

Supporting Technology-enhanced Teaching Practices for Health Academics

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Abstract: Two learning technologists (LTs) at an Australian University support some 140 Health faculty academics. Resources and strategies for innovative technology-enhanced teaching have been put in place, including a MediaHub, iPad pack pool and a Blackboard community site with curated resources and templates for best practice. Examples of LT-assisted and academic self-created media are presented. Designed in keeping with the university's central learning and teaching strategies, 85 'Landing pages' for subject sites were created. With a design and feel praised by students, they displayed subject outlines, welcome messages, pre-class flipped activities, and library curated eReadings lists. Crucially, during the busy exam marking winter period, academics unavailable to meet in person were engaged remotely by email and interactive PDF Landing page request forms. This paper looks at this transformational subject design work and analysis of student usage data. Academics feedback has been positive. Analytics reveal strong engagement by students and academics. Suggestions for future work are also presented.

1 INTRODUCTION

A challenge for LTs in universities is to provide methods for academics to easily create videos with good quality audio and video. An ever-growing reality in higher education learning and teaching is that academics require good on-camera presentation skills and basic audio video production capabilities in creating videos for their students. The university's learning and teaching strategy (Learning.Futures, 2017) espouses practices that aim to combine the best blend of online, collaborative and face-to-face teaching. The city campus is in the midst of a \$1 billion redevelopment. Newly designed learning spaces have been created on campus to accommodate contemporary approaches to flipped learning and collaborative learning initiatives.

In a prior role as LT at another Australian University (O'Connor, 2013) and now at the current University, the authors have followed an approach of continuous improvement in LT service provision for academics. Along with face to face meetings, and a work request ticketing system, the authors,

responding to known academic needs, have designed online resources, project planning practices and acquired borrowable technological tools for academics. While LTs may not be available at all times, technological and pedagogical solutions are always available to academics.

This initiative described in this paper constitutes the deployment of a pool of 10 iPad Packs, a Learning Futures MediaHub content creation studio, subject site landing pages and a central Blackboard site of curated resources and technologies in which all health academics, fulltime and casual, are enrolled. We also present illustrative examples and discuss academic and student feedback data. Our evaluation shows how LTs can help improve the digital self-efficacy of health academics resulting in a rise in student satisfaction ratings.

2 INITIATIVES

2.1 The Health Learning Futures MediaHub

The Health Learning Futures MediaHub (Figure 1) is a space available to all academics containing:

- 1 high performance Apple iMac + 6TB External Hard drive – Includes Adobe Creative Suite
- 1 MacBook Pro – Allows mobile LT support in academics' offices and teaching spaces
- 1 PC – Most academics use staff PCs
- 1 Zoom H6 Pro audio recorder/interface – capable of stereo recording up to 6 tracks of audio
- A pool of 10 iPad Packs



Figure 1: The Learning Futures MediaHub.

With this equipment academics can create screen capture and head shot videos, excellent quality stereo audio recordings and use a range of pc and mac software for content design and in class uses.

2.2 iPad Packs

The authors purchased 10 iPad packs (Figure 2) for academics to borrow to create learning and teaching materials. Easily portable, the iPad pack is not only an excellent video solution, but fosters uses of teaching and/or health related apps in class. Academics are encouraged to bring one of the packs home for the weekend, to record visiting lecturers or all 10 can be borrowed at once. 2 iPad packs can be used for interview scenarios.



Figure 2: iPad Pack Pool: Each iPad Pack, 10 in all, contains an iPad, Makayama Moviemount, Rode SmartLav microphone and a Manfrotto tripod. Portable, affordable and supported with how-to set up videos (O'Connor, 2017).

Below (Figures 3 and 4) are examples of videos created with academics in various campus locations.

2.2.1 Uses of iPad Packs at our City Campus



Figure 3: Academics utilizing different city campus locations to shoot welcome videos including Health Building, the Frank Gehry designed Business School Building (with titles) and green screen backdrops.

2.2.2 Academic Self-created iPad Pack Video at our Moore Park Campus

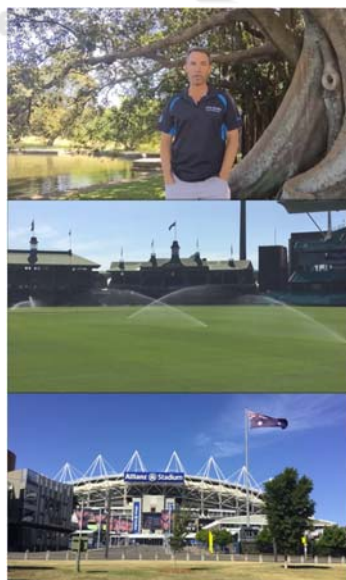


Figure 4: Stills from Dr Rob Bower’s self-created welcome video for Sport and Exercise Science students featuring Sydney Cricket Ground and Allianz Stadium at the Moore Park campus.

