

Guidelines for flexible learning using the La Trobe University Learning Management System (LMS)

Curriculum, Teaching and Learning Centre

These guidelines for learning design at La Trobe University set out principles for flexible learning using the LMS, and provide an approach to planning flexible learning which focusses on teaching-learning activities (TLAs) and modes of engagement that are enabled or supported by the LMS.

What can be accomplished with an LMS?

Learning management systems are designed to support university teaching practices. The concept of managed learning encompasses processes such as distributing lecture notes, managing assessment and quizzes, managing grades and discussions that reflect the activities commonly associated with tertiary teaching. While it can be argued that the use of these applications improves current practice, the improvement is more likely to be one of convenience for staff and student users, than a change in the level of learning outcomes.

The goal of achieving higher learning outcomes is not necessarily accomplished using technologies such as the LMS as, in most cases, technology is applied to support the existing pedagogy and existing objectives of a subject (Conole & Fill, 2005). What is required is a focus on the pedagogical approach embodied in the subject design, combined with knowledge of how to use the LMS to support effective learning activities and how to select appropriate tools to support the planned activity.

The same approach, which emphasises the design of learning, applies to staff development in the use of the LMS. Teaching people how to use the LMS may not lead to the kind of pedagogical design that would lead to higher level outcomes (Salter, 2006). We need instead to develop capabilities in the application of effective pedagogical approaches and the use of the LMS to support them.

If the LMS is to be used to support strategic changes that may lead to high-level learning outcomes, the application of the system and the associated approach to staff development should be considered more broadly and flexibly. Through extensive research and development in higher education a range of approaches have been developed to engage students in active learning activities that lead to higher levels of analysis and synthesis as outcomes (Biggs, 2003). These approaches can be seen as a paradigm-shift from the view of students as receivers of instruction and direction through lectures (the instructional paradigm) to the view of learners as active seekers of knowledge and the capability to apply it in worthwhile ways (the learning paradigm) (Barr & Tagg, 1995). The constructivist approach to teaching and learning provides a framework for active learning approaches that are consistent with this learning paradigm (Biggs, 2003).

Biggs describes three levels of focus for teaching (Biggs & Tang, 2007, pp. 16-19):

<p>Level 1 Focus: What the student is</p> <p>Level 2 Focus: What the teacher does</p> <p>Level 3 Focus: What the student does</p>
--

Figure 1: Levels of thinking and practice for teaching

These three “levels of understanding” for teaching and learning reflect orientations in practice, with the Level 3 focus on what the student does exemplifying the learning-centred approach.

Designing a learning-centred approach

Constructivist theory emphasises that students learn what they actively do, rather than what they are told. From this perspective knowledge that is learned for an exam may be quickly forgotten afterwards. By contrast knowledge and applied capability learned through active involvement in intentional learning activities, seen by the students to be relevant and authentic, is more meaningful and is retained longer (Dochy, Segers, Van den Bossche, & Gijbels, 2003). Students who develop knowledge and capability in a meaningful context, such as resolving an enquiry that is authentic to the student’s intended profession, learn underlying theory and its application in an integrated way that builds enduring capability. Some teaching and learning principles associated with this approach are:

- Learning is an active, problem-solving process (EdTec, NSW)
- Learning is collaborative. Just as professionals tend to work in collaborative teams, active learning may involve knowledge and idea sharing and collaborative learning in small project teams (IML).
- Learning is focused on the intended learning outcomes (ILOs) for the course/unit.
- A ‘constructive alignment’ between ILOs, teaching/learning activities (TLAs) and assessment is required. Assessment should be based on the outputs of TLAs, both at the individual and team level, to demonstrate the attainment of the ILOs for the unit (Biggs & Tang, 2007).
- The teaching role is focused on ‘creating environments and experiences that bring students to discover and construct knowledge for themselves’ (Barr & Tagg, 1995, p. 15)
- The development of graduate capabilities, such as communication, teamwork and problem-solving, which are integrated into the TLAs for the unit.
- Reflection on what has been learned and on the development of graduate attribute capabilities is an important part of the learning process.

An important underlying assumption must be that learning-centred approaches should not be more demanding of staff time and resources than is normal for current practice. Units can be designed for this approach that are time and cost efficient while still producing high level outcomes. The LMS can be instrumental in enabling this (Twigg, 2003).

