



TECHNOLOGY ENHANCED LEARNING AND TEACHING WHITE PAPER

2014-2018

BACKGROUND PAPERS

Gerry Kregor, Luke Padgett & Natalie Brown (Editors)

With contributions from Carina Bossu, Gary Williams and Rebecca Shaw

Tasmanian Institute of Learning and Teaching, University of Tasmania

TABLE OF CONTENTS

Background paper 1: The state of TELT across the developed world	3
1.1 Focus: Students	3
1.2 Focus: Institution.....	4
1.3 Focus: Consortia/partnerships/Sector	6
1.4 Focus: Technologies	8
1.5 Focus: the future of universities	10
Background Paper 2: Open Educational Practices – a summary	13
2.1 The Open Movement	13
2.2 What are MOOCs?.....	14
2.3 References.....	20
Background Paper 3: Technology links in UTAS Strategic Plans	21
Background Paper 4: White Paper Consultation	26

Background paper 1: The state of TELT across the developed world.

Several recent major reports from Australia, the US and the UK provide a strong picture of the current state of TELT across the developed world from several perspectives; students, institutions, the sector, and technologies. These reports individually and in combination suggest the agendas, opportunities and technologies that will influence developments in TELT, and university operations more broadly, over the next 5 years.

1.1 Focus: Students

The *ECAR Study of Undergraduate Students and Information Technology, 2012* (Dahlstrom & EDUCAUSE Center for Applied Research, 2012) presents findings from a survey of over 100,000 students at 195 institutions from around the world. The study has been repeated on a similar scale since 2004. From this large and deep data set the authors suggest that, although the study is not designed as a formal predictive modelling study, short term and long term trends provide insight about how undergraduate experiences and expectations are changing and that undergraduate student behaviours and opinions of today can inform the technology needs of undergraduate students of tomorrow. The researchers distil their findings from the current year into the broad thematic finding that:

“... institutions and educators need to balance strategic innovation with solid delivery of basic institutional services and pedagogical practices and to know students well enough to understand which innovations they value the most.”

1.1.1 Key Findings from the ECAR study

- 1. Blending modalities and engaging learners is a winning combination.*
 - Blended-learning environments are the norm; students say that these environments best support how they learn.
 - Students expect their instructors to use technology to engage them in the learning process, and instructors are responding.
 - Understanding which technologies are more or less effective for students can translate into strategic pedagogical investments.
- 2. The time has come to move beyond thinking about individual platforms and devices.*

No surprises this year for device ownership—portable devices are the academic champions, and they are diverse in terms of brands and platforms.

- Students continue to bring their own devices, favoring small, portable ones.
 - Students want to access academic progress information and course material via their mobile devices, and institutions deliver.
3. *Students believe that technology is critical to academic success and that it plays an important part in their future accomplishments.*
- Students believe technology benefits them, especially with regard to achieving their academic outcomes and preparing for future plans.
 - Students report that basic technologies have the greatest impact on their success.
 - Technology training and skill development for students is more important than new, more, or “better” technology.
 - When it comes to device preferences, the usability afforded by the larger screens and keyboards of laptops trumps the portability offered by tablets, but the line between the two is beginning to blur.
4. *Students want multiple communication options, and they prefer different modes for different purposes and audiences.*
- Students use social networks for interacting with friends more than for academic communication.
 - Academic success is underpinned by e-mail, face-to-face interaction, and using the course/learning management system.

Note: A full list of actionable recommendations is available in the ECAR report (p 30-32), however there are some key recommendations that are pertinent to the findings above. The researchers recommend that institutions should learn from the emerging or established leaders (other institutions, other countries, other industries) for strategies to deliver instruction and curricular content to tablets and smartphones.

There is also a strong implication that development of mobile-friendly resources and activities should be prioritised. Included in this is access to course websites, curriculum information as well as learning management systems that allow students not only to access resources for learning, but also to keep track of their grades and academic progress.

1.2 Focus: Institution

The *2012 Survey of Technology Enhanced Learning for higher education in the UK* published by UCISA (Universities and Colleges Information systems Association) represents the findings of 165 institution-level surveys and interviews of higher education institutions across the UK.

1.2.1 *Summary of conclusions*

(edited for relevance to the Australian and UTAS contexts)

Note: in the original contexts these conclusions presented some detailed commentary on changes in ranking of issues over time, these have been largely removed to aid readability

1. Enhancing the quality of learning and teaching remains the primary driver for considering using TEL: meeting student expectations and improving access to learning for students off campus remain at second and third place respectively in the rankings. Improving access to learning for distance learners has risen to fourth place in the rankings.
2. Availability of TEL support staff is still the leading factor in encouraging the development of TEL. Central university senior management support and school/departmental senior management support have risen to second and third places in the rankings.
3. The top two barriers to TEL development are identified as lack of time and money. Departmental/school culture was ranked third.
4. Teaching, learning and assessment is the leading internal strategy influencing institutional TEL development. The key change since 2010 has been the emergence of the Corporate strategy, which has overtaken Library and learning resources as the second most commonly cited internal strategy. In contrast, the declining influence of dedicated e-learning strategies is further confirmed.
5. Evaluation activity in reviewing VLE provision is well established across the sector, with nearly two thirds of institutions which responded to the Survey having conducted a review in the last two years. Change in supplier provision for a supported system tops the list of reasons given for initiating a review.
6. Plagiarism detection, e-submission and e-assessment tools remain the most common centrally supported software in use across the sector. E-portfolio, wiki and blog tools are also well established but support for podcasting tools has declined.
7. Social networking and blog tools remain the most common non-centrally supported software controlled by staff and students. Document sharing also appears to be well established. Comparing centrally provided and non-centrally provided provision, social networking tools appear to be firmly adopted at a local level, but are not a feature of central provision. Blog provision and document sharing tools, in contrast, are well established in both domains across institutions.
8. Although supplementary use of the web to support unit delivery remains the most common use of TEL, the proportion of web supplemented modules has steadily decreased over the years since the 2003 Survey, with web dependent modules involving interaction with content and modules involving interaction with a combination of content and communication tasks both increasing in activity. This suggests that progress has been made in embedding TEL as a key element of unit

delivery, engaging students in its use as a feature of their learning experience. However, fully online courses have decreased as a proportion of TEL activity over the years and remain a niche area of activity.

