Institutional positioning for mobile learning initiatives at RMIT

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Abstract:

25 min 5 min Q&A

This presentation will address the structure and direction of mobile learning initiatives at RMIT University, and specifically the university-wide positioning to enhance active on-campus learning experiences via the use of mobile technologies. The presentation will report on how the affordances of mobile technologies are creating opportunities for innovative learning and teaching practices and fundamental curriculum design changes. Realisation of the curriculum development necessary to utilise the capabilities of mobile technologies is directly linked to the professional development opportunities provided to staff. The presentation will detail the scalable professional development program deployed to support academic capability development. The program, which is delivered fully online, focuses on transforming the student experience through the use of mobile technologies in an active learning experience and provides staff with a component of an accredited educational qualification.

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Introduction – The context

Trends and Challenges affecting learning and teaching over the next 5 years:

- Universally agreed that institutional budgets are tight

- Burgeoning organisational ICT cost pressures

- Increasingly a post-PC world for students and staff

Question:

At what point, and <u>how</u>, does an educational organisation begin to systematically invest in mobile technologies?

Factors of influence

- Mobile devices are intrinsically personal devices c.f. early availability patterns of PCs for student learners

- Device scaling localises to population patterns

- Elevating consumer expectations driven by massive growth in device acquisition and usage

  (IDC : 2012: 712million Smartphones (44% increase), Projected ~918 million in 2013, Tablets 78% YoY growth, 28% of US population mobile is primary Web access)

- Smartphone/Tablet consumerised with high functionality

- Ubiquitous wireless

- Cloud computing and no-fee web services

- Tablet form-factor and battery life 7+ hours

Distinctions in the University context:

1.) <u>Infrastructure:</u> Providing the infrastructure and support services for on-campus use of mobile technologies

2.) <u>Mobile Web presentation:</u> Establishing and maintaining a mobile delivery capability with all relevant websites/webservices

3.) <u>mLearning:</u> Utilising the affordances of mobile technologies specifically in the learning and teaching context

As a generality, in transition for 1, 2, and 3 (in particular)

mLearning – towards realisation of its potential

- **Situated learning**: Mobile devices allow direct online learner interactions in authentic learning environments such as Work Integrated Learning (WIL)

- **Collaborative learning**: Mobile devices provide user-centric real-time collaborative interactions and a portable means of electronic information gathering and sharing (e.g. camera/video/audio)

- **Informal/lifelong learning**: direct inclusion of mobile devices in everyday experiences provides a convenient means for translating informal experiences into an evidenced learning path.

- **Support/coordination**: Mobile devices provide real-time spatially aware access to learning resources, news, academic information, time management, address books etc.

mLearning - key institutional questions:

- What is the rationale for implementing mobile learning technologies?

- What course content and processes is suitable for utilisation on mobile computing/communication devices?

- How will staff and students need support to deal with the introduction of mLearning?

