

E-learning and the first year experience: A framework for best practice¹

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ABSTRACT

This paper presents a progress report on Phase 1 of a project investigating optimal ways of preparing first year students for adapting to university e-learning environments, with a view to enhancing the quality of their learning experiences, particularly in online environments. This paper draws on the outcomes of the Australian contribution to a cross-national collaboration among a team of investigatorsⁱ from Australia, New Zealand, the United States and the United Kingdom who have identified a series of best practices in relation to introducing first year students to e-learning at university. The Australian study draws on the international draft framework – currently under development – with a particular focus on implications for the quality of the first year experience in Australian higher education contexts.

INTRODUCTION

The first year experience is pivotal in determining whether university students will persist with their studies, and engage with peers, faculty, and the learning environment (Krause et al., 2005). In particular, students' early university experiences determine the quality of their engagement with the institution. Information and communication technologies (ICTs) play an important role in students' early engagement opportunities and experiences, especially in e-learning settings (Krause & Coates, 2008). The last decade has witnessed a rapid growth in the use of ICTs for learning and teaching in both fully online and blended environments. With this growth comes the imperative to ensure that the embedding of ICTs in curricula is characterised by best practice in curriculum design and pedagogy, addressing student and faculty needs, and enhancing policies and practices.

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A recent study of Australian first year students (Kennedy et al., 2008) revealed that the extent to which they had embraced a range of emerging technologies, such as blogs or RSS feeds, varied significantly. The findings highlight the considerable danger in assuming that first year students are capable of employing a range of technologies in an informed way to enhance their learning at university. Similarly, a recent UK study of first year students (JISC/Ipsos MORI, 2008) found a notable disparity between the technologies that students were comfortable using for learning purposes (e.g. learning management systems), as compared with those with which they were socially familiar, yet not comfortable using in educational contexts (e.g. Web 2.0 technologies). These findings challenge the myth of the 'digital native' and further challenge practitioners and policy makers to ensure that the use of ICTs to enhance learning is underpinned by evidence-based best practice.

This paper reports on Phase 1 of a study designed to identify a range of best practices in relation to first year students' early experiences with ICTs in university e-learning environments. It provides details of a project that builds on the findings of research undertaken in Australia, New Zealand, the UK and the US, in order to develop a framework for best practice in assisting students to engage with e-learning early in their first year. This framework is designed to complement and enhance existing resources, including the benchmarks for the use of technology in learning and teaching developed by the Australasian Council on Open, Distance and E-Learning (ACODE, 2008).

Project findings will feed into an international initiative being undertaken under the auspices of the IMS Global Learning Consortium (IMS) which is an international non-profit member organization that creates standards and best practices for the development and adoption of technologies that enable high quality, accessible and affordable learning experiences (see Endnote 1 for a list of current project members). The IMS project focuses on a number of key areas as potential candidates for the development of best practices. These include: assessment and communication of expectations; student recruitment and advising; learning design; functional technology; technology literacy and support for students and, staff and faculty; and broader non-technical online student support for first year students. The project is premised on the fundamental importance of institutional management, policies and quality assurance and enhancement practices, though this is not its only focus.

E-LEARNING BEST PRACTICES IN THE AUSTRALIAN CONTEXT

The Australian project reported in this paper places particular emphasis on the relationship between the proposed areas of effective e-learning practices in first year and existing Australian work in this area, particularly the ACODE benchmarks. The primary goal of Phase 1 of the Australian project has been to contribute to development of the draft best practice framework and to gather data from a sample of faculty who are teaching online courses in order to determine the extent to which these draft guidelines might usefully complement existing benchmarking activities such as those initiated by ACODE. The results of the study of faculty experiences in online environments are reported in another paper (Krause & McEwen, forthcoming).

Phase 2 of this project will seek to examine ways in which these areas of best practice might be adapted for use in the school and vocational education sectors.

This will be important if we are to promote e-learning best practice within the school and tertiary contexts and if we are to facilitate effective transitions between the sectors in relation to developing the e-learning skills and capacities of Australia's young people. Phase 2 will also road-test the draft best practice areas with key stakeholders from the Australian higher education sector to determine their relevance and the extent to which they might complement existing benchmarking activities. The particular contribution of the present study is to place the spotlight on the unique needs of first year students as they make the transition to e-learning contexts in higher education.