9. The leading services optimised for mobile devices by institutions are access to library services, email and course announcements. Timetabling information, access to course materials and personal calendars are also popular mobile enabled services. These developments are being implemented institution-wide as centrally supported services, most commonly in support of iPad, iPhone and Android devices. The more interactive tools in support of learning and teaching activities such as collaboration software (blogs, wikis and discussion boards) have not attracted as much investment to date as centrally supported mobile services.
10. Evaluation of the impact of TEL tools and systems on the student learning experience is well established with well over half of the institutions responding to the Survey having conducted studies, but evaluation of pedagogic practices is less common.
11. The economic climate appears to have had an impact on institutional services with just under half of respondents reporting changes made in TEL support staff provision. The establishment of outsourced support for TEL services remains quite limited though across the sector and has only really been implemented for student email services and to a lesser degree for LMS hosting.
12. There has also been a financial impact on the training and development activities promoted to TEL support staff, with institutions reporting reduced attendance at events and reduced budgets as the major changes since 2010. Whilst national conferences/seminars and internal staff development remain the most promoted development activities, there has been a marked increase in the promotion of accreditation, in particular HEA and CMALT accreditation. Looking to the future, institutions anticipate increased virtual attendance at events in the future.
13. Mobile technologies have moved to the top of the list of the items making the most demand on TEL support teams. E-assessment and lecture capture remain in the list of top five demands, along with VLEs where the focus is now on how institutions change to a new system or embed use of their current VLE within their institution. Web 2.0 is now seen as much less demanding.
14. Mobile technologies also top the list of challenges which institutions face, followed by staff development, legal/ policy issues and e-assessment, with staff development, strategies/policies and support staff seen as the primary remedies.

1.3 Focus: Consortia/partnerships/Sector

Collaborate to compete: Seizing the opportunity of online learning for UK higher education: Report to HEFCE by the Online Learning Task Force, 2011 - <http://www.hefce.ac.uk/pubs/year/2011/201101/name,63891,en.html>

1.3.1 Summary of recommendations

1.3.1.1 Technology needs to enhance student choice and meet or exceed learners' expectations

Online programmes need to be of comparable quality and standard to other programmes. Students need greater support to ensure their study and academic literacy skills are fit for the digital age. Information about online programmes is lacking and often difficult to find, both for distance courses and for the online learning elements in blended programmes. This has a significant impact on student choice, domestically and internationally. Only with better information can prospective students find what they want, judge value for money and make more accurate decisions about where and how to study. Better information will give institutions competitive edge – private providers demonstrate some excellent examples of how to do this effectively – particularly given the wider context of student choice driving demand.

A number of organisations are focused on improving the information that is available to prospective students to help them judge value for money and make accurate decisions about where to study.

1.3.1.2 Investment is needed to facilitate the development and building of consortia to achieve scale and brand in online learning

Quality online learning is not a cheap option. Through collaboration, institutions can achieve significant economies of scale and more rapid development and adoption of technologies, for example in the development of learning resources or in sharing the risk of developing new forms of provision. This approach enables institutions and organisations (that are perhaps already collaborating in other areas) to exploit their joint brands and extend them into new markets, offering innovative, quality provision. Collaboration should embrace and harness the strengths of diverse institutions and organisations, across public-private and sector divides.

One way in which collaboration could be achieved is through a national competition that would look to invest around £20 million per year for five years in some three to five consortia, whether in subject disciplines, regional links or institutional groupings, building on successful collaborative ventures to ensure we continue to compete effectively in the future. Each country in the UK might wish to take forward appropriate schemes.

1.3.1.3 More and better market intelligence about international demand and competition is required

The sector needs to work together to collect and share market intelligence and, in particular, make better use of what is already produced by UK Trade and Investment (UKTI) and the British Council. Market intelligence is key, but obtaining it individually is likely to be beyond the means of many. Providers around the world are embracing, developing and embedding online learning, and may well attract students away from UK institutions, so there is clearly an imperative to improve the situation. Institutions in the UK may well be competing with each other for students, but they all share a responsibility for promoting UK HE as high quality, responsive and globally competitive.

1.3.1.4 *Institutions need to take a strategic approach to realign structures and processes in order to embed online learning*

The need to address student expectations and remain competitive should help drive developments in online learning and ensure its development and use are aligned with institutional mission. Institutions and organisations need to invest in learning, and leadership and vision at the highest level is required to bring a step-change. Such changes will not occur rapidly enough without effective organisational structures and processes. Online learning is a strategic issue, not a simple, bolt-on option. Institutions need to ensure staff understand the range of challenges and opportunities provided by online learning, and ensure what they do is cost-effective and high quality. A strategic approach across the whole institution will enable staff to overcome barriers to adoption.

