

Teaching with technology Masterclass: Quick wins and longer term approaches

Evidence based practice using
University of Manchester online learning systems
for effective teaching and learning
at unit and programme level

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Learning Outcomes

By the end of this session, you will be able to

- Recognise the different ways technology can complement learning across the programme of study
- Explore how to integrate the use of technology with programme and/or unit delivery both as quick wins and longer term approaches

UKPSF*

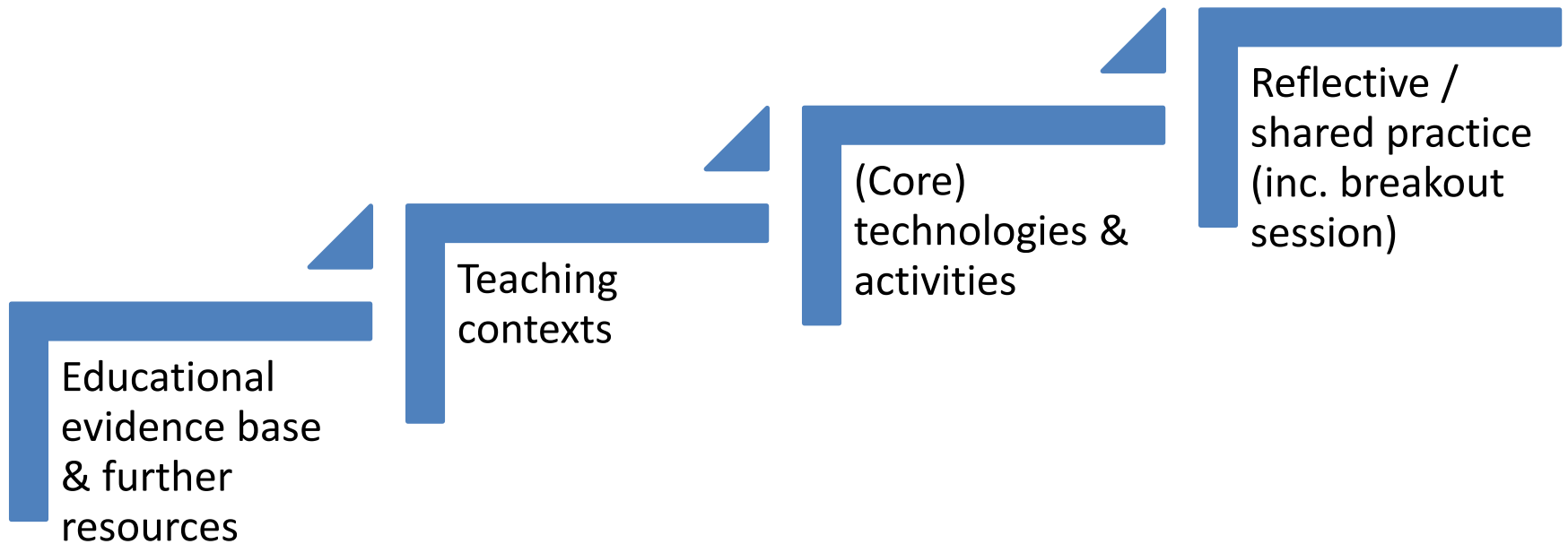
Core Knowledge K4: The use and value of appropriate learning technologies

Descriptor 2 IV: Successful engagement in appropriate teaching practices related to the Areas of Activity

Descriptor 2 V: Successful incorporation of... pedagogic research and/or scholarship...

* **UK Professional Skills Framework** from the Higher Education Academy (HEA)

In a nutshell...



Educational evidence base

- Technologically-focussed
 - E.g Horizon report – **short**/medium/long term:
 - blended learning and collaborative learning
 - Need to improve digital literacy and integrate formal and informal learning
 - Utilise adaptive learning technologies and mobile learning

Example of educational evidence base

<http://www.nmc.org/publication/nmc-horizon-report-2017-higher-education-edition/>

Key Trends Accelerating Technology Adoption in Higher Education

Long-Term Trends: Driving Ed Tech adoption in higher education for five or more years

- > **Advancing Cultures of Innovation**
- > **Deeper Learning Approaches**

Mid-Term Trends: Driving Ed Tech adoption in higher education for the next three to five years

- > **Growing Focus on Measuring Learning**
- > **Redesigning Learning Spaces**

Short-Term Trends: Driving Ed Tech adoption in higher education for the next one to two years

- > **Blended Learning Designs**
- > **Collaborative Learning**

Significant Challenges Impeding Technology Adoption in Higher Education

Solvable Challenges: Those that we understand and know how to solve

- > **Improving Digital Literacy**
- > **Integrating Formal and Informal Learning**