The eight ACODE benchmarks for the use of technology in learning and teaching are listed in Table 1 below. They are designed:

“to support continuous quality improvement in e-learning. The approach reflects an enterprise perspective, integrating the key issue of pedagogy with institutional dimensions such as planning, staff development and infrastructure provision. The benchmarks have been developed for use at the enterprise level or by the organisational areas responsible for the provision of leadership and services in this area.”
(ACODE, 2008)

Table 1: Preliminary comparison: ACODE¹ Benchmarks and SIEL² draft framework

ACODE Benchmark Areas	Student-induction to E-Learning BPA³ Draft Framework
1. Institution policy and governance for technology supported learning and teaching	BPA7: Institutional management; may incorporate BPA1: Assessment and communication of expectations and BPA2: Recruitment and advisement
2. Planning for, and quality improvement of the integration of technologies for learning and teaching	
3. Information technology infrastructure to support learning and teaching	BPA4: Functional technology
4. Pedagogical application of information and communication technology	BPA3: Learning and the learner (some overlap)
5. Professional/staff development for the effective use of technologies for learning and teaching	BPA5: Technology literacy and support
6. Staff support for the use of technologies for learning and teaching	
7. Student training for the effective use of technologies for learning	
8. Student support for the use of technologies for learning	BPA3: Learning and the learner (some overlap)
	<i>Specific first year issues addressed</i>
	BPA1: Assessment and communication of expectations
	BPA2: Recruitment and advisement
	BPA3: Learning and the learner
	BPA6: Non-technical online student support services

¹ ACODE: Australasian Council on Open, Distance and E-Learning; ² SIEL: Student Induction to E-Learning project; ³ BPA: best practice areas. See Appendix 1 for more detailed components of each BPA.

The proposed “Best Practice Areas” outlined in Table 1 (see also Appendix 1) provide a complement to the ACODE benchmark areas, with an acknowledged focus on specific needs of first year students in transition. Several important features of the proposed framework for best practice in first year e-learning include:

1. the role of advising and assessing commencing undergraduates’ readiness to engage in e-learning. This may and should occur well before students’ first encounter with the formal university e-learning environment, particularly at a time when universities are encountering increased numbers of under-prepared students who may have limited cultural and social capital as they enter the arena of higher education.
2. the importance of recognizing the whole student experience, from managing pre-entry expectations, to supporting first year students with specific technology training, to providing a range of non-technical support services online as part of a top quality technology-enabled first year experience.

FOCUSSING ON THE LEARNER IN E-LEARNING ENVIRONMENTS

The Australian contribution to the Phase 1 of the framework development has focussed particularly on Best Practice Area 3: *Learning and the learner*. As shown in Appendix 1, components in this area include:

- Pedagogical underpinning
- Learner-centered approach
- Learner engagement and community building
- Designed for retention
- Assessment tasks, feedback and evaluation

The priority for this project is to ensure that all best practices are derived from a robust evidence base. Preparation of the best practices has thus entailed an extensive survey of the literature in this growing field of investigation. What follows is an illustrative selection of how each component of the best practice areas in the framework is supported from the literature. Every effort has been made to ensure that the components are supported by empirical research studies, however we are still in the process of documenting the research underpinning these best practices. It is our hope that as a result of presentations such as this, colleagues will contribute their own research evidence to support these components of good practice by visiting the IMS Global Learning Consortium Community Forum at <http://www.imsglobal.org/community/forum/>.

Illustrative examples are provided in Appendix 2 of two subcomponents (*pedagogical underpinning* and *learner engagement and community building*) of Best Practice Area 3: *Learning and the learner*, with selected research evidence. Each illustrates the extent to which empirical studies have been used to inform development of the principles of best practice for each area of activity.

The research underpinning Best Practice Area 3: *Learning and the learner* points to the critical importance of taking account of the unique and changing needs of learners when planning to integrate e-learning into the first year curriculum. It should be emphasized that many of the components of best practice outlined in this framework represent best practice whether in e-learning environments or not. However, there are clearly unique challenges and opportunities inherent in the use of

e-learning approaches and it is these that the framework seeks to highlight.

For example, as for face-to-face learning experiences, first year students in online environments are likely to remain in a course if they are satisfied with the course and can commit time to their studies (Herbert, 2008). Nevertheless, some key dimensions of the e-learning experience may play a particular role in ensuring students' satisfaction. These include providing a cohort- and team-based learning experience with extensive faculty feedback and interaction to address isolation concerns that so often arise when students are studying in online environments; providing application-based content and activities, and helping students meet expectations for personal growth, particularly in the first year.

