Normalising practice – moving a technological implementation from project phase to operational phase

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It is widely acknowledged that successful implementation of new technologies relies on a project-based institutional approach with a dedicated and motivated project team to champion the technology and support professional development. One challenge that arises following project-style implementations is how to transition support structures and project drivers to 'normalisation' phase where technologies are seen as 'business-as-usual'. Griffith University's PebblePad implementation project team deliberately planned an end-of-project to business-as-usual transition. This planning involved; embedding PebblePad in the institution's Virtual Learning Environment (VLE); setting up ongoing scalable support structures; and ensuing there were suitable institutional partnerships to sustain the diffusion of the institutional adoption. Griffith's implementation project was led by the central learning & teaching unit (Learning Futures) and relied heavily on buy-in and support from many institutional stakeholders. Therefore it was essential that stakeholder teams were empowered to maintain the existing users and continue to look for opportunities for targeted and meaningful implementation. Similarly, Learning Futures had to find staffing capacity to continue to support PebblePad as a technology within the VLE. This ongoing work involves maintaining vendor relationships, providing ongoing professional development and continuing to be a centralised point for managing internal and external communications between stakeholders.

Keywords: ePortfolios, Ed Tech, Implementation Project, Institutional Technological Adoption

Introduction

Griffith University adopted PebblePad in 2017 as an institution-wide ePortfolio tool and as part of the Griffith employability strategy. The implementation was led by a centralised project team within Learning Futures (LF) who were appointed to the project for a two-year term. This paper focusses on the transition from project mode to embedding PebblePad as another tool in Griffith's Virtual Learning Environment (VLE).

Many institutions take a project-based approach when implementing new technologies (Marshall, 2010; Reynolds & Pirie, 2016, Slade, Murfin & Trahar, 2017) however there are a variety of issues that arise when these projects end and there are 'risks associated with the short-term nature of projects only building limited capacity, which is lost when resources cease' (Hansen & Greenaway, 2017). These risks also include; changes in institutional strategic priority, lack of funding, supporting continued use, supporting continued innovation, loss of project sponsor and inability to offer continued professional development. As noted in Reynolds and Pirie (2016), [future use] 'is dependent on how we use this new base and continue to innovate and support…'. The LF project team were conscious that significant transition planning would be required to ensure operational success.

Late in 2018, Griffith University announced a Digital First strategy which included a broader view of educational technologies (ed tech) and the implementation of a Virtual Learning Environment (VLE). The timing of the introduction of the VLE meant that PebblePad became a key platform in the initiative and reinforced its position in the operational suite of ed tech tools.

As with many technology implementations, the Griffith PebblePad implementation can be seen to follow the five Gartner Hype Cycle stages of, Innovation Trigger, Peak of Inflated Expectations, Trough of Disillusionment, Slope of Enlightenment and Plateau of Productivity (Gartner, 2019. See Figure 2). Towards the end of the project, Griffith use of PebblePad was still following the cycle and it became apparent that there was a need to set up supports to ensure that the Slope of Enlightenment phase bridged the end of the project and the move to normalisation.

Approach

Campbell & Trahar (2017) identified the relationship between the Griffith PebblePad implementation and Rogers' Diffusion of Innovation theory (2003). This paper draws further on Rogers' work to examine the stages of the implementation and compare this experience with his evaluation of innovation across organisations and institutions. Rogers' diagram of *The Innovation Process in an Organization* (sic) (Figure 1) is useful to situate Griffith's project time-line with diffusion of innovation theory. In the PebblePad implementation, the project phase included both initiation stages and the Redefining/Restructuring and Clarifying stages of the implementation phase. The project team was careful to work with the Group Learning and Teaching Consultants (LTCs) in clarifying their role to continue to embed PebblePad in their contexts. By the time the implementation project concluded, the institutional expectation of routinising the technology was clear and it is even possible that a new diffusion cycle may have begun in each of the respective academic groups. This could be the focus of further research but it out of the scope of this paper.
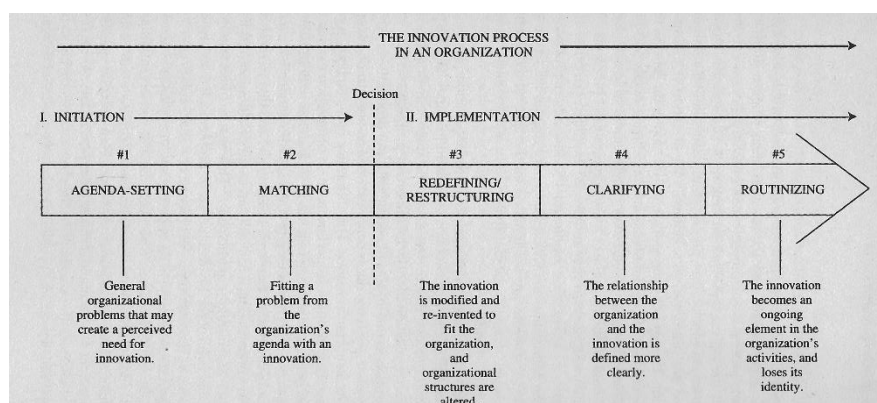