1.3.1.5 *Training and development should be realigned to enable the academic community to play a leading role in online learning*

To move online learning forward needs sensitive management and coordination of effort. Staff may be willing to engage with technology to meet the expectations of students, or require encouragement and training to do so, but in both cases they need support to be effective. There needs to be a stronger understanding of the potential of web-enabled learning and the use of social media, greater prioritisation of teaching partnerships between technologists, learning support specialists and academics, and an end to the 'not invented here' syndrome. Mixed teams working together on the pedagogic and technological elements of online learning enable institutions to offer innovative, up-to-date, high-quality provision. Good practice must also be shared.

1.3.1.6 *Investment is needed for the development and exploitation of open educational resources to enhance efficiency and quality*

There is no point duplicating effort to create content that is already available and has been proven to work. Institutions can build on the existing open educational resources initiative (funded by HEFCE, managed by the JISC and the HEA) to achieve economies of scale and efficiencies. In addition they can pull in the best content and openly available learning resources from around the world and adapt them for particular courses. Students can then access a richer, wider range of material to enhance their learning experiences wherever they are studying, and leading experts can build a profile beyond their institution. There are also significant opportunities for partnership with private organisations to produce content that is interactive, responsive and pedagogically effective.

1.4 Focus: Technologies

Horizon Report: The Technology Outlook for Australian Tertiary Education 2013 - 2018

<http://www.nmc.org/publications/2013-technology-outlook-australian-tertiary-education>

1.4.1 Extract from Executive Summary

Table 1: Comparison of “Final 12” topics across three NMC Horizon research projects

NMC Horizon Report 2013 Higher Education Edition	Technology Outlook for Australian Tertiary Education 2013-2018	Technology Outlook for Australian Tertiary Education 2012-2017
Time-to-Adoption Horizon: One Year or Less		
Flipped Classroom	Learning Analytics	Cloud Computing
Massive Open Online Courses	Massive Open Online Courses	Learning Analytics
Mobile Apps	Mobile Learning	Mobile Apps
Tablet Computing	Social Media	Tablet Computing
Time-to-Adoption Horizon: Two to Three Years		
Augmented Reality	3D Printing	Digital Identity
Games and Gamification	Badges	Game-Based Learning
The Internet of Things	Information Visualisation	Open Content
Learning Analytics	Location-Based Services	Personal Learning Environments
Time-to-Adoption Horizon: Four to Five Years		
3D Printing	Flexible Displays	Digital Preservation
Flexible Displays	The Internet of Things	Massive Open Online Courses
Next Generation Batteries	Virtual and Remote Laboratories	Natural User Interfaces
Wearable Technology	Wearable Technology	Telepresence

Table 2: Top-ranked trends across three NMC Horizon research projects

NMC Horizon Report 2013 Higher Education Edition	Technology Outlook for Australian Tertiary Education 2013-2018	Technology Outlook for Australian Tertiary Education 2012-2017
Openness — concepts like open content, open data, and open resources, along with notions of transparency and easy access to data and information — is becoming a value.	People expect to be able to work, learn, and study whenever and wherever they want.	People expect to be able to work, learn, and study whenever and wherever they want.
Massive open online courses are being widely explored as alternatives and supplements to traditional university courses.	Education paradigms are shifting to include online learning, hybrid learning, and collaborative models.	Increasingly, students want to use their own technology for learning.

The workforce demands skills from college graduates that are more often acquired from informal learning experiences than in universities.	Openness — concepts like open content, open data, and open resources, along with notions of transparency and easy access to data and information — is becoming a value.	Education paradigms are shifting to include online learning, hybrid learning, and collaborative models.
---	---	---

Table 3: Top-ranked challenges across three NMC Horizon research projects

NMC Horizon Report 2013 Higher Education Edition	Technology Outlook for Australian Tertiary Education 2013-2018	Technology Outlook for Australian Tertiary Education 2012-2017
Faculty training still does not acknowledge the fact that digital media literacy continues its rise in importance as a key skill in every discipline and profession.	Faculty training still does not acknowledge the fact that digital media literacy continues its rise in importance as a key skill in every discipline and profession.	Economic pressures and new models of education are bringing unprecedented competition to the traditional models of tertiary education.
The emergence of new scholarly forms of authoring, publishing, and researching outpace sufficient and scalable modes of assessment.	Most academics are not using new and compelling technologies for learning and teaching, nor for organising their own research.	Appropriate metrics of evaluation lag behind the emergence of new scholarly forms of authoring, publishing, and researching.
Too often it is education’s own processes and practices that limit broader uptake of new technologies.	The demand for personalised learning is not adequately supported by current technology or practices.	Most academics are not using new and compelling technologies for learning and teaching, nor for organising their own research.

1.5 Focus: the future of universities

Ernst and Young: University of the future: A thousand year old industry on the cusp of profound change (Ernst& Young, 2012)

[http://www.ey.com/Publication/vwLUAssets/University_of_the_future/\\$FILE/University_of_the_future_2012.pdf](http://www.ey.com/Publication/vwLUAssets/University_of_the_future/$FILE/University_of_the_future_2012.pdf)

1.5.1 Executive summary

The current Australian university model — a broad-based teaching and research institution, with a large base of assets and back office — will prove unviable in all but a few cases.

Ernst & Young’s view is that the higher education sector is undergoing a fundamental transformation in terms of its role in society, mode of operation, and economic structure and

value. To explore these themes and future directions, we have conducted an industry-wide study of the main forces impacting the higher education industry globally and locally, and the opportunities, challenges and implications for Australian universities. We conducted a mix of primary and secondary research, including interviews with more than 40 leaders from public universities, private universities, policy makers and sector representative groups. Our interviewees included representatives from more than 20 universities, including 15 Vice-Chancellors. The topic attracted immense interest around Australia.