- How will the educator's role change?
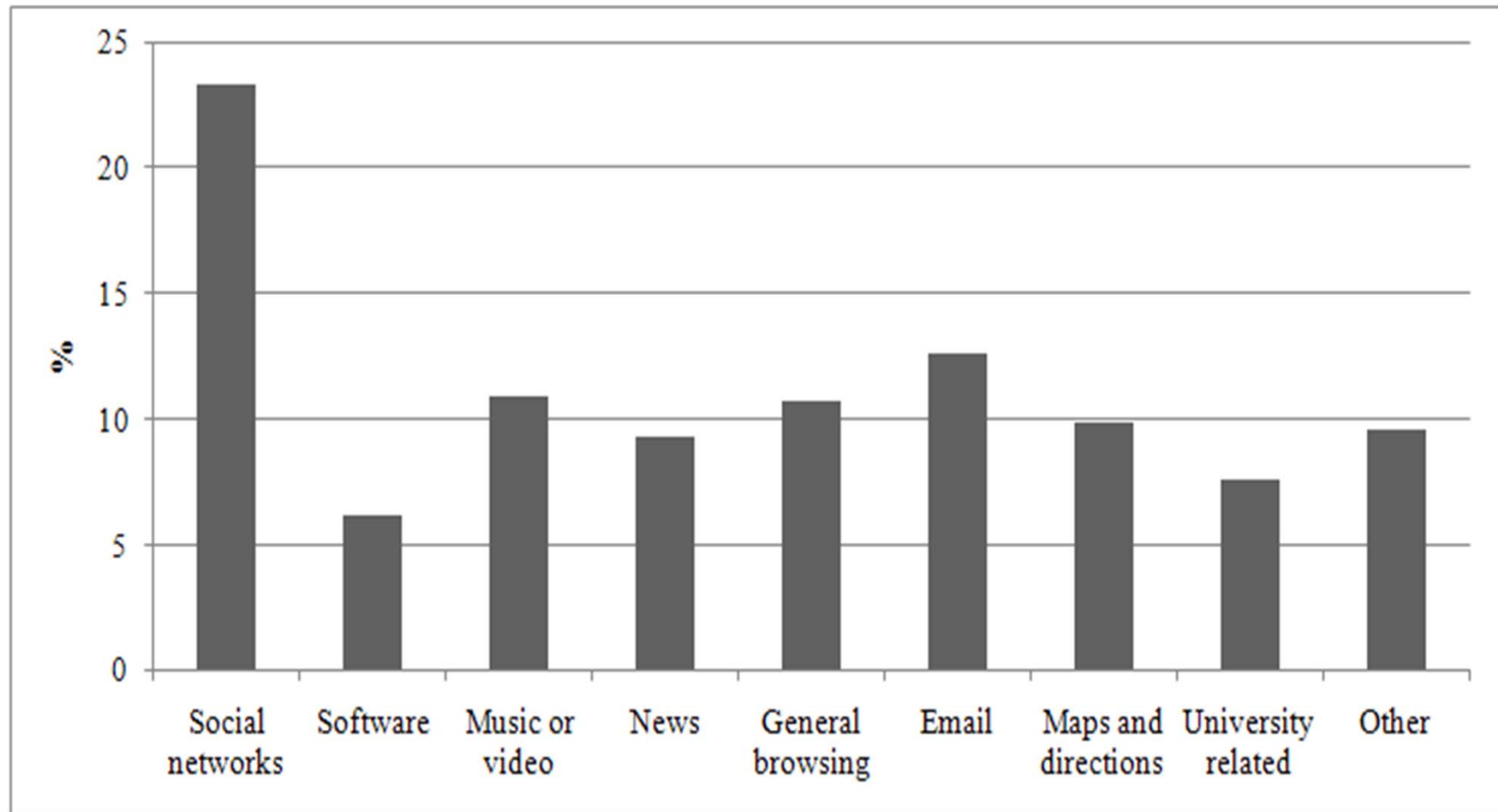
RMIT's positioning with mobile learning technologies

Understanding student patterns and attitudinal mindset

Initial surveying: November 2009, n = 242, *sample characteristics, most respondents were female (68.6%), under the age of 20 (56.93%),*

~ 50% of RMIT students accessing the Internet on mobile

Framework: Its <u>your</u> device, what do your consider to be its prime usage, what is your attitude to using this device in an active learning context on campus?

If you access the internet with your phone, do you access it for any of these reasons (at uni or elsewhere)?

Would you be willing to use your phone, laptop, netbook or other device in a lecture or tute to interact with the lecturer during a lecture (using the WiFi at no cost)?
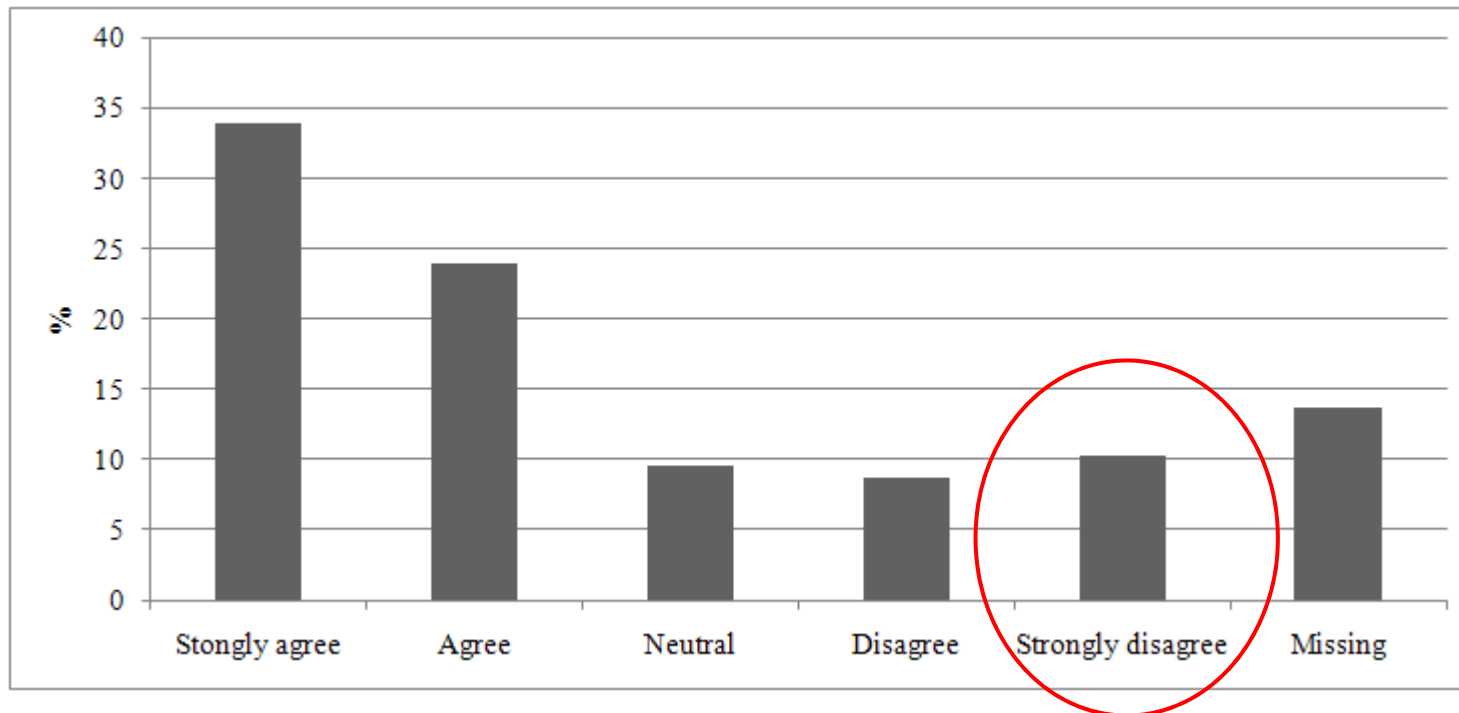
RMIT's positioning with mobile learning technologies