Difficult Challenges: Those that we understand but for which solutions are elusive

- > **Achievement Gap**
- > **Advancing Digital Equity**

Wicked Challenges: Those that are complex to even define, much less address

- > **Managing Knowledge Obsolescence**
- > **Rethinking the Roles of Educators**

Important Developments in Educational Technology for Higher Education

Time-to-Adoption Horizon: One Year or Less

- > **Adaptive Learning Technologies**
- > **Mobile Learning**

Time-to-Adoption Horizon: Two to Three Years

- > **The Internet of Things**
- > **Next-Generation LMS**

Time-to-Adoption Horizon: Four to Five Years

- > **Artificial Intelligence**
- > **Natural User Interfaces**

NMC Horizon
Report 2017 Higher
Education Edition

Educational evidence base 2

- Peer-reviewed educational research
 - Assessment – review of the literature
 - Feedback - 7 principles of good feedback practice
 - Reflective practice – recommended for maximising professional development

See electronic reading list for these and more...

The University of Manchester

Getting started....

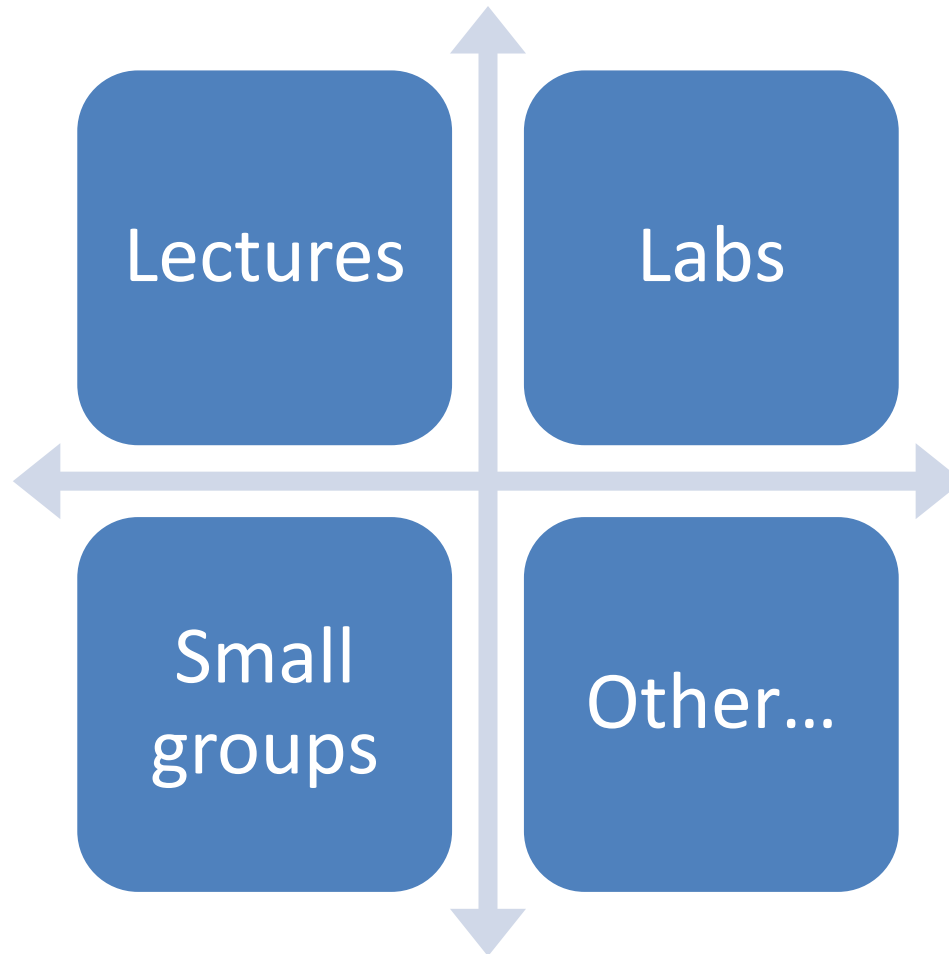
- **Key Trends Accelerating Technology Adoption in Higher Education** pages 8-20 in the NMC Horizon Report 2017 Higher Education Edition
<http://www.nmc.org/publication/nmc-horizon-report-2017-higher-education-edition/>
- **Assessment:**
Gikandi, J.W., Morrow, D. & Davis, N.E., 2011. **Online formative assessment in higher education: A review of the literature**. Computers and Education, 57(4), pp.2333–2351. Available at: <http://dx.doi.org/10.1016/j.compedu.2011.06.004>.
- **Feedback:**
Nicol, D.J. & Macfarlane-dick, D., 2006. **Formative assessment and self-regulated learning : A model and seven principles of good feedback practice** . Formative assessment and self-regulated learning : A model and seven principles of good feedback practice . Studies in Higher Education (2006),, 31(2), pp.199–218.
- **Reflective Practice:**
Williams, R. & Grudnoff, L., 2011. **Making sense of reflection: a comparison of beginning and experienced teachers' perceptions of reflection for practice**. *Reflective Practice*, 12(3), pp.281–291. AVAILABLE at: <http://dx.doi.org/10.1080/14623943.2011.571861>.