Our primary hypothesis is that the dominant university model in Australia — a broad-based teaching and research institution, supported by a large asset base and a large, predominantly in-house back office — will prove unviable in all but a few cases over the next 10-15 years. At a minimum, incumbent universities will need to significantly streamline their operations and asset base, at the same time as incorporating new teaching and learning delivery mechanisms, a diffusion of channels to market, and stakeholder expectations for increased impact. At its extreme, private universities and possibly some incumbent public universities will create new products and markets that merge parts of the education sector with other sectors, such as media, technology, innovation, and venture capital. Exciting times are ahead — and challenges too.

We have summarised the drivers of change of this brave new world into five key trends:

- Democratisation of knowledge and access — The massive increase in the availability of ‘knowledge’ online and the mass expansion of access to university education in developed and developing markets means a fundamental change in the role of universities as originators and keepers of knowledge.
- Contestability of markets and funding — Competition for students, in Australia and abroad, is reaching new levels of intensity, at the same time as governments globally face tight budgetary environments. Universities will need to compete for students and government funds as never before. The current Australian university model — a broad-based teaching and research institution, with a large base of assets and back office — will prove unviable in all but a few cases.
- Digital technologies — Digital technologies have transformed media, retail, entertainment and many other industries — higher education is next. Campuses will remain, but digital technologies will transform the way education is delivered and accessed, and the way ‘value’ is created by HE providers, public and private alike.
- Global mobility — Global mobility will grow for students, academics, and university brands. This will not only intensify competition, but also create opportunities for much deeper global partnerships and broader access to student and academic talent.
- Integration with industry — Universities will need to build significantly deeper relationships with industry in the decade ahead — to differentiate teaching and learning programs, support the funding and application of research, and reinforce the role of universities as drivers of innovation and growth. The university sector is critical to

Australia's future. Universities educate our leaders and entrepreneurs of the future, create new ideas and knowledge, and earn much needed export income. Universities provide opportunities for students of all backgrounds to increase standards of living for themselves and future generations. But, to succeed, universities will need to forge new business models that are dynamic, modern and fit for the decades ahead.

We see university business models becoming more diverse, and anticipate three broad lines of evolution.

1. 'Streamlined Status Quo' — Some established universities will continue to operate as broad-based teaching and research institutions, but will progressively transform the way they deliver their services and administer their organisations — with major implications for the way they engage with students, government, industry stakeholders, TAFEs, secondary schools, and the community.
2. 'Niche Dominators' — Some established universities and new entrants will fundamentally reshape and refine the range of services and markets they operate in, targeting particular 'customer' segments with tailored education, research and related services — with a concurrent shift in the business model, organisation and operations.
3. 'Transformers' — Private providers and new entrants will carve out new positions in the 'traditional' sector and also create new market spaces that merge parts of the higher education sector with other sectors, such as media, technology, innovation, venture capital and the like. This will create new markets, new segments and new sources of economic value. Incumbent universities that partner with the right new entrants will create new lines of business that deliver much needed incremental revenue to invest in the core business — internationally competitive teaching and research.

Faced with this dynamic industry landscape, Australian universities should critically assess the viability of their institution's current business model, develop a vision of what a future model might look like, and develop a broad transition plan. Deliberations on future models need to include which customer segments to focus on, what 'products' or services they need, optimal channels to market, and the ideal role of the university within the education and research value chains. Support functions will need to be streamlined and in some cases fundamentally reconfigured. Regardless of the path chosen, universities will need to align new directions to their institution's core purpose and values.

Background Paper 2: Open Educational Practices – a summary

Luke Padgett and Dr Carina Bossu, Tasmanian Institute of Learning and Teaching

2.1 The Open Movement

A range of 'Open' philosophies and models have emerged during the 20th Century as a result of several different drivers and motivations - including sharing freely, preventing duplication, avoiding restrictive (copyright) practices, promoting economic efficiencies and improving access to wide groups of stakeholders. Many of these have been driven and created by communities that recognise the benefits to themselves, and sometimes to wider groups. Some of these are listed below:

- Open source (relating to business and technology)
- Open source software
- Open standards
- Open access (research)
- Open admission
- Open curriculum
- Open knowledge
- Open data
- Open content
- Open educational resources
- Open educational practice
- Massive Open Online Courses

The last three, Open Educational Resources, Open Educational Practices, and Massive Open Online Courses have received much attention over the last couple of years from higher education institutions as they consider opportunities and technologies that will influence their operations over the next 5-10 years (Brown & Kregor, 2013). This paper explains what these open approaches are. Some of the opportunities and challenges they bring are summarised in table 5 below.

2.1.1 Open Educational Resources (OER)

Since its inception by the United Nations Educational, Scientific and Cultural Organization (UNESCO, 2002), the term "Open Educational Resources" has been re-defined several times to meet the fast evolving pace of the movement and to fit into the diverse range of contexts to which it has been applied. Most recently the OER Foundation has defined OER as:

“educational materials which are licensed in ways that provide permissions for individuals and institutions to reuse, adapt and modify the materials for their own use. OER can, and do include full courses, textbooks, streaming videos, exams, software, and any other materials or techniques supporting learning” (OER Foundation, 2011).

The OER movement and its initiatives have not only increased in numbers, they have also evolved theoretically and ideologically. One example of this evolution is the Open Educational Practice programs.

2.1.2 Towards Open Educational Practice

The growing diversity of OER initiatives coupled with better understanding of the limitations of open content, without open practices, has given rise to an important shift in thinking in the field. An early example of this shift was the Open Educational Quality Initiative (OPAL), an international network to support and promote Open Educational Practices (OEP). The project concluded that OEP have potential to lead to more open pedagogical practices and innovative cultures. In other words, a narrow focus on OER *per se* may not be enough for educational institutions to fundamentally embrace and establish effective open pedagogical practices.