Figure 1: Five Stages in the Innovation Process in Organizations (Rogers, 2003)

Project Transition

A common way to analyse the adoption and integration of new technologies is the Gartner Hype Cycle (see figure 2). 'The hype cycle is set up in a predictable shape that defines the mainstream adoption of various technologies' (Grundmeyer, 2014). When a product or technology is initially adopted, there are high expectations and early adopters jump onboard, often driven by a fear of missing out. Some early adopters then experience disillusionment due to incorrect implementation, not enough understanding of the technology or not using it in a fit-for-purpose manner. Once these issues are addressed and the technology begins to become normal, users are more enlightened which leads to the plateau of productivity (Gartner, 2018, Grundmeyer, 2014).
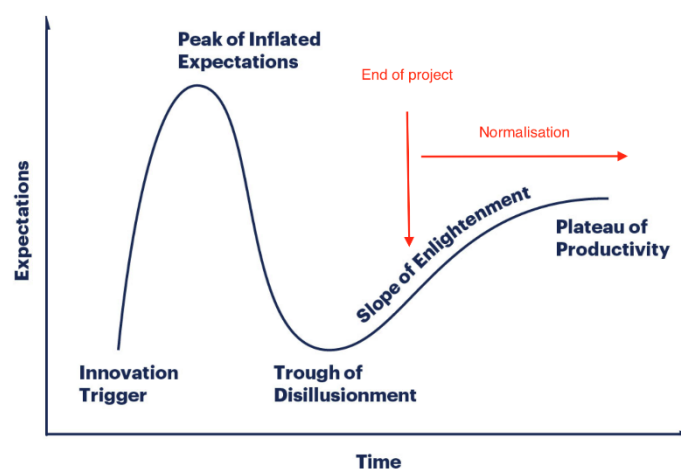

Figure 2: The Gartner Hype Cycle and indications of Griffith's PebblePad implementation

In the case of Griffith's PebblePad implementation, the project was coming to an end as users were reaching the 'Slope of Enlightenment' (see red arrows in Figure 2, below). In order to reach the longer-term institutional goal of ensuring all 50,000+ students develop an employability portfolio there needs to be institutional growth of another 20,000+ users. Once this level of growth is achieved it may signal that PebblePad use at Griffith has climbed the Slope of Enlightenment and reached the Plateau of Productivity.

Data from PebblePad reports support the continuing uptake of PebblePad in courses at Griffith. During the two-year project there were 732 active workspaces (a workspace is attached to a course and is where student work is collected and viewed/marked). At the time of writing (eight months post-project) there are 1087 active workspaces which indicates a 48% growth in usage in that period.

Learning Futures transition planning

Over the two-year initiation and implementation (Rogers, 2003) phase of the project, it was clear that the implementation phase had moved through the redefining and restructuring stage (see Figure 1) and to ensure successful organisation diffusion, the end-of-project requirements included clarifying and routinising the position of PebblePad within the institution. The project team deliberately planned for the transition of PebblePad from a supported and nurtured environment with significant central resources to an environment where PebblePad became one of many educational technologies supported by LF. As noted by Hansen & Greenaway (2017) and Slade et al. (2017), there is significant institutional risk if post-project resourcing is not considered as part of the end-of-project planning. Marshall (2010) goes further to say that as well as the typical products and processes developed during technology implementations, it is imperative that consideration be given to developing deep capacity and strengthen e-learning capability so that implementations remain valid and sustainable.