If you're interested to read further...

- **Blended learning:**
López-Pérez, M.V., Pérez-López, M.C. & Rodríguez-Ariza, L., 2011. **Blended learning in higher education: Students' perceptions and their relation to outcomes**. Computers and Education, 56(3), pp.818–826. Available at: <http://dx.doi.org/10.1016/j.compedu.2010.10.023>.
Garrison, D.R. & Kanuka, H., 2004. **Blended learning: Uncovering its transformative potential in higher education**. The Internet and Higher Education, 7(2), pp.95–105. Available at: <http://linkinghub.elsevier.com/retrieve/pii/S1096751604000156> [Accessed November 1, 2012].
- **Assessment:**
Roediger, H.L. & Karpicke, J.D., 2006. **Test-Enhanced Learning**. Psychological Science, 17(3), pp.249–255. Available at: <http://dx.doi.org/10.1111/j.1467-9280.2006.01693.x>.
Nicol, D., 2007. **E-assessment by design: using multiple-choice tests to good effect**. Journal of Further and Higher Education, 31(1), pp.53–64. Available at: <http://dx.doi.org/10.1080/0309877060116792>
- **Feedback:**
Orsmond, P. & Merry, S., 2011. **Feedback alignment: effective and ineffective links between tutors' and students' understanding of coursework feedback**. Assessment & Evaluation in Higher Education, 36(2), pp.125–136. Available at: <http://dx.doi.org/10.1080/02602930903201651>.
Panadero, E. & Jonsson, A., 2013. **The use of scoring rubrics for formative assessment purposes revisited: A review**. Educational Research Review, 9, pp.129–144. Available at: <http://dx.doi.org/10.1016/j.edurev.2013.01.002>
Lunt, T. & Curran, J., 2010. **"Are you listening please?" The advantages of electronic audio feedback compared to written feedback**. Assessment & Evaluation in Higher Education, 35(7), pp.759–769. Available at: <http://dx.doi.org/10.1080/02602930902977772>
- **Reflective practice:**
Schön, Donald A. (1983). *The reflective practitioner: how professionals think in action*. New York: Basic Books.

Reading list link: <https://manchester.rl.talis.com/lists/A14C4286-B47F-D310-C878-D919533CED3B.html>

Teaching Contexts



University of Manchester: 10 core online learning systems

What do we mean by “core”?

Online learning systems:

- **Virtual Learning Environment (VLE)** – [Blackboard](#) (eLearning and IT Services)
- [Turnitin](#) (integrated in our VLE)
- **Classroom Response Systems** (e.g. [TurningPoint](#); eLearning)
- **STACK** (from Semester 2 2018-19; eLearning and IT Services)
- [Video Portal](#) - formerly Video Library Service (Media Services/IT Services)
- [Podcasting](#) (IT Services)
- [TechSmith Relay](#) (IT Services)
- [Learning on Screen](#) – formerly Box of Broadcasts, “BoB” (British Universities and Colleges Film and Video Council)
- [Electronic Reading Lists](#) (Library)
- [My Learning Essentials](#) (Library)

Other technological considerations...

Digital_natives
 Student_characteristics
 Blended_and_online_learning_pedagogy
 Online_examinations
 Transition_from_secondary_school
 Emerging_Technologies
 WiFi
 Longevity
 Mobile_learning
 Ease_of_use
 GDPR
 Apps
 Video_hosting
 Free_tools
 Accessibility
 Mobile

- **Virtual learning Environment**
- **Turnitin**
- **Classroom Response Systems**
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Video_creation
 Social_media
 Sustainability
 Transition_from_undergraduate_studies
 Ethical_and_pastoral
 Integration_with_existing_systems
 Expectations_from_other_cultures

Breakout session briefing

Task 1: **Share examples of current technology use**

(5 minutes)

Task 2: **Align activities and tools to evidence based practice for different contexts** (lectures, labs, small groups, etc) for one area from *teaching & learning, assessment* or *feedback*

(20 minutes)

Outputs:

- examples of current practice
- ideas for evidence-based practice using core technologies

Learning Outcomes Reviewed

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Questions?