The principles that underpin OEP developed by OPAL and adapted to this paper are as follow (OPAL, 2011, p. 12):

- OEP are based on OER
- OEP embraces open learning strategies
- Learning and teaching quality improvement
- Change of educational cultures
- OER as value proposition for Institutions

Despite the growing consensus that resources alone might not be enough to provide learners with a full learning experience, and might not be robust enough for institutional OER initiatives to prosper, most OER initiatives still remain predominately repositories of content (Bossu, Brown, & Bull, 2012). However, OER have continued to evolve and be morphed into other developments in education, particularly in higher education. An example of this evolution is MOOCs.

2.2 What are MOOCs?

Massive Open Online Courses (MOOCs) “offer a middle ground for teaching and learning between the highly organised and structured classroom environment and the chaotic open web of fragmented information”(Siemens, 2013, p. 6). McAuley et al. (2010, p. 4) comments that MOOCs integrate:

“the connectivity of social networking, the facilitation of an acknowledged expert in a field of study, and a collection of freely accessible online resources. Perhaps most importantly, however,

a MOOC builds on the active engagement of several hundred to several thousand “students” who self-organize their participation according to learning goals, prior knowledge and skills, and common interests. Although it may share in some of the conventions of an ordinary course, such as a predefined timeline and weekly topics for consideration, a MOOC generally carries no fees, no prerequisites other than Internet access and interest, no predefined expectations for participation, and no formal accreditation.”

At an elementary level MOOCs are:

- **Massive**, in relation to the number students that can participate at any one time. They are scalable and can involve hundreds or thousands of students. The first ever MOOC in 2008 entitled Connectivism and Connective Knowledge (CCK08) drew 2200 participants (Siemens, 2013). More recently offerings by Coursera and Udacity have exceeded 100,000 registrants (See for example, Parr, 2013). The concept of “massive” may extend beyond quantitative measures of student numbers and can be applied to course impact. For example, through a MOOC students may form sub-networks inside and outside the MOOC environment based upon language, geographical location, study and interest. This may lead to virtual and physical ‘meet-ups’. Furthermore, a MOOC can act as a catalyst for meet-ups across sectors (tertiary, higher education and corporate learning). At an individual level students use the size and diversity of networks formed within MOOCs to personalise their learning (Siemens, 2013).
- **Open**, in that they are freely accessible. However there is a great diversity as to the openness of course resources. Some for-profit enterprises like Coursera deliver MOOCs with content that is not openly licenced. That is, the content of the MOOC can be accessed for free without fee for the purpose of undertaking the MOOC, but they cannot necessarily be reused outside the MOOC.
- **Online**, in that all learning activities, content and engagement occurs online. However, learners are not prevented from arranging physical meet-ups.
- **Courses**. They have a start and finish time. A MOOC has some structure and its content is sequenced.

2.2.1 What are the models for MOOCs?

MOOCs are currently defined as either cMOOCs, xMOOCs or quasi-MOOCs (Siemens, 2013). Yuan and Powell (2013, p. 7) have commented that “different ideologies have driven MOOCs in two distinct pedagogical directions: the connectivism MOOCs (cMOOC) which are based on a connectivism theory of learning with networks developed informally; and content-based MOOCs (xMOOCs), which follow a more behaviourist approach. In many ways, this is the same learning process versus learning content debate that educationalists have had for many decades and failed to resolve”. There is also said to be a further division of xMOOCs into two models that are identified as either profit or non-profit, and they generally serve different purposes (Yuan & Powell, 2013).

Quasi-MOOCs represent a third model and generally consist of Web-based tutorials as OER, such as those of the Khan Academy and MIT's OpenCourseWare (OCW). These are not considered to be courses but rather a collection of OER intended to support learning-specific tasks. They may also be described as "asynchronous learning resources that do not offer the social interaction of cMOOCs or the automated grading and tutorial-driven format of xMOOCs" (Siemens, 2013, p. 8).

2.2.2 Predominant MOOC and Open Education initiatives

edX (<https://www.edX.org/>) is a non-profit MOOCs platform founded by Massachusetts Institute of Technology and Harvard University with \$60 million of resources contributed by the two institutions to support the project. MITx and Harvardx courses will not be offered for credit at either university but online learners who demonstrate mastery of subjects can pay a modest fee for a certificate of completion.

Coursera (<https://www.coursera.org/>) is a for-profit company, which started with \$22 million total investment from venture capitalists, including New Enterprise Associates and Kleiner, Perkins, Caufield & Byers Education. Some partner universities offer credit for their Coursera classes to those who want to pay a fee to have some extra assignments and work with an instructor and be assessed.

UDACITY (<https://www.udacity.com/>) is another for-profit start-up founded by Sebastian Thrun, David Stavens and Mike Sokolsky with \$21.1 million investment from venture capitalist firms, including Charles River Ventures and Andreessen Horowitz. When students complete a course, they receive a certificate of completion indicating their level of achievement, signed by the instructors, at no cost. Some universities began offering transfer credit for Udacity students who then take the final examination at a Pearson centre.

Udemy (<https://www.udemy.com/>) founded in 2010, with a total \$16 million investment from Insight Venture Partners, Lightbank, MHS Capital, 500 start-ups and other investors provides a learning platform, which allows anyone to teach and participate in online video classes. Udemy currently offers over 5,000 courses, 1,500 of which require payment, with the average price for classes falling between \$20 and \$200.