1.) <u>Infrastructure:</u> Strategic Goal: Anywhere, Anytime Student Computing

- Where possible educational technologies inclusive of mobile capability

2.) <u>Mobile Web presentation:</u> Web development principles for learning environments: <u>Responsive Web Design</u> (RWD)

- Allowing: dynamic customisation of interfaces for different devices and served from the same website, Adaptive visual interfaces for smartphone, tablet and desktop browsers, Use of HTML 5

3.) <u>mLearning</u>:

- Facilitation of active on-campus learning engagement

1.) <u>Infrastructure:</u> Bring your own device (BYOD)/Bring your own Application (BYOA)

- Providing technologies for effective student learning

- An artefact of consumerised ICT and highly funcational mobile devices. Considered "Issue no. 2" 2012 *EduCause top ten IT issues*

- Co-dependency between Cloud and mobile technologies for effective educational mobile web services

- A cultural fit for University requirements. Noting: once in place service not readily removed

- Part of professional trends: 43 per cent of Australian businesses allow BYOD for notebooks, 40 per cent for tablets and 54 per cent for Smartphones

- Students' expectation that the University supply them with learning technologies (in transition?)

1.) <u>Infrastructure:</u> BYOD at RMIT

- ~ 74,000 students, Projected on-campus ownership of 3 devices *phone/tablet/laptop*

- BYOD a seeded in a new Academic Building, built to facilitate new models of educational practice

- Citrix Virtual Desktop Infrastructure (VDI) provides secure access to *Mydesktop* (virtual Windows desktop), Internet and *myRMIT* (Student Portal) from RMIT wireless network

- Polices to posture check and record device based on Operating System type, validation of anti-virus and service pack levels

- Enables Staff to self provision (sponsor) guest access to wireless network

- Reducing demand on campus PCs (currently 6500+ student facing PCs)

BYOD in new Academic Building – Semester 2

- Over 1,000 students are using *myDesktop* for self-directed study

- Over 40% identifying how to connect either on their own or using support resources (brochures and self-help videos playing on digital signage screens/ online)

- Early survey: 92% of users (students and staff) satisfied with *myDesktop*

Trends with BYOA in the University context

- BYOA can utilise the many public apps that are free or low cost and students experience high reliability and usability which maps to their social experiences

- But BYOA is also introduces risks: - security of the information, - security associated with user localisation, - application providers not being able to guarantee the long term viability of a product, or absence of enterprise level service level agreements

- Students bringing the ICT infrastructure is not necessarily a panacea for budget shortfalls .. Estimated cost of BYOD initiatives ~ 1% of ICT budget

- Enduring enthusiasm for BYOD/BYOA?

2.) <u>Mobile Web presentation</u>: The App landscape - to App or not to App?

- What is the value proposition for App development?