To this end there was not only a transition of support structures but also of the product knowledge, help-seeking and problem-solving skills. The team was conscious of the need to think about end-of-project and PebblePad's life after the project and therefore several focus areas were identified. These were:
- Training & workshops
- Online showcase
- Communications strategy
- Support resources
- Events
- Evaluation

Training & workshops

In order to maintain capacity-building and sustainable knowledge transfer, maintaining a schedule of training and workshops was important in the project-normalisation transition. During the project, four different workshops made up the workshop series, these were: *An Introduction*, *Supporting Reflection, Creating Interactive Resources* and *Understanding the Assessment Lifecycle*. As may be expected when introducing new technology, attendance was high throughout the project period with 402 unique attendees who attended one or more of the sessions (total session attendance numbers: 611). There were 88 sessions offered over the project period. These workshops provide structured content to participants while allowing them opportunities to learn from LF staff and their academic peers.

Train-the-trainer sessions were designed to develop LTCs as champions within their academic groups. Rogers (2003) highlights the importance of champions when innovating in organisations. He asserts that champions have common qualities which are:

> [T]hat they (1) occupied a key linking position in their organization, (2) possessed analytical and intuitive skills in understanding various individuals' aspirations and (3) demonstrated well-honed interpersonal and negotiating skills in working with other people in the organization. Thus champions [are] brokers and arrangers for an innovation in an organization, helping fit it into the organizational context. (Rogers, 2003)

These qualities are all the qualities held by Educational Designers and LTCs at Griffith. Given that one of the goals of the project was to ensure sustained capacity, the train-the-trainer sessions were imperative to ensure champions diffused their knowledge of and belief in the system throughout the institution. These sessions would often include vendor attendance to deliver training in specific advanced functions.

Online showcase
The purpose of the PebblePad showcase website was to have a central place to direct staff and students who were looking for exemplars. These included student and staff portfolios as well as academic examples of PebblePad in practice. The showcase website provided links to further resources, specifically the 'Student Centred Activities in PebblePad' case studies which were housed in the Explore Learning and Teaching site (ExLNT). The web showcase was not only to inspire academics who were interested in seeing examples of PebblePad being used at Griffith, but also for LTC and support staff to refer to in their consultations with academic staff in the planning and design of courses and programs. This helps the LTCs continue to champion the implementation and supports them with broadening the use in their academic groups.

Communications strategy
Identifying and managing communication channels was critical as the channels provide an avenue to disperse information. Blog posts were submitted to LF Press (the Learning Futures blog site) on a regular basis. The project team use this channel to communicate many stories about PebblePad including the latest feature upgrades to the platform and successful use-cases. The current audience data shows this blog has reached over 5,700 unique visitors which makes it an excellent way to reach academic colleagues.

An important component of the ongoing communications strategy is in contributing to wider LF staff professional development sessions such as the Foundations of University Teaching course which specifically targets new to teaching and/or new to Griffith academics. PebblePad updates are presented to the monthly technology working group and on a less regular basis, to the ePortfolio Working Party (ePWP). The ePWP has stakeholders from across the university including representatives from each of the four academic groups. LF holds monthly meetings with the vendor to discuss any topics relevant to the PebblePad installation at Griffith. By ensuring that decision-making is still happening at various levels and by a variety of stakeholders, it is more likely that the innovation will become normalised. Rogers (2003) notes that when more stakeholders are involved in decision-making processes, innovations tend to have greater sustainability.

Support Resources
PebblePad support resources are an important part of the transition strategy as they provide users with just-in-time support and self-help resources. Online facts sheets provide users with easily digestible information on the tools in the VLE, and online modules (the Getting Started Series) give further information on how to use tools and include use-case examples. Student Centered Activities are case studies of pedagogical practice using ed tech tools and encourage academics to read, consider and, hopefully, design their own SCA. Griffith's PebblePad website contains help for staff and students, access to the showcase section and houses the archives of PebblePad event recordings. The embedded help menu inside each user's PebblePad home page is a direct link to Griffith's PebblePad support site. These just-in-time resources aid in the process of routinising practice because they are not seen as special or specific to the project, but rather are adopted as normal modes of support (Rogers, 2003).