These principles are likely to lead to differences in the patterns of engagement, TLAs and assessment activities, and different roles for academic staff. Creating a learning environment in which students are actively seeking solutions and evidence of solutions, individually and collaboratively, changes the function of lectures and tutorials. It may lead to less time spent in structured classes and more time focused on self-directed learning activities. Students are more likely to be learning in small teams and to be working on assessable projects, with less emphasis on end of year exams. An increase in written work may require reflection on drafts, and student peer review and assessment of other students' written work. Assessment of portfolios of student work may have more importance, as will student peer review to encourage reflection on learning and contribution to teams and team projects. The LMS may play a range of roles in these teaching-learning activities, from assisting to make the activities manageable on a larger scale, to enhancing pedagogy or making activities feasible within current levels of resourcing.

Implications for the LMS

Applications of alternative approaches to teaching and learning have implications for the learning management and support systems. The current functions of the LMS will still be required, but the system should be more flexible, with easy integration of third party software, to support and enable TLAs that are consistent with the constructivist approach. Learning activities that will need online support include:

- Small team projects need online support to enable:
 - Communication among group members
 - Collaborative planning and scoping of projects
 - Collaborative writing tasks
 - Peer review of contribution to team projects
 - Peer assessment (collaborative creation of rubrics and subsequent assessment)
- Developmental learning processes may require peer review and assessment of written work to encourage quality writing and reflection on written work in comparison to other students
- Portfolios of work may be needed for portfolio assessment and to provide evidence of graduate attribute development for potential employers.

Online supports for these processes are necessary to enable learning-centred, constructivist approaches that include collaborative learning activities and outcome-focused assessment.

Principles for good practice in flexible learning

“There are really no models of e-learning *per se*” (Mayes & de Freitas, 2004, p. 4).

Flexible learning is founded on good practice principles in learning. At La Trobe University, this means applying good practice approaches to multi-campus and off-campus teaching that support staff and student interaction. These include:

- **Relevance and alignment:** Design learning with a clear purpose and relevance to students by aligning learning outcomes with assessment, content and learning activities, and the use of feedback and formative assessment. Teaching and learning will be effective when framed around the principles of constructive alignment (Biggs & Tang, 2007)
- **Providing an equivalent experience:** The University offers all students an equivalent experience of learning on all campuses, enabled by a teaching presence at all teaching venues where necessary.
- **Enhancing learning and engaging students:** A design which enhances the nature and scope of learning experiences, supports collaboration and interaction between staff and students and between students, and offers learning experiences that would otherwise be difficult to provide.
- **Inclusive teaching:** A design which does not make assumptions which exclude students on the basis of their disability, language, cultural or socio-economic background.

These principles for flexible learning are based on good practice approaches drawn from two university documents: the [Statement of the Use of Technologies to Support Learning and Teaching at La Trobe University](#), and [Different Instances of a Unit](#).

Designing flexible learning

Planning for flexible learning needs to account for a broad range of needs, contexts and parameters for a particular setting. These may include designing new units, enhancing existing units, and/or teaching to multi-campus settings. Flexible learning approaches can:

- offer blended approaches where the combination of face-to-face and online modes of teaching can bring new possibilities by extension of the spaces of interaction (Normand & Littlejohn 2006; Abraham 2007; Bonk & Graham 2006; Garrison & Kanuka 2004; Bretag & Hannon 2008)
- provide students with choices about where, when and how they learn.
- respond to the learning needs of our students effectively and efficiently by designing an inclusive curriculum to cater to a range of student needs.

To achieve effective student engagement requires a focus on the experience of learning. In practical terms, this means a shift in thinking “from content towards activity” (Goodyear, 2002, p. 66), where content becomes a “resource for activity”, rather than content and information which is transmitted to students.

Modes of engagement for flexible learning

Approaches to assessment and learning which are focussed on student activity are more likely to lead to effective learning. The LMS may act as a convenient resource supporting student activity or provide an online environment in which the activity takes place. Trobe University provides online [Teaching Technologies](#), including the LMS, Lectopia, Respondus and Turnitin, to support teaching and learning activities. To accomplish a learning-centred environment, the following *modes of engagement* using learning technologies can be used to build teaching-learning activities (TLAs) at La Trobe University.