It is also crucial to offer a well-managed program and ensure that faculty members are both interested and competent in teaching in the online learning environment (Bocchi et al., 2004). This highlights the critical importance of supporting both students and faculty (see Best Practice Area 5, Appendix 1) in e-learning environments.

IMPLICATIONS AND WAYS FORWARD

The framework for best practice in first year e-learning will be relevant to all those charged with engaging first year students through technology-enhanced learning, including online distance mode, blended learning or hybrid learning contexts. It is designed to provide a basis for faculty, administrators, educational designers and librarians to work together to ensure that e-learning becomes a positive feature of the first year experience. During Phase 2 of this project we plan to consult widely with representatives of these key stakeholders, including peak bodies such as ACODE, in order to explore ways in which these guidelines for best practice might be used to enhance university learning and teaching, particularly for first year students.

The framework recognises that e-learning good practice shares much in common with that of effective learning and teaching in face-to-face settings; however it also recognises the unique challenges that students, faculty, staff and institutions face as they seek to optimise technology use to enhance the quality of student learning. This study comes at a time when several studies have identified the dangers about making assumptions regarding first year students' digital literacy and their capacity to engage fully and effectively in e-learning environments (see for example Kennedy et al., 2008). Moreover, in the context of a global financial crisis, it is expected that the numbers of students in undergraduate higher education will increase significantly as the undergraduate degree of the 21st century becomes the higher school certificate of the 20th century. In other words more students are entering higher education as the labour market weakens and as industry demands higher qualifications from workers.

In this context, we can expect increasing numbers of commencing undergraduate students who are under-prepared and perhaps even lacking in motivation to complete their study – particularly if they simply see university study as a placeholder until the labour market strengthens. These contextual factors mean that it is particularly important for universities to be proactive in preparing students for engagement in university learning environments, including providing them with

sound induction and preparation for e-learning experiences. As increasing numbers of students from equity groups enter our higher education system, the need to take account of the holistic support represented in this draft best practice framework takes on even greater urgency.

Phase 2 of this project will take into consideration the importance of fostering best practice in the school and vocational education e-learning environments. Effective transitions between these sectors will be fostered if young people are supported through a framework that prepares them to optimise e-learning opportunities from the early school years through to post-school education. Consideration will also need to be given to strategies for supporting mature learners engaging with e-learning for the first time. This group represents an increasing proportion of the university population and highlights the need to ensure that any e-learning framework should be adaptable to the unique needs of various demographic subgroups in the educational arena.

REFERENCES

- Australasian Council on Open, Distance and E-Learning. (2008). ACOE Benchmarks. Retrieved February 12, 2009, from http://www.acode.edu.au/projects_resources.php
- Barnard, L., Paton, V. O., & Rose, K. (2007). Perceptions of online course communications and collaboration. *Online Journal of Distance Learning Administration, 10*(4). Available online from: [Hhttp://www.westga.edu/~distance/ojdl/winter104/barnard104.html](http://www.westga.edu/~distance/ojdl/winter104/barnard104.html)
- Beetham, H. (2007). An Approach to Learning Activity Design. In H. Beetham & R. Sharpe (Eds.), *Rethinking Pedagogy for a Digital Age: Designing and Delivering E-Learning* (pp. 26-40). London & New York: Routledge.
- Bilham, T. (2006). Creating and sustaining online communities of practice, *AISHE Conference 2006: All Ireland Society for Higher Education (AISHE)*.
- Bocchi, J., Eastman, J. K., & Swift, C. O. (2004). Retaining the Online Learner: Profile of Students in an Online MBA Program and Implications for Teaching Them. *Journal of Education for Business, 79*(4), 245-253.
- Britain, S. (2007). Learning Design Systems. In H. Beetham & R. Sharpe (Eds.), *Rethinking Pedagogy for a Digital Age: Designing and Delivering E-Learning* (pp. 103-114). London & New York: Routledge.
- Carr, S. (2000). As Distance Education Comes of Age, the Challenge Is Keeping the Students. *Chronicle of Higher Education, 46*(23), A39-41.
- Chickering, A. W., & Erhmann, S. C. (2008). Implementing the Seven Principles: Technology as Lever.
- Conole, G. (2004). E-Learning: The hype and the reality. *Journal of Interactive Media in Education, 12*, 1-18.
- Craig, A., Coldwell, J., & Goold, A. (2007). Roles and responsibilities in online learning: Perceptions of students. Presented at *Institute of Teaching and Learning Conference*. Melbourne, VIC: Institute of Teaching and Learning, Deakin University. 24-25 September, 2007.