2.2.3 Further Uses of iPad Packs

Other outputs of mobile learning include nursing and midwifery simulation lab demo videos, twitter clubs (Ferguson et al, 2016) and development of the Growing Healthy app and website (Growing Healthy, 2016).

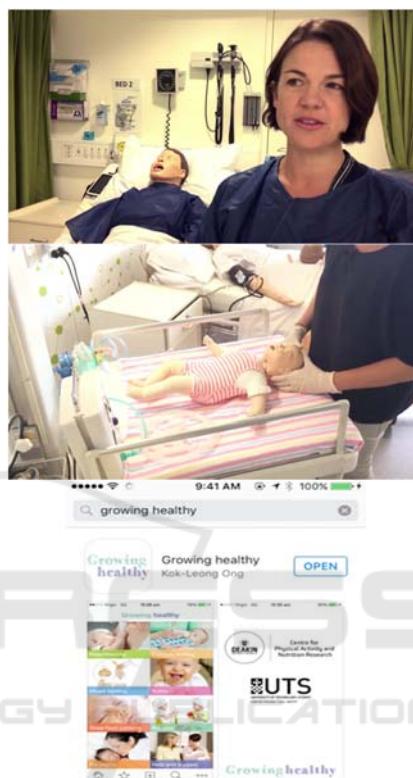


Figure 5: iPad uses – Nursing & Midwifery simulation lab videos and Growing Healthy Midwifery App.

2.3 Faculty Learning and Teaching Community Blackboard site

This site features a range of regularly updated, curated resources. All academics are enrolled and can be readily updated using Blackboard Announcements. Features include:

- Welcome landing page (see Appendix)
- News, Key Dates, Lunch and Learn sessions, information on Teaching and Learning Grants and Awards won by the faculty
- Learning and Teaching Resources – assessment, 3rd party tools and social media (O’Connor, 2016)

- Subject Coordination Toolkit for first time subject coordinators
- Learning Module templates – Adobe Captivate, Blackboard Learning Module, iSpring
- Additional face to face and online classroom technologies e.g. Kahoot, Skype, Kanopy, Lynda.com
- Landing Page Request forms (see Figure 6)
- YouTube Playlists – Student interview skills, nursing reflection practice, clinical placement videos

2.4 Blackboard Site Landing Pages

The Balanced Teaching Periods initiative was introduced as part of Learning.Futures (Academic Calendar, 2016). This proposed a gold, silver and bronze standard (Bronze, 2016). To present seamless integration of online and on-campus learning, visually appealing, engaging landing pages (Kats, 2013; Kickstart, 2015) were chosen to introduce subject sites to students. *“The purpose is to help students create a sense of connection, preparation, engagement and motivation in that crucial lead up time to day one of week one.”* Yvonne Breyer, Kickstart Project. These were found to be an excellent way to engage students.

Gantt Chart planning (Croft, 2015) fostered engagement with academics during time challenged end of term periods (marking and exams). The design goal was to create streamlined interactivity between support staff (LTs) and subject coordinators. To facilitate quick engagement, the authors developed the Landing Page Request Form (Figure 6). This interactive PDF form, designed with faculty marketing images and faculty branding, was emailed to all programs on June 6th 2016. Follow up emails were sent on June 14, July 6 and July 18. Academics filled out and returned this form via email, taking only a few minutes. In this way, it allowed the LTs to generate the lead time necessary to create the landing pages and schedule follow up meetings.

85 subject sites were designated for Learning.Futures compliance for Spring 2016. All 85 subjects landing sites were built and populated between June 6 and by the July 25 start of term. Figure 7 in the results section shows the excellent uptake by academics during this time poor period. Without the Landing Page Request Form and the planning behind its roll out, meeting this deadline would not have been possible.

