Carpe Diem: seizing each day to foster change in e-learning design

Alejandro Armellini and Sylvia Jones
University of Leicester and Open University

ABSTRACT

The ADELIE project (Advanced Design for e-Learning Institutional Embedding) has been at the heart of change in e-learning design at the University of Leicester since October 2006. This article presents the findings of research into the pedagogical change process experienced by academics as a result of ADELIE's interventions.

ADELIE's key lever for change is a discipline-specific two-day workshop for departmental course teams called Carpe Diem. The workshop generates, facilitates and disseminates incremental change in technology-enhanced course design. Prior to Carpe Diem, most course teams place emphasis on the transmission of course content via the institutional virtual learning environment. As a result of the Carpe Diem intervention, focused, structured online activities become central to the course re-design process. Post-Carpe Diem designs evidence a shift towards interactive and collaborative approaches to learning. This change is having a positive impact on the experience of on-campus, blended and distance learners.

This article presents the results of research into pedagogical change in approaches to e-learning through analysing the impact of Carpe Diem on participants' e-learning designs.

INTRODUCTION

Tutors and institutions in higher education are not yet capitalising on the full potential offered by e-learning (HEFCE, 2005). There is widespread concern that e-learning has failed to penetrate the established teaching practices of universities and hence deliver innovation in pedagogy (Zemsky and Massey, 2004; Hedburg, 2006). The results of a pilot e-learning Benchmarking exercise conducted at the University of Leicester in early 2006 revealed that teaching staff were not exploiting the full potential of Blackboard, the institutional virtual learning environment (VLE). Other learning technologies were not being utilised effectively by most academic staff. The potential for e-learning was not being attained. Designing for effective e-learning was thus identified as a key area to be strategically addressed.

Funded by the UK's Higher Education Academy to address this need, the ADELIE[1] project (Advanced Design for E-Learning Institutional Embedding) started at Leicester in October 2006. ADELIE was designed to build capacity in designing for learning throughout the University of Leicester and research the process of change in e-learning practice. This

---

[1] www.le.ac.uk/adelie

article focuses on how the ADELIE interventions have changed individuals' and teams' understanding of e-learning design and practice, and how that shift in understanding is now influencing provision.

LEARNING, TEACHING AND TECHNOLOGY IN HIGHER EDUCATION

The way tutors teach in higher education is the result of their beliefs and presumptions about teaching and learning (Bain and McNaught, 2006; Trigwell et al., 1994; Trigwell and Prosser, 1996). Based on their orientations, tutors adopt a teacher-centred or learner-centred pedagogical approach (Samuelowicz and Bain, 1992 and 2001; Prosser and Trigwell, 1998) although Kember (1997) suggests that there is a transitional orientation between these two. Teacher-centred learning is predominantly concerned with the transfer of information from tutor to student. It is often referred to as transmission teaching, as there is little involvement of the teacher in the learning process, other than in transmitting content. Learner-centred approaches give more independence to the learner, attempt to facilitate understanding through more active engagement with content and draw on dialogic processes (Samuelowicz and Bain, 2001). This orientation to teaching encourages deep learning (Ramsden, 2003), which involves the critical analysis of new concepts, connecting them to prior knowledge and the ability to apply the new learning in a variety of contexts.

As tutors come to believe in teacher-student interaction and make provision for this in their teaching, they move from a complete reliance on transmissive and didactic modes of teaching to more interactive methods without adopting a complete learner-centred orientation (Kember, 1997). A trajectory is evidenced as tutors change their orientation towards teaching and learning.

Though the institutional VLE is becoming normalised (Dickson, 2004; Garrett and Jokivirta, 2004), it is mainly used as a repository for lecture materials and reproduces the traditional paradigms of teaching (Jenkins et al., 2005). Thus, academics remain largely teacher-centred in their use of technology and have proved very reluctant to adopt more learner-centred ideas. They tend to debate issues relating to learning, teaching and assessment predominantly in terms of their own discipline – their own 'tribe and territory' (Becher and Trowler 2001:1). This strong disciplinary identity and focus, arising from epistemological and social factors, can inhibit acceptance of change (Becher, 1989; Becher and Trowler, 2001). Many practitioners seeking development will only respond to peers in their discipline and are often antipathetic to staff development, advice, theory or research which is not wholly discipline-based (Jenkins,1996).

Given the opportunities provided by learning technology, the relatively slow rate of uptake by academics and the general lack of innovation in the use of learning technology in pedagogically sound ways, the ADELIE project was designed to work within the culture of academics to move them away from teacher-centred methods. The project was set up to develop capacity at the University of Leicester by engaging tutors in re-design processes for e-learning that benefit from the affordances of information and communication technologies within the disciplines. The ADELIE interventions were intended to influence

the way teachers plan, design and teach, and thus to generate a positive impact on the learner experience.

FOSTERING CHANGE: A FRAMEWORK FOR INTERVENTION

The ADELIE team includes researchers and learning technologists working in partnership with academics who wish to enhance their learners' experience by using learning technologies effectively in their discipline. ADELIE's target audience comprises course teams developing a new online programme or module, as well as teams planning to revamp one of their face-to-face courses with online components as an integral part of their design.

Staff development approaches are often driven by policy and compliance requirements, as well as the staff developers' agenda, rather than the academics' actual needs (Shortland, 2004). These events attract tutors from the whole institution for specific skills development and are normally disconnected from the nitty-gritty of course design in a discipline. Crucially, they are devoid of the epistemological understanding that occurs in departments.

In contrast, the ADELIE project uses a research agenda to foster change. It was designed to meet the requirements of discipline-specific course teams, who themselves have identified design issues that e-learning might help to address. Hence, they gain a sense of ownership and control of the change initiative and its deliverables.

Central to ADELIE's interventions is a two-day workshop, called Carpe Diem[2], in which course teams, in collaboration with subject librarians and learning technologists, work to implement effective e-learning designs. Carpe Diem is a design workshop, not an opportunity to learn how to use a given tool. It exploits low-cost, normalised technologies (Bax, 2003) such as a VLE, and focuses on learner activity and group work. It is practical and outcomes-based. By the end of the second day, teams have a set of online learning activities or *e-tivities* (Salmon, 2002) for their course running on the VLE, a blueprint of what the course will do, a model to adapt and apply and a practical action plan.

Prior to the two-day workshop, the ADELIE team meet the course team to discuss their goals for attending. In these discussions, the departments' current teaching methods and assessment practices are surfaced, which enables the ADELIE team to understand the context and tailor the workshop to the needs of the department. The meeting provides an opportunity for pre-empting misunderstandings about e-learning and begin the change process.

After Carpe Diem, contact is maintained with departments. Some departments want further sessions while the contact with other departments is less systematic. Figure 1 illustrates this framework for intervention.

---

[2] The Carpe Diem process is based on earlier research by Professor Gilly Salmon of Leicester University, with input from teams at Caledonian Business School, tested and refined with teams at the University of Bournemouth and Anglia Ruskin University.
