of the institution. From the report of the National Forum, what is needed to support scholarship in teaching and learning in institutions includes

Recognition of the value of research in teaching and learning both by individual institutions (e.g. in KPIs, promotions, dedicated space, time, providing mentoring) and sectorally. (National Forum, 2013)

Of the 22 responses, 6 indicated that they had applied for funding, and two had been successful. A further two people mentioned their intention to seek funding in the future.

Q6: *How did the module help?*

As well as asking whether they would recommend the module to colleagues (21 of the 22 respondents said yes, that they had already done so) we also asked how had the module helped with the integration of technologies into their teaching practice.

A number of respondents indicated that it had helped them get started, to overcome an initial reluctance or feeling of being overwhelmed:

I had no previous experience of technology so it assisted in getting me off the ground and braving the world of technologies - Survey respondent

To be honest, I don't think I would have experimented with the various learning technologies if I hadn't first been shown them. I feel much more informed now about what is available, and do think that the integration of learning technologies has had a positive impact both on the teaching and hopefully on the learning experience for students. - Survey respondent

I can't say that it changed my teaching practice but it added to my bag of tricks. I am always willing to try new things. I think that it is good for students to see that effort. It is very good for them to see someone like me (56 years old) who is not afraid to tackle technology. Some of it works, some of it doesn't. It's good for them to see the effort. - Survey respondent

Others commented that it gave them time and space, or permission, to invest properly in integrating technology:

It made me get around to various things I wanted to do but had not gotten around to doing before! - Survey respondent

The module gave me a mandate to include non-traditional learning methods into my teaching. It also made me think more about the student experience - viewing it from their perspective. - Survey respondent

To be honest, I don't think I would have experimented with the various learning technologies if I hadn't first been shown them. I feel much more informed now about what is available, and do think that the integration of learning technologies has had a positive impact both on the teaching and hopefully on the learning experience for students. - Survey respondent

It gave me the support, push and encouragement to try some of the available technologies out there. I believe that these technologies could be used to encourage more students to become 'reflective' and so more engaged and responsible for their own learning and in so doing help them to a deeper understanding of the discipline. - Survey respondent

For one of our original technophobes, the experience was transformative:

The module helped me decide on what would be appropriate to the learning needs of the student cohort I look after. In relation to presenting at a conference about learning technology, it is not something I would have ever have considered myself doing because to be honest I was a techno phobe. Doing the module really helped me get over this. I am not so scared of technology now. - Survey respondent

There was also some evidence that our technophiles were beginning to think more deeply about the pedagogical effects of using technology in their teaching.

I think it had a lot of bearing on my teaching practice as I was already using a lot of technologies. I think it pushed me to reflect on why I was using technologies in teaching. Learning technologies are great and being innovative is great, however I found that the module not only helped me discover new technologies, it made me aware of the need to embed them properly in a curriculum. - Survey respondent

Perhaps the most challenging participant in a group is the techno-sceptic, but who can also bring a wonderful balance to the class. The techno-sceptics can help to ground the group.

The module allowed a discussion of where trends were going and there was some space for grumpy types to make observations about why we should bother using the various tech and how and to what purpose. However, we were then cast into the pit of actually having to do something.....and that was fun and more or less got one to understand the basics of 'how to'. - Survey respondent

From the responses to this question, we could see that the module, with its mix of theory and practice, with plenty of opportunity for discussion and exploration of themes, supports different types in different ways. While respecting the backgrounds techno-cultures of the various participants, through a supportive environment, each individual can be encouraged to try something new and progress in his own disciplinary context.

Overall, we conclude that the answers to the survey indicate that there is a small shift in culture happening, though it will take time to see the benefits of this. There indications that the module is helping to create champions, people who are willing to share their experiences and to spread the word. There is evidence that good practice in the use of technology is being embedded in teaching and learning activities. Finally, it is clear that, through the module, we are not just supporting technology enthusiasts, but also empowering more reluctant academics.

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