P2Pu (<https://p2pu.org/en/>) was launched in 2009 with funding from the Hewlett Foundation and the Shuttleworth Foundation. P2PU offers some of the features of MOOCs, but is focused on a community centred approach to provide opportunities for anyone that is willing to teach and learn online. There are over 50 courses available and the process of improving the quality of the courses relies on community-review, feedback and revision. There are no fees or credits, but P2PU's school of Webcraft adopted a badge reward system to integrate elements of gamification into the learning process.

Khan Academy (<https://www.khanacademy.org/>), another well-known free online learning

platform, is a not-for-profit educational organisation with significant backing from the Bill & Melinda Gates Foundation and Google. The Khan Academy, started by Salman Khan in 2008, offers over 3,600 video lectures in academic subjects with automated exercises and continuous assessment.

OERu - The OER university is an innovation partnership of like-minded institutions committed to creating pathways for OER learners to gain academic credit through the formal education system. The OER university is not a formal teaching institution and does not confer degrees or qualifications -- but works in partnership with accredited educational institutions to provide credit for OER learning on the pathway to awarding credible credentials.

Whereas edX offer simply Harvard and MIT's courses, Coursera participation is by invitation only and is focused on providing a platform that any university can use, and Udacity only offers its own curriculum with specialised areas. Other open education initiatives, such as Udemy, P2PU and Khan Academy have been around for a while and provide opportunities for anyone to learn with experts, peers and others outside traditional universities. Table 4 indicates the major differences between the initiatives described above in terms of financial motivation, access, fees and credits.

Table 4: Comparison of key aspects of MOOCs or Open Education initiatives (Adapted from Yuan & Powell (2013))

Initiatives	For profit	Free to access	Certification fee	Institutional credit
eDX	x	✓	✓	x
Coursera	✓	✓	✓	x✓
Udacity	✓	✓	✓	x✓
Udemy	✓	✓	✓	x✓
P2PU	x	x✓	x	x
OERu	x	✓	✓	✓

Legend: x - Not a feature ✓ - Feature present x✓ - Feature partially present

Table 5: Opportunities and challenges to consider when adopting Open Educational Practices, including MOOCs^

Who	Opportunities	Challenges
Australian Higher Education Sector	<ul style="list-style-type: none"> To assist to bridge the gap between formal and informal education. To support the diverse student cohort in Australia, for example remote and rural students, adult, distance, national, international, refugee and imprisoned students etc. To position the Australian higher education sector on the global stage. 	<ul style="list-style-type: none"> To what extent could OEP be incorporated into other regulatory frameworks (e.g. TEQSA).[#]
Institution	<ul style="list-style-type: none"> Increased interest in, and awareness of online learning. Online learning continues to outpace enrolment growth of traditional university students (Allen & Seaman, 2011). OEP is a potential vehicle for the institution to market and showcase its educational content, raise the international profile and attract more students. OEP provide an opportunity for national and international collaboration with other universities and cooperation with many different stakeholders. OEP align with the institution's agendas for social inclusion and widening participation. OEP help to create economies of scale by more efficient content production in terms of time and money (e.g. avoid "reinventing the wheel" and the replication of content). OEP can help to promote innovations and quality in teaching and learning. 	<ul style="list-style-type: none"> Government funds and priorities are not aligned and available to educational institutions to encourage the adoption of OEP. There are not policy enablers for OEP in Australia yet. There is the need to revise institutional policies and procedures on content materials to support the adoption of OEP. Traditional academic culture and mindset represent barriers for the adoption of OEP Potential for cheating and plagiarism. This concern requires attention in order for MOOCs to be developed into credit bearing courses (Young, 2012). There is no sustainable revenue model yet. Maintaining MOOCs, in particular and OEP in general, is resource intensive.
Students	<ul style="list-style-type: none"> To enhance learning through networked and collaborative learning. To promote richer learning experiences through access to learning 	<ul style="list-style-type: none"> Poorly contextualised resources Inadequate access to the Internet for remote and rural

	<p>resources available outside institutional boundaries.</p> <ul style="list-style-type: none"> • To meet students’ different needs and learning styles. • To promote and enhance lifelong learning. • Free access to Higher Education • The possibility for credit in some MOOCs. • Increased equity between educator and learner. Through OER, external experts and access through learning content, social media and participatory nature of the Web (Siemens, 2013) 	<p>students</p> <ul style="list-style-type: none"> • Lack of computer skills could also be a barrier to the successful adoption of OEP • Particularly for MOOCs, poor completion rates in comparison to traditional university courses. However, MOOCs dropouts may be driven by different factors than in traditional courses (Daniel, 2012).
<p>Academics</p>	<ul style="list-style-type: none"> • Adoption of OEP can increase collegial and subject level collaboration. • OEP could be a vehicle for a “quality agenda translated into better teaching”. • OEP add value and enrich teaching experiences. • OER and OEP can create efficiency in content development • OEP can create more opportunities for learning. • The adoption of OEP can enhance existing pedagogical approaches to learning and provide the basis for new ones. 	<ul style="list-style-type: none"> • Academics can be reluctant to make their contents available as OER. • Concerned about the quality of OER available for re-use. • Other concerns that academics might have towards OER: time-consuming, hard to find resources, low quality of the resources, etc. • Different skills and knowledge are required by individuals in order to take advantage of OEP.