Faculty of Health Landing Page Template Request Form			
Name:	Click to enter text	Subject Name and No:	Click to enter text
Number of Panels:	2 4 6 8 Other	Course: (Nursing, Midwifery, SES, Health Sciences)	Click to enter text
Panel Images:	Generic Course Custom	If custom, please give a brief idea of your subject content:	Click to enter text
Panel Options:	<p>Panel Options: (Please note that the number of panels chosen here should reflect the number selected above)</p> <p>These will be the images used unless 'custom' is selected and new images are provided as attachments when returning this form</p>		<p>Most Landing Pages will include a Welcome Message, Pre-class Activity and Subject Outline</p> <p>Include <input type="checkbox"/> Don't Include <input checked="" type="checkbox"/></p> <p>Please select 'Include' or 'Don't Include' based on your preference</p> <p>Include <input type="checkbox"/> Don't Include <input checked="" type="checkbox"/></p>
<p>Pre-class Activity</p> <p>Subject Outline</p>		<p>All Landing Pages must include a subject outline</p>	

Figure 6: Landing Page Request Form, an Interactive PDF with 20+ Panel choices and specify time for follow up meetings with LTs.

2.5 Library Resources Page

A direct outcome from collaborations between the Health team with the library has been the creation of the Library Resources Page (See appendix). It has been an easy to share, scalable, reusable resource which allows the embedding of all the latest and best of what the library has to offer on one. Namely; Library Welcome, Harvard Referencing Guide, HeadsUp (Captivate Modules to facilitate self-directed learning), eReadings (customizable for each subject), English Language Support and 'Ask a Librarian!' The Library Resources Panel, designed in by the authors, has since been shared in other faculties' subjects and learning and teaching sites. Such connectivity across faculties is a strength. Networks such as the central LT team along with FLAG (Flipped Learning Action Group), FYE (First year education group) and the annual Teaching and Learning Forum are ways to further disseminate these ideas.

3 RESULTS

The following data were collected to evaluate the previously described initiatives.

3.1 Online Engagement with Academics by Email and Follow Up Meetings



Figure 7: Early engagement and buy in by academics by email (grey) and face-to-face meetings (black) in June/July '16.

Engagement with academics was measured from email responses and meeting dates. Note how email responses occurred during the busy exam/marking period. All landing pages were created prior to the follow up meetings where welcome videos and all content links were finalized in time for start of term.

3.2 Academics' Landing Page Choices

An evaluation of the 85 spring sites showed that after the 3 Learning.Futures recommended (Bronze level) prep items of 'Welcome video', 'Subject Outline', and 'Pre-class activity', the most popular panel chosen by academics was the Library Resources panel. See Table 1. For Autumn 2017, these choices by academics will inform Landing Page design.

Table 1: Top panel choices by academics, Spring 2016.

1	Subject Outline
2	Welcome Message
3	Pre-class activity
4	Library Resources
5	Announcements
6	Staff Contacts
7	Learning Futures Animation
8	Custom panel

The library resources panel, created by the authors with the Library, was the next most popular. The option to customize panels, 8th out of 20, was also popular facilitating academics' differing teaching styles.

3.3 Academic Feedback

Feedback on these landing pages from academics has been very positive: "I filled in the form. I didn't have to think about it. It just appeared!" Dr. Jo Lewis, Autumn 2016.

"It has been a culture shift. These landing pages have been drivers for change. You have given every subject an identity and brought the look and feel of these sites to an appropriate level, where they should be. It has allowed for better engagement, clarity and ease of use by students." Dr. Carla Saunders, Spring 2016.

Feedback on the learning and teaching community site: "This has been a Godsend! The Health Learning and Teaching Community site is the most helpful tool I have access to. It has every resource or link to resource needed for coordinating subjects and teaching at your fingertips. No more searching and asking around! This year I have eight new casual teachers/coordinators so being able to show them how to access online everything they need, any time they need, any place they are has helped me and them enormously." Nicki Watts, Jan 2017.

This feedback forms part of an ongoing conversation with academics. Reflecting on what is working, redesigning where necessary and answering requests for new solutions ensures continuous improvement.

3.4 Student Usage Results and Feedback

Student usage analytics (Figure 8) gathered in Blackboard show an average of over 6 hits per student on landing pages in orientation week and week 1 from July 25 to Aug 7. Low non-engagement was also recorded.

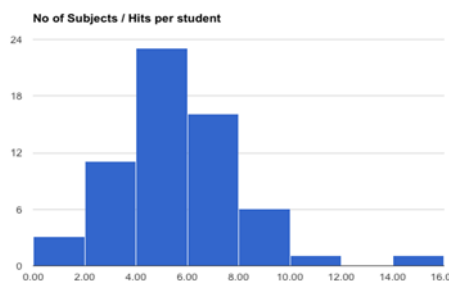


Figure 8: Subject sites vs. hits per student, averaging at 6 hits per student, and low non-engagement.