- Delialioglu, O., & Yildirm, Z. (2007). Students' perceptions on effective dimensions of interactive learning in a blended learning environment. *Educational Technology & Society*, 10(2), 133-146.
- Denholm, J. W. (2004). *Flexible delivery in Higher Education: Global scan: Case studies* (Discussion paper). Glasgow, UK: Quality Assurance Agency for Higher Education (QAAHE).
- DiRamio, D., & Wolverton, M. (2006). Integrating Learning Communities and Distance Education: Possibility or Pipedream? *Innovative Higher Education*, 31(2), 99-113.
- Goodyear, P., & Ellis, R. A. (2008). University students' approaches to learning: Rethinking the place of technology. *Distance Education*, 29(2), 141-152.
- Hameed, S., Badii, A., & Cullen, A. J. Effective E-Learning Integration with Traditional Learning in a Blended Learning Environment. Paper presented at the EMCIS 2008. 2008. Retrieved February 8, 2009, from http://www.iseing.org/emcis/EMCIS2008/Proceedings/Refereed%20Papers/Contributions/C%2037/Blended_Learning%20efficiency%20asesment-OKOK.pdf.
- Hannon, J., & D'Netto, B. (2007). Cultural diversity online: student engagement with learning technologies. *International Journal of Educational Management*, 21(5), 418-432.
- Herbert, M. (2008). *Staying the Course: A Study in Online Student Satisfaction and Retention*. Online Journal of Distance Learning Administration, 9(4). <http://www.westga.edu/~distance/ojdla/winter94/herbert94.htm>
- Hu, C. (2007). "Here are my best online contributions and why": Students' perceptions of good online participation. Presented at 22nd *ASCILITE Conference*. Singapore: Australasian Society for Computers in Learning in Tertiary Education (ASCILITE). 2-7 December, 2007.
- Hung, D. & Chen, D. (2001). Situated Cognition, Vygotskian Thought and Learning from the Communities of Practice Perspective: Implications for the Design of Web-Based E-Learning. *Educational Media International*, 38(1), 4-12.
- Ipsos MORI. (2007). *Student expectations study: Key findings from online research and discussion evenings held in June 2007 for the Joint Information Systems Committee* (Briefing paper). Bristol: Joint Information Systems Committee (JISC).
- Ipsos MORI. (2008). *Great expectations of ICT: How higher education institutions are measuring up*. Retrieved September 20, 2008, from <http://www.jisc.ac.uk/publications/publications/greatexpectations.aspx>
- Joint Information Systems Committee. (2004). Designing for Learning: An Update on the Pedagogy Strand of the JISC Elearning Programme. Retrieved February 8, 2009, from www.jisc.ac.uk/elearning_pedagogy.html.
- Keller, J. M. (2008). First principles of motivation to learn and e³-learning. *Distance Education*, 29(2), 175-185.
- Kennedy, G. E., Judd, T. S., Churchward, A., Gray, K. & Krause, K. (2008). First year students' experiences with technology: Are they really digital natives? *Australasian Journal of Educational Technology*, 24(1), 108-122.
- Kennedy, G., Judd, T., Churchward, A., Gray, K., & Krause, K. (2008). First year students' experiences with technology: Are they really digital natives? *Australasian Journal of Educational Technology*, 24(1), 108-122.
- Kenny, J. (2003). *Student Perceptions of the Use of Online Learning Technology in Their Courses*. Melbourne: RMIT