^Some of the information in this table are findings from the OLT funded project: Bossu, C. (publication pending). Adoption, use and management of open educational resources to enhance teaching and learning in Australia, <http://www.olt.gov.au/project-adoption-use-and-management-open-educational-resources-enhance-teaching-and-learning-austral>

This challenge appears to have been overcome by the University of Southern Queensland as they successfully offer open units for credit in partnership with OERu. See: http://wikieducator.org/Australia's_University_of_Southern_Queensland_launches_the_first_OERu_prototype

2.3 References

- Allen, I. E., & Seaman, J. (2011). *Going the Distance: Online Education in the United States, 2011*. Wellesley, MA: Babson Survey Research Group.
- Bossu, C., Brown, M., & Bull, D. (2012). *Do Open Educational Resources represent additional challenges or advantages to the current climate of change in the Australian higher education sector?* Paper presented at the ascilite Conference. http://www.ascilite.org.au/conferences/wellington12/2012/images/custom/bossu_carina_-_do_open.pdf
- Brown, N., & Kregor, G. (2013). Background Paper 1: The State of TELT across the developed world - summary of relevant documents. (Tasmanian Institute of Learning and Teaching, Trans.). In N. Brown, G. Kregor & L. Padgett (Eds.): University of Tasmania.
- Dahlstrom, E., & EDUCAUSE Center for Applied Research. (2012). *ECAR National Study of Undergraduate Students and Information Technology, 2012*: EDUCAUSE Center for Applied Research.
- Daniel, J. (2012). Making Sense of MOOCs: Musings in a Maze of Myth, Paradox and Possibility Retrieved 14 December, 2012, from <http://sirjohn.ca/wordpress/wp-content/uploads/2012/08/120925MOOCspaper2.pdf>
- McAuley, A., Stewart, B., Siemens, G., & Cormier, D. (2010). The MOOC model for digital practice Retrieved 14 May, 2013, from https://oerknowledgecloud.org/sites/oerknowledgecloud.org/files/MOOC_Final.pdf
- OER Foundation. (2011). OER Foundation FAQs - What are OERs? Retrieved 26/12/2011, from http://wikieducator.org/WikiEducator:OER_Foundation/FAQs/Open_Education_Resources/
- OPAL. (2011). Beyond OER: Shifting Focus to Open Educational Practices: Open Education Quality Initiative.
- Parr, C. (2013). How was it? The UK's first Coursera Moocs assessed. *Time Higher Education* Retrieved 14 May, 2013, from http://www.timeshighereducation.co.uk/news/how-was-it-the-uks-first-mooc-assessed/2003218.fullarticle?dm_i=QHI,1GJAP,5ZWEWM,4YIAY,1
- Siemens, G. (2013). Massive Open Online Courses: innovation in education? In R. McGreal, W. Kinuthia & S. Marshall (Eds.), *Open educational resources: innovation, research and practice* (pp. 5-15). Vancouver: Commonwealth of Learning and Athabasca University.
- UNESCO. (2002). *Forum on the Impact of Open Courseware for Higher Education in Developing Countries. Final Report*. Paper presented at the Forum on the Impact of Open Courseware for Higher Education in Developing Countries. UNESCO, Paris. 1-3 July 2002., UNESCO, Paris.
- Young, J. R. (2012). Dozens of plagiarism incidents are reported in Coursera's free online courses August 16. Retrieved 14 May, 2013, from <http://chronicle.com/article/Providers-of-Free-MOOCs-Now/133697>
- Yuan, L., & Powell, S. (2013). MOOCs and Open Education: Implications for Higher Education White Paper. University of Bolton.

Background Paper 3: Technology links in UTAS Strategic Plans

	Strategic initiatives										
	High Level Plans			Faculty Plans							
	Open to Talent	(L & T Strategic Plan)	TELT Action Plan	Business	Health Science	Education	AMC	SET	Law	Arts	
Technology to enhance the delivery of curriculum	S3.6: Embraced technology as a key component of the learning experience and delivers curriculum with the flexibility required by students			Identify and develop one flagship flexible unit from each school to use for promotional purposes and as a 'taster' course for prospective students				Balancing e-learning/ on-line approaches with high quality face-to-face/ personalise L&T - a niche area for AMC	The Faculty will work with CALT and the PVC (S&E) to develop a process and funding arrangement to support schools to develop and deliver units for flexible delivery that preserve the quality of student experience in the units and courses offered by the Faculty.	Consider the option of introducing e-learning modules for postgraduate courses, in particular, coursework graduate certificates and/or professional development short course programs	Create efficiencies in the delivery of languages, particularly in the area of mixed more/ flexible delivery Developed improved on-line materials and a model for flexible delivery in French. Investigate potential cross-institutional collaboration in the provision of language teaching.

	Strategic initiatives									
	High Level Plans			Faculty Plans						
	Open to Talent	(L & T Strategic Plan)	TELT Action Plan	Business	Health Science	Education	AMC	SET	Law	Arts
										Develop on-line assessment tolls for Indonesian, Chinese and Japanese languages.
Technology to enhance flexibility for students		<p>Elements 1.2 d, e, i Design and deliver programs that respond to the diverse needs and circumstances of our students.</p> <p>Increase in number of units and courses that utilise flexible delivery modes</p>		<p>Complete flexibilisation of Bbus core units and two majors - increase enrolments in Bbus by 40 EFTSL by the end of 2014</p> <p>Review and refresh all flexible unit offerings as part of regular curriculum content review.</p>	<p>Increase the number of units offered by distance in the FHS</p>				<p>Introduce flexible approaches to teaching and learning in Introduction to Law and Legal Systems.</p>	<p>Redevelop Graduate Certificate of Public Policy and International Relations for Flexible delivery.</p> <p>Implement new Master of Social Work course, support the development of flexible delivery of units, and implement extension of SW into Hobart.</p>
Technology to enhance resources available for		<p>100% undergraduate units have an online presence</p>		<p>100% of undergraduate units to have an online presence</p>	<p>Ensure all new unit proposals approved through FLTC are web</p>	<p>Identification of customised resources to support new and</p>	<p>Strategic direction and pedagogical uses</p>			