Mode of engagement	Examples of teaching-learning activities	Examples of TLAs using the LMS (Learning Management System)*
Lectures as simple information transmission	Students listen and write notes in a lecture Students collaboratively make a mind-map of the key concepts in the lecture	Revision and study using: <ul style="list-style-type: none"> ▪ Recorded presentation via Lectopia, ▪ Subject content from LMS ▪ Readings from Library ▪ Student, collaboratively generated content, linked to from the LMS
Lecture or interactive or multimedia presentation	Students watch images, videos, demonstrations by overheads, handouts. Videoconferencing Students contribute to discussion regarding the issue or problem posed	<ul style="list-style-type: none"> ▪ videoconferencing ▪ Lecture presentations, videoclips & podcasts via Lectopia ▪ Multimedia simulations ▪ Create discussions, journals in LMS for later discussion or reflection
Individual student activity	Tutorial exercises, essays and project assignments, self-assessment, reflective writing, case studies, simulations: via journals, portfolios	<ul style="list-style-type: none"> ▪ Using websites, searching, online interactive tutorials, self-assessment, reflective writing via: online discussion, blogs, e-portfolio. ▪ Quizzes using LMS or Respondus ▪ Online assignment submission and feedback ▪ Feedback via grading forms and rubrics
Student-teacher interaction	Tutorial supervision, individual case study, investigations, surveys, fieldwork or observations, reflective tasks,	<ul style="list-style-type: none"> ▪ Online discussion and collaboration: Using LMS Communication Tools, Group manager tool.

	work-based learning, portfolio evidence, mentoring, formative assessment, online role-play.	<ul style="list-style-type: none"> ▪ Public journal using blogs * ▪ Discussion criteria and online protocols (Dabbagh 2000)
Student-student interaction	Discussion, problem-based learning, group investigations or projects, peer collaboration, peer review assessment, presentations and performances, online role-play.	Peer collaboration <ul style="list-style-type: none"> ▪ Online discussion in LMS ▪ Collaborative groupwork via wikis * ▪ Collaborative groupwork via other online tools sourced from the Web * ▪ Sharing documents with google docs* ▪ Social bookmarking with delicious* ▪ Peer review and assessment

Adapted from (Bostock, 2007)

* La Trobe University provides online [Teaching Technologies](#), including the LMS, Lectopia, Respondus and Turnitin, to support teaching and learning activities. A wide range of resources such as wikis and weblogs (blogs) are available from web sources. These may be used by La Trobe staff and students for appropriate learning activities. La Trobe University takes no responsibility for web sources it does not provide. These are used by staff and students at their own risk and discretion. To find out more about using social software for learning and teaching, see Dalsgaard, (2006), and McLoughlin & Lee, (2008).

Resources and readings

La Trobe University Resources

Statement of the Use of Technologies to Support Learning and Teaching at La Trobe, Learning Technologies Policy and Governance Committee University.
<http://www.latrobe.edu.au/teaching/assets/downloads/statement-learningtech.pdf>

Different Instances of a Unit, Secretariat, La Trobe University.
<http://www.latrobe.edu.au/secretariat/procedural-docs.html>

Flexible Learning, Teaching Resources,
<http://www.latrobe.edu.au/teaching/teaching-resources/flex-learning/index.html>

Teaching Resources. <http://www.latrobe.edu.au/teaching/teaching-resources/>
 Communication Tools, 'How Do I ...?', LMS Support, La Trobe University.
<http://www.latrobe.edu.au/lms/>

Teaching Technologies, La Trobe University.
<http://www.latrobe.edu.au/teaching/learning-technologies/index.html>

Lectopia, La Trobe University, <http://www.latrobe.edu.au/lectopia/>

LMS (Learning Management System), <http://www.latrobe.edu.au/lms/>

Respondus, La Trobe University.

http://www.latrobe.edu.au/ict/services/support/software_licenses/respondus

Teaching and Learning Resources

EDTeC, A Blended Approach to Active Learning, University of New South Wales.

http://www.edtec.unsw.edu.au/inter/dload/flex_ed/resources/blended_approach.htm

CSHE, Assessing Learning in Australian Universities. Centre for the Study Of Higher Education for the Australian Universities Teaching Committee.

<http://www.cshe.unimelb.edu.au/assessinglearning>

TEDI (Teaching and Educational Development Institute). University of Queensland.

<http://www.tedi.uq.edu.au/teaching/index.html>

IML, Student activities in lectures, Lectures, Institute of Interactive Media & Learning, University of Technology, Sydney

<http://www.iml.uts.edu.au/learnteach/resources/tm/lectures.html>

Twenty terrible reasons for lecturing, Oxford Centre for Staff and Learning Development (OCSLD), Oxford Brookes University.

http://www.brookes.ac.uk/services/ocsd/2_learntch/20reasons.html

Blogs, example website for teaching and learning, Edublogs, <http://edublogs.org/>

Wikis, example websites for higher education:

Wetpaint wikis, <http://wikisineducation.wetpaint.com/page/Higher-Ed+Wikis>

Wikispaces, <http://www.wikispaces.com>

Google docs, document sharing and collaboration. <http://docs.google.com/>

Delicious, social bookmarking. <http://delicious.com/>

References

Abraham, A. (2007). Adopting a student-centred pedagogy in the teaching of accounting to engineering students: Comparing a blended learning approach with a traditional approach. In ICT: Providing choices for learners and learning. Proceedings ascilite Singapore 2007.