- In-house educational App development… the extent of University involvement

- App development cycle: - 3 platforms Andorid/iOS/Windows, - Refresh in 12 months, - significant overheads for sustained use as a learning technology

- Suitability for: University level functionality, high-value functionally rich, enduring educational resources

- Development in HTML 5 will allow mobile functionality (but is not able to make calls to mobile specific functionality such as GPS/Camera/Push notifications)

3.) <u>mLearning</u> - Active on-campus learning experiences enhanced via the use of mobile technologies

- Localised initiatives based on Tablet form factor

  - University provision availability models (overcome acquisition barrier to adoption)

  - iPADs in Pharmacy

- Use of mobile phones in Personal Response Systems (PRS)

- Mobile device inclusion in large class teaching settings – the issue of competition for attention in the academic learning context

Facilitating enquiry based learning with mobile PRS technology

Rationale: Building an <u>active</u> on-campus learning experience

- Transitioning from traditional in-class feedback technology

- Utilisation of *Turning Technology Responseware*

Input: Any web device, Smartphone Apps

- Technology platform that provides LMS integration (Blackboard)

- Multi-format polling and text input
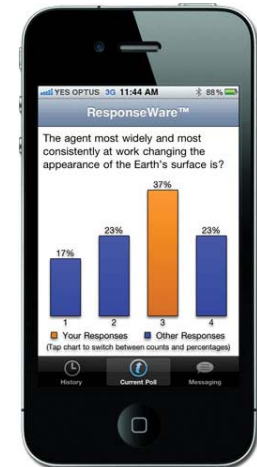
Mobile PRS technology for interactive engagement in large class settings:

Examples of question/response polling:

- Directing attention and raising awareness

- Interpreting representations

- Stimulating cognitive processes

- Promoting articulation, conflict and productive discussion

- Using formative response data to refine group interactions
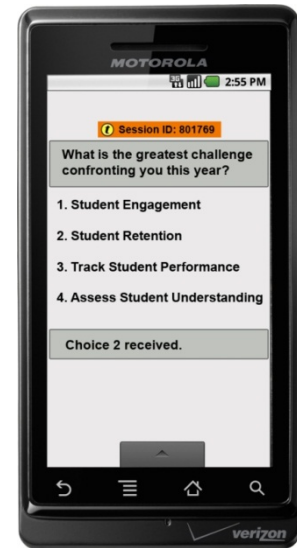
Assessment:

- Assessment with mobile devices: Can provide on-campus assessment on mobile devices

   Issues for consideration: Integrity of process, student assessment validity risk issues

Future directions

1.) <u>Infrastructure:</u> Wireless completion, universal BYOD

2.) <u>Mobile Web presentation:</u> All relevant educational technologies with mobile presentation functionality

3.) <u>mlearning:</u> More extensive re-conceptualisation of learning capabilities with mobile technologies

- Significant professional development requirements for academic staff

Scalable professional development

- The changing nature of the academic role

- 3600+ full time staff in Multiple offshore sites

- A model for fully online academic staff professional development independent of location

- Addressing base requirements for University academics

- Equivalent to 4 credit points of 12 credit point degree course

- Incorporating technology directions – mobile learning – utilising the affordances of mobile learning

- Created as a service by Open Universities Australia

Online Tertiary Teaching Practice

Learning outcomes:

- Develop online learning activities that support the intended learning outcomes of the Unit or Program.

- Demonstrate understanding of the range of educational technology at RMIT

- Show appropriate understanding of synchronous and asynchronous communication methods

- Demonstrate learning design principles when developing an online course

- Incorporate appropriate assessment tasks that enable students to demonstrate the learning outcomes of the unit of course or program and provide timely and relevant feedback.

Online Tertiary Teaching Practice

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
	Overview of Educational Technologies	**Designing for the online environment**	**Developing online learning activities**	**Online assessment**	**Synchronous / Asynchronous communication**	**Putting it all together**
Content	*Video intro* Knowledge audit and self assessment LMS, Assumptions, expectations of student cohort and course offering Examples of technologies eg, mobile technologies	*Video intro* Learning design principles and processes	*Video intro* Reflective / demonstrative / group / individual / virtual / real (eg games and quizzes)	*Video intro* Formative/Summative Self / Peer / Facilitator Grad attributes	*Video intro* Webinar, chat, collaborate, google, apps, email, discussion forums, online discussion, netiquette	*Video intro* IP, working with T&L support, accessibility issues, file types and sizes, writing for the web, images, etc
Activities	Create a personal blog and explain why you would use one or more of the technologies discussed in your unit or program	Group discussion key themes	Wiki to define terminology, examples and pros and cons	eAssessment technology	Webinar discussion	Finalise learning design of a unit of their choice including the justification for choices
	Self-assessed	**Facilitator-led**	**Facilitator-led**	**Facilitator-led**	**Facilitator-led**	**Facilitator feedback**
Assessment (Weekly Blog, Peer review, Final learning design)	Peer assessment	Key themes	Relevance of above to specific unit	Peer assessment of members of learning design		Final assignment submission

Conclusions

- Institutional advancement with mobile learning benefits from conceptualisation across three domains: Infrastructure, Mobile web presentation and mLearning

- The advent of mobile technologies places emphasis on the changing nature of the academic role and associated skills expectations

- Scalable professional development, delivered via online means, is a cornerstone of realising the affordances of mLearning

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  http://www.rmit.edu.au/browse;ID=4c7aunmp10uc

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