	Strategic initiatives									
	High Level Plans			Faculty Plans						
	Open to Talent	(L & T Strategic Plan)	TELT Action Plan	Business	Health Science	Education	AMC	SET	Law	Arts
		<p>that provides networking opportunities, and supports the dissemination of best practice models through engagement with Open Scholars.</p> <p>An institutional policy and associated procedures that facilitates the creation and use of OERs, and an Open Scholar approach</p> <p>A support mechanism for OER technical (eg repository), copyright and quality processes</p>								
Staff professional development in		Professional learning in interactive online	2.3 Investigate the use of a diagnostic digital			Provide appropriate professional				

	Strategic initiatives									
	High Level Plans			Faculty Plans						
	Open to Talent	(L & T Strategic Plan)	TELT Action Plan	Business	Health Science	Education	AMC	SET	Law	Arts
the use of technology		pedagogies provided for UTAS	literacy skills audit for staff, and develop associated flexible support resources and pathways.			learning in regards: online pedagogy and use of technology Ensure all staff have the required skills to teach in an online environment through appropriate orientation and induction activities				
Development of student digital skills						Ensure that students have skills and capabilities in using learning technologies appropriately				

Background Paper 4: White Paper Consultation

The consultation process and contributors formal consultation meetings are listed as Appendix 1 in the White Paper.

Prior to consultation, a series of questions was circulated to attendees for their consideration. The circulated questions are reproduced below:

By the end of 2018	
Student Learning Environment	
1	... every unit has an online presence that, at a minimum, enables distribution of information and resources and is a means of rich teacher-student, student-teacher and student-student communication.
	Strongly agree Agree Neutral Disagree Strongly disagree
	<i>Explanation of Level of Agreement:</i>
2.	... students studying in any mode of delivery have the same access to all unit materials and resources.
	Strongly agree Agree Neutral Disagree Strongly disagree
	<i>Explanation of Level of Agreement:</i>
3.	... a student has access to an electronic dashboard, for every unit, that summarises their progress and achievement in units and courses and allows comparison to their peers. This information is also available to staff to aid with advising students.
	Strongly agree Agree Neutral Disagree Strongly disagree
	<i>Explanation of Level of Agreement:</i>
4.	... 80% of units are offered in at least two modes: blended (i.e. on-campus attendance required and the integration of an online presence) and fully online.
	Strongly agree Agree Neutral Disagree Strongly disagree
	<i>Explanation of Level of Agreement:</i>
5.	... a student studying in a unit that is offered both by blended delivery and fully online can swap between modes – on a week by week basis.
	Strongly agree Agree Neutral Disagree Strongly disagree
	<i>Explanation of Level of Agreement:</i>
6.	... every student will have to complete at least one unit in a fully online mode.
	Strongly agree Agree Neutral Disagree Strongly disagree

	<i>Explanation of Level of Agreement:</i>
7.	... all on-campus learning and teaching spaces are enabled with a minimum standard of equipment (furniture and technical) to facilitate flexible approaches and the melding of cohorts across campuses and online.
	Strongly agree Agree Neutral Disagree Strongly disagree
	<i>Explanation of Level of Agreement:</i>
Opening UTAS to the World	
8.	... all unit teaching resources, where legally allowable, are available online for the world to use and adapt, with appropriate recognition of the source(s).
	Strongly agree Agree Neutral Disagree Strongly disagree
	<i>Explanation of Level of Agreement:</i>
9.	... there is a comprehensive suite of online units and short courses specifically designed to be completed on a fee-basis, outside of course structures, by Tasmanian, Australian and international community members.
	Strongly agree Agree Neutral Disagree Strongly disagree
	<i>Explanation of Level of Agreement:</i>
10.	... UTAS will offer free, open short courses that are accessible to anyone
	Strongly agree Agree Neutral Disagree Strongly disagree
	<i>Explanation of Level of Agreement:</i>
11.	... UTAS will offer free open units that can be credited to our degrees or the degrees offered by other institutions.
	Strongly agree Agree Neutral Disagree Strongly disagree
	<i>Explanation of Level of Agreement:</i>
12.	... UTAS will have established partnerships for credit recognition with other open providers.
	Strongly agree Agree Neutral Disagree Strongly disagree
	<i>Explanation of Level of Agreement:</i>
Enablers	
13. there is a single source of truth for every unit outline, and this is used for all distributions of unit outline information and is openly accessible worldwide.
	Strongly agree Agree Neutral Disagree Strongly disagree
	<i>Explanation of Level of Agreement:</i>
14.	... the suite of learning and teaching systems managed by the University is complemented by the extensive use of external environments, such as cloud services and social media platforms.
	Strongly agree Agree Neutral Disagree Strongly disagree

	<i>Explanation of Level of Agreement:</i>
15.	... there will be a clear and systematic pathway for the identification, piloting and movement of technology applications into core learning and teaching operations.
	Strongly agree Agree Neutral Disagree Strongly disagree
	<i>Explanation of Level of Agreement:</i>
16.	... all UTAS students have the necessary digital skills to fully participate in technology enhanced learning experiences.
	Strongly agree Agree Neutral Disagree Strongly disagree
	<i>Explanation of Level of Agreement:</i>
17.	... all UTAS teaching staff have the necessary digital skills to design and deliver quality online or blended learning experiences to students.
	Strongly agree Agree Neutral Disagree Strongly disagree
	<i>Explanation of Level of Agreement:</i>
	Other Thoughts and Suggestions?