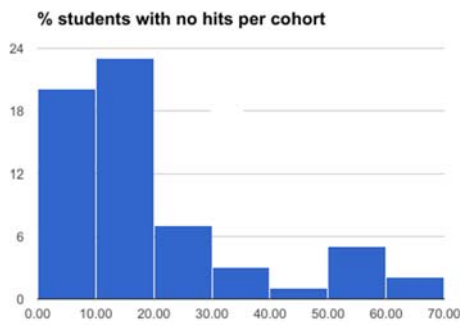


Figure 8: Subject sites vs. hits per student, averaging at 6 hits per student, and low non-engagement (cont.).

Landing Page panels proved popular with students in a focus group:

“The graphics look good. It should be rolled out across more pages.” 1st year nursing student.

“Why don’t we have the library page on our first page in UTSONline? Why is it specific to a unit? You’ve got the nice graphics... why is it not here (on our homepage)?” 1st year nursing student.

This feedback has been shared with academics and with the central LT team. Further focus groups with students in March 2017 will form part of next term’s evaluations.

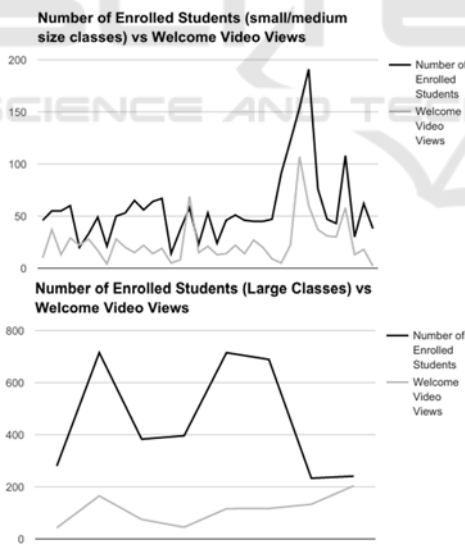


Figure 9: YouTube analytics: Hits for student views of subject welcome videos for small, medium and large classes.

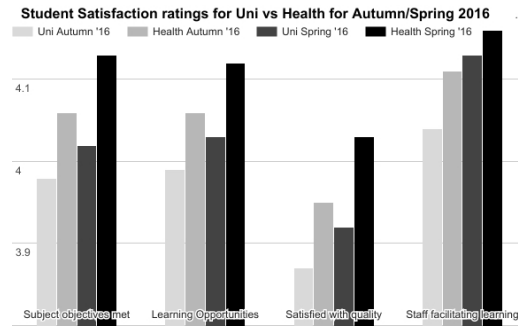


Figure 10: A sample of the Health’s student satisfaction ratings for Autumn/Spring 2016 compared with the university mean rating.

For the criteria shown, the Health Faculty’s student satisfaction ratings were the highest in the university. They also increased from Autumn into Spring of 2016 (figure 10) for all 14 criteria. The Nursing/Midwifery ranking rose from 20th to 4th in the world and from 4th to 1st in Australia. Sport (first ranked in 2017) is 41st in the world and 5th in Australia.

3.5 Teaching and Learning Community Site and Learning Futures MediaHub

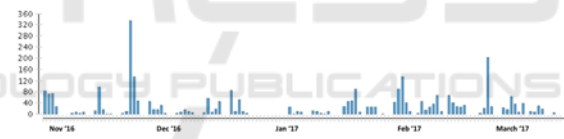


Figure 11: Usage of our blackboard community site since deployment in November 2016.

Peaks occur following a faculty retreat and in the run up to the Autumn 2017 term. Sustained usage is shown with a rise in pre-term activity in February ‘17.

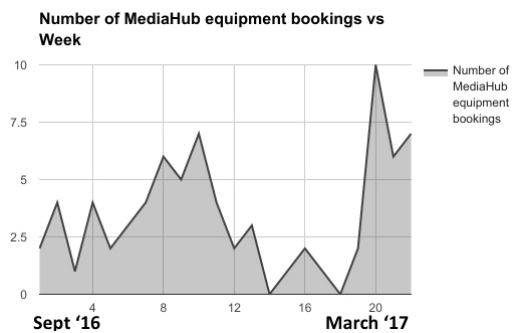


Figure 12: Weekly MediaHub bookings from Sept '16 to March '17 demonstrating sustained use by academics and LTs.