- Krause, K. (2007a). Beyond classroom walls: Students' out-of-class activities and implications for teaching and learning. *Nagoya Journal of Higher Education*, 7, 301-318.
- Krause, K. (2007b). E-learning and the e-generation: The changing face of higher education in the 21st century. In J. Lockard & M. Pegrum (Eds.), *Brave new classrooms: Educational democracy and the internet* (pp.125- 140). New York: Peter Lang Publishing.
- Krause, K. (2007c). Social involvement and the transition to higher education. *The Journal of the First-Year Experience & Students in Transition*, 19(1).
- Krause, K., & Coates, H. (2008). Students' engagement in first-year university. *Assessment and Evaluation in Higher Education*, 33(5), 493-505.
- Krause, K., Hartley, R., James, R., & McInnis, C. (2005). *The first year experience in Australian universities: Findings from a decade of national studies*. Canberra: Australian Department of Education, Science and Training.
- Laws, D., Howell, L., & Lindsay, N. K. (2003). Scalability in Distance Education: "Can We Have Our Cake and Eat It Too?" *Online Journal of Distance Learning Administration*, 6(4).
- Mayes, T., & de Freitas, S. (2007). Learning and e-learning: The role of theory. In H. Beetham & R. Sharpe (Eds.), *Rethinking pedagogy for a digital age: Designing and delivering e-learning* (pp. 13-25). London & New York: Routledge.
- McLoughlin, C., & Visser, T. (2003). Quality e-learning: Are there universal indicators?, *16th Open and Distance Learning Association of Australia*. Canberra: Open Distance Learning Association of Australia (ODLAA).
- O'Brien, B. S., & Renner, A. L. (2002). Online Student Retention: Can It Be Done?, *ED-MEDIA Conference*. Denver, CO.
- Sheely, S., Veness, D., & Rankine, L. (2001). Building the Web Interactive Study Environment: Mainstreaming Online Teaching and Learning at the University of Western Sydney. *Australasian Journal of Educational Technology*, 17(1), 80-95.
- Siragusa, L. (2002). Research into the effectiveness of online learning in higher education: Survey findings, *Western Australian Institute for Educational Research Forum*. Edith Cowan University: Western Australian Institute for Educational Research (WAIER).
- Wheeler, S. (2005). Creating social presence in digital learning environments: A presence in mind?, *TAFE Conference*. Mooloolaba, QLD: TAFE Queensland.
- Yorke, M., & Longden, B. (2008). *The first-year experience of higher education in the UK: Final report*. York: The Higher Education Academy.

¹ IMS Global International Project Group, as at February 2009

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APPENDIX 1

Student Induction to E-Learning: A Draft Framework Best Practice Areas

(Note: these headings represent the draft framework as at February 2009. It is subject to change and revision based on stakeholder and project member feedback through 2009)

1. Assessment and communication of expectations
2. Recruitment and advising
3. Learning and the learner
4. Functional technology
5. Technology literacy and support
6. Non-technical online student support
7. Institutional management

Each best practice area comprises a series of components, drawn from the literature, as outline below.

BPA 1: Assessment and communication of expectations

includes

- ✓ Identify rationale for expectations
- ✓ Incorporate expectations in formal systems and processes
- ✓ Identify student expectations
- ✓ Communicate expectations to students

BPA 2: Recruitment and advising

includes

- ✓ Academic and professional advisement
- ✓ Assessment of readiness and appropriateness for e-learning
- ✓ Management plan for students at-risk

BPA 3: Learning and the learner

includes

- Pedagogical underpinning
- Learner-centered approach
- Learner engagement and community building
- Designed for retention
- Assessment tasks, feedback and evaluation

BPA 4: Functional technology

includes

- ✓ Definition and management of minimum expectations for software and hardware
- ✓ Front-end interface and functionality
- ✓ Back-end systems and functionality

BPA 5: Technology literacy and support

includes

- ✓ Minimal initial competency and access
- ✓ Student training and support
- ✓ Faculty induction into the e-learning community and all that entails
- ✓ Faculty members' technical skills training
- ✓ Faculty e-learning pedagogy

BPA 6: Non-technical online student support

includes

- ✓ Tutoring (professional and peer)
- ✓ Textbooks
- ✓ Registration
- ✓ Financial services
- ✓ Personal counselling
- ✓ Transcript and records
- ✓ Learning resources and library
- ✓ Introduction to support teams and primary contact
- ✓ Student governance
- ✓ Time, workload and information load management
- ✓ Remediation

BPA 7: Institutional management

includes

- ✓ Economic imperative
- ✓ Legal and historical context
- ✓ Policies and mission statements
- ✓ HR and division of labour