<http://www.ascilite.org.au/conferences/singapore07/procs/abraham.pdf>

Barr, R. B., & Tagg, J. (1995). From Teaching to Learning: A New Paradigm for Undergraduate Education *Change*, 27(6), 13-25.

Biggs, J. (2003). *Teaching for Quality Learning at University* (Second ed.). Maidenhead: Open University Press.

Biggs, J., & Tang, C. (2007). *Teaching for Quality Learning at University* (3rd ed.). Maidenhead, England: Open University Press.

Bonk, C. & Graham, C. (Eds.), (2005) *Handbook of blended learning: Global perspectives, local designs*. San Francisco, CA: Pfeiffer Publishing.

- Bostock, S. (2007). E-Teaching: Engaging Learners Through Technology. SEDA Paper 119. Staff and Educational Development Association.
<http://www.keele.org.uk/e-t/index.htm> [Electronic Version].
- Bretag, T. & Hannon, J. (2008) Online close and personal: Developing a community of inquiry using computer mediated communication. In Meeri Hellsten and Anna Reid (Eds). *Researching International Pedagogies for Teaching and Learning, Netherlands: Springer*
- Conole, G., & Fill, K. (2005). A learning design toolkit to create pedagogically effective learning activities. *Journal of Interactive Media in Education, (08)*,
<http://www.jime.open.ac.uk>.
- Dabbagh, N. (2000). *Online-protocols*.
<http://mason.gmu.edu/~ndabbagh/wblg/online-protocol.html>. In Anderson, T. (2004) "Teaching in an Online Learning Context," in Terry Anderson & Fathi Elloumi, (2004) (eds.), *Theory and Practice of Online Learning*, Athabasca University
- Dalsgaard, C. (2006) Social software: E-learning beyond learning management systems. *European Journal of Open and Distance Learning (EURODL)*, Budapest.
http://www.eurodl.org/materials/contrib/2006/Christian_Dalsgaard.htm
- Dochy, F., Segers, M., Van den Bossche, P., & Gijbels, D. (2003). Effects of problem-based learning: a meta-analysis. *Learning and Instruction, 13*, 533-568.
- Garrison, D.R. & Kanuka, H. (2004) Blended learning: Uncovering transformative potential in higher education. *The Internet and Higher Education, 7*, 95-1005.
- Goodyear, P. (2002). Psychological Foundations of Networked Learning. In C. Steeples & C. Jones (Eds.), *Networked Learning*. London & New York: Springer.
- Mayes, J. T., & de Freitas, S. (2004). Review of e-learning theories, frameworks and models. JISC e-Learning Models Desk Study
http://www.jisc.ac.uk/whatwedo/programmes/elearning_pedagogy/elp_outcomes.aspx
- McLoughlin, C. (2004). *Achieving excellence in teaching through scaffolding learner competence*. Paper presented at the Seeking Educational Excellence. Proceedings of the 13th Annual Teaching Learning Forum, 9-10 February 2004, Perth: Murdoch University.
<http://lsn.curtin.edu.au/tlf/tlf2004/mcloughlin.html>.
- McLoughlin, C., & Lee, M. (2008). Future Learning Landscapes: Transforming Pedagogy through Social Software. *Innovate, 4(5)*,
<http://innovateonline.info/index.php>.
- Normand, C. and A. Littlejohn (2006). A model for analysis and implementation of flexible programme delivery. Gloucester, The Quality Assurance Agency for Higher Education.
- Salter, D. (2006). E-Scholars: Staff development through designing for learning. In L. Markauskaite, P. Goodyear, & P. Reimann (Eds.) *Proceedings of the 23rd annual conference of the Australasian Society for Computers in Learning in*

Tertiary Education: Who's learning? Whose technology? Sydney: Sydney University Press.

http://www.ascilite.org.au/conferences/sydney06/proceeding/pdf_papers/p57.pdf.

Twigg, C. A. (2003). Improving Learning and Reducing Costs: New models for online learning. *Educause Review*, Sept/Oct, 28-38.

<http://www.educause.edu/ir/library/pdf/erm0352.pdf>.