Figure 13: Faculty YouTube page analytics showing increasing yearly video creation by LTs/academics and views by students.

The timeline of the Faculty’s YouTube page, on which all academic videos are hosted, shows arrival of the authors, dramatic increases in activity and the opening of the MediaHub. Note significant rise in Autumn 2016 and peaking in Spring 2016 with continued sustained use thereafter.

4 DISCUSSION

Autumn 2016 saw the creation of 45 landing pages for some health subjects. Applying improvements including Gantt chart project planning, interactive pdfs and follow up meetings, the Spring term saw 85 landing pages created for all Health subjects. All Health subjects reached at least Learning.Futures bronze standard level (Bronze standard, 2016) a result not matched by any other faculty. Analysis of the usage of these sites by students reveals strong student engagement. More analysis of data can enhance student learning (Scott, 2016).

Production and on-camera skills are an essential tool for academics. YouTube statistics show (figure 9) that the welcome videos may need redesigning in some cases. Better verbal communication of the resources contained in the landing page and library resources page would encourage student self-directed learning. The Health Faculty Learning.Futures team meets on a biweekly and offers ongoing connectivity with key stakeholders, fellows and LTs across the university. Academic feedback of a culture shift is consistent with the sustained uses by academics of LT created resources (Blackboard community site, Figure 11) and MediaHub equipment (Figure 12) throughout 2016. Analytics from the faculty’s YouTube page (Figure 13) shows a vast increase since 2013 in video creation by LTs/academics and views by students. These increases are consistent with the arrival of the

authors, working independently and as a team, along with the impact of the opening of the MediaHub.

5 FUTURE WORK

Further transformational improvements can be made to subject sites based on student usage and dialog with academics. Discussions are underway towards incentivizing academics to build on excellent video work done. Workshops (The power of Screen Presenting, 2016) run by the Postgraduate.Futures team’s studios have been embraced (21 out of the 146 university academics were from Health). Academic feedback was excellent. 2017 will see more such workshops offered as a key part of professional development. This training will include deliverables such as improved welcome videos. Such LT assisted recording sessions engender self-efficacy in academics towards producing content independently (Vygotsky, 1981). The university is currently trialling the Canvas LMS for some postgraduate subjects. If extended to undergraduate subjects, this could give further functionality. Kaltura, a soon to be introduced video hosting platform, will give analytics for each student. We also hope to facilitate further discussion, resource and experience sharing, and a community of practice among academics through our community blackboard site and ongoing interactions. The new Futures Teaching and Learning Blog is a public facing site where these ideas can become OERs for all (Futures Blog, 2017).

6 CONCLUSIONS

The work done and successes achieved by the authors is consistent with the Health Faculty scoring the highest student satisfaction ratings of any faculty at the university and the rise in international and Australian rankings. Sustained use by academics of tools and curated resources has fostered a culture shift in the use of technology enhanced teaching and learning for our students. This workflow could be adopted by other faculties in other universities to realise the potential of these new approaches in learning technology project management.

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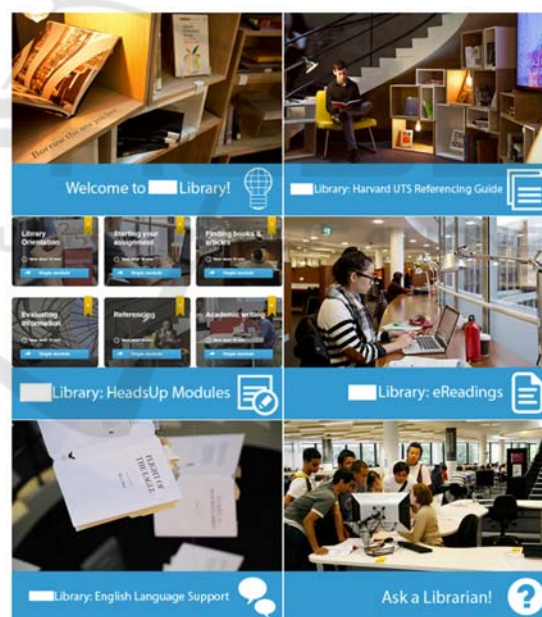
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APPENDIX



Welcome page for the Learning and Teaching Community Site.



Library Resources Landing Page.