APPENDIX 2

Selected components of Best Practice Area 3: Learning and the learner

3.1. Pedagogical underpinning

- 3.1.1. Understand the learning process (Bilham, 2006; Conole, 2004; Hameed, Badii, Cullen, 2008).
- 3.1.2. Hybridise the pedagogical philosophies, theories and instructional-design (Delialioglu & Yildirm, 2007)
- 3.1.3. Design learning environments that are more holistic (Goodyear & Ellis, 2008; Ipsos MORI, 2007, 2008).
- 3.1.4. Manage learning: provide navigation and learner control (Beetham, 2007)
- 3.1.5. Align discourse and practice (Sheely, Veness & Rankine, 2001).
- 3.1.6. Consider content and the learning object: discipline and the program type, make it relevant to students' personal life experience, integrate interpersonal and social elements (Conole, 2004; Hameed, Badii, Cullen, 2008; Laws, Howell & Lindsay, 2003).
- 3.1.7. Consider structure: Sequencing of units, implement effective modularisation of content (Siragusa, 2002).
- 3.1.8. Consider processes: encourage deep-learning experiences, promote active learning, reward collaboration, negotiation as well as autonomy, be goal-oriented, re-use materials, provide sufficiently complex learning tasks, balance individual and collaborative tasks, allow time and space for reflection on learning, cultivate self-directed learners, engage with students, provide a range of activities to meet the various needs, styles, etc. (associative, cognitive and situative), implement different kinds of conventions for different types of learning medium, provide high quality assessments that focus on unique and demonstrative products, visual delivery modes that promote higher level thinking and inquiry and high quality, and visual design that promotes understanding and student satisfaction (Beetham, 2007; Bilham, 2006; Hung & Chen, 2001; Mayes & de Freitas, 2007; McLoughlin & Visser, 2003)
- 3.1.9. Consider context: usability; student prior learning and social background; professional learning opportunities (JISC, 2004; Kennedy et al., 2008; Krause, 2007b; Yorke & Longden, 2008).
- 3.1.10. Consider learning outcomes and objectives: Align assessment processes with learning outcomes, create new learning experiences and expand the knowledge base (Britain, 2007).
- 3.1.11. Provide flexible, clear and easy to follow courses that allow them to move at their own pace (Denholm, 2004; Kenny, 2003).

3.3. Learner engagement and community building

- 3.3.1. Generate interdependencies that benefit from the diverse expertise in the learning community by encouraging students to interact and dialogue with staff (community of learning) as well as by developing reciprocity and cooperation among students (Barnard, Paton & Rose, 2007; Delialioglu & Yildirm, 2007; DiRamio & Wolverson, 2006; Keller, 2008).
- 3.3.2. Ensure students are comfortable with collaboration in order to negotiate and construct knowledge (Chickering & Erhmann, 2008).
- 3.3.3. Build and sustain motivation by providing prompt and regular feedback, gathering data about the students, gathering information about the learning environment, carrying out an audience analysis to determine potential motivational problems, (Keller, 2008; McLoughlin & Visser, 2003; Yorke & Longden, 2008).
- 3.3.4. Encourage students to engage with course material (Barnard, Paton & Rose, 2007; Keller, 2008).
- 3.3.5. Engage students both in and out of class (Krause, 2007a,c).
- 3.3.6. Train faculty members in ways of stimulating and nurturing online students' interests as well-trained academic tutors contribute to student course completion and quality of programs (Craig, Coldwell, & Goold, 2007; Hu, 2007).
- 3.3.7. Provide quality course design (Siragusa, 2002).
- 3.3.8. Capitalise on social and collaborative communication with others who have shared interests (Topper, 2007).
- 3.3.9. Carry out an environmental analysis to critique the existing material and systems (Hung &

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- Chen, 2001).
- 3.3.10. Develop the learning environment (Beetham, 2007; McLoughlin & Visser, 2003).
 - 3.3.11. Provide a space / place for social interaction (a discussion area 'just 4 fun' for example) (Siragusa, 2002).
 - 3.3.12. Bridge "the psychological or perceptual gap between students and tutors" (Wheeler, 2005, p. 8).
 - 3.3.13. Create a dynamic course by integrating motivational tactics into the instructional design, by encouraging regular participation in discussion forums (Beetham, 2007).
 - 3.3.14. Allow for incentive maintenance that provides motivational momentum (Hameed, Badii, Cullen, 2008).
 - 3.3.15. Use learning contracts to encourage students to take responsibility for their own learning as well as initiate and maintain trust (DiRamio & Wolverson, 2006; O'Brien & Renner, 2002).