Events
Events provide an opportunity to promote PebblePad's various applications within learning and teaching. This is an important component in the transition strategy because it highlights the versatility of platform to a wide audience. The Griffith PebblePad Symposium provides colleagues with highlights of in-practice examples and opportunities to see how others are using the platform. External events are further opportunities for staff to share their stories with the wider community and be recognised professionally for the results that they are achieving. Sharing at events also helps situate the work being done at Griffith in the wider ed tech and higher ed communities and reinforces the nomalisation of practice.

Evaluation
The purpose of evaluation in the transition strategy is to continuously improve practice, to identify trends and to be able to make decisions based on data. Several of the initial courses identified as early adopters were surveyed as part of the project. During the transition phase, survey results were used to make decisions on where to direct future resources (ie: conduct further face-to-face training) given that there was going to be reduced capacity with Learning Futures. Face to face training participants were also evaluated and the training sessions and workshops were adjusted according to feedback.

Normalisation

Since the project's conclusion PebblePad is being normalised within the suite of tools in the VLE. The LTCs in the Academic Groups have taken responsibility and ownership of PebblePad within their respective teams while LF still maintains custodianship. With the introduction of the Digital First strategy, LF must ensure that PebblePad

maintains its position as a key technology in the VLE. Griffith's Digital First strategy includes commitment to use ed tech more broadly with the Learning Management System (LMS). PebblePad is integrated with the LMS via LTI allowing links from course materials to workbook and template resources. ATLAS (Active Teaching, Learning and Assessment Space) was also integrated and assessments could be completed within PebblePad resources, submitted directly to ATLAS and marks sent through to the LMS. This deep integration was one of the factors that aided in wide-spread use of PebblePad in coursework across the institution and is also a key factor in sustaining current use. These, along with other transition measures have assisted in moving PebblePad to a well-integrated tool in the VLE.

PebblePad was implemented in courses in each of the four academic groups, but to varying degrees. Two groups had well-embedded champions and these groups saw the biggest initial implementation. A third group was not as well resourced with champions so PebblePad took longer to embed. Monash University reported a benefit of having champions to develop relationships and continue to support capacity-building in academic staff (Hook, Macfarlan & Smith, 2018). Hansen and Greenaway (2017) similarly place importance on a "distributed support approach" to ensure that there is minimal risk to the institution if staff members leave or take on other roles.

Although the implementation project had concluded and the core project team disbanded, LF is still responsible for overseeing the ongoing uptake and use of PebblePad. Since the introduction of the VLE LF looks to maximise opportunities for PebblePad to integrate with other VLE tools. This includes liaison with the development team to explore how integrations work with products such as Echo360, H5P and Microsoft Teams.

Learning Futures is growing the visibility of PebblePad by highlighting the pedagogical uses of the tool in the newly-developed *Teaching in the VLE* (TiVLE) course. TiVLE is designed to provide academics with experiences using and integrating VLE tools in their courses. Participants in TiVLE have the choice to submit an optional assessment in a PebblePad template which means that anyone who submits will have had an experience using PebblePad (possibly for the first time) and will create a PebblePad asset. Slade et al. (2017) identified the benefit of attaching assessment weighting when introducing new technologies to students. Academics who participate in TiVLE and would like to be rewarded with a micro-credential will have been introduced to PebblePad through a meaningful but low-stakes assessment approach.

Conclusion

PebblePad was adopted as part of Griffith's employability strategy and the implementation was led by a project team within Learning Futures. The project team were aware of the risks associated with transitioning beyond the conclusion of the project and wanted to put a transition strategy in place to ensure PebblePad remained relevant, championed and continued to grow in use post-project. If this transition was successful, it would ensure that the institution was not subject to the risks identified with the end-of-project problems of other implementations (Slade et al. 2017 and Hansen & Greenaway, 2017).

As Griffith placed strategic importance on the VLE, PebblePad was embedded as a key VLE tool. This has helped institutional champions to continue to find ways to grow the use of PebblePad and progress along the Gartner Slope of Enlightenment. The deliberate systematic approach to ensure there was integration in academic use, support for champions and continued stakeholder communications meant that PebblePad is becoming part of the 'culture of the institution' (Hook, Macfarlan & Smith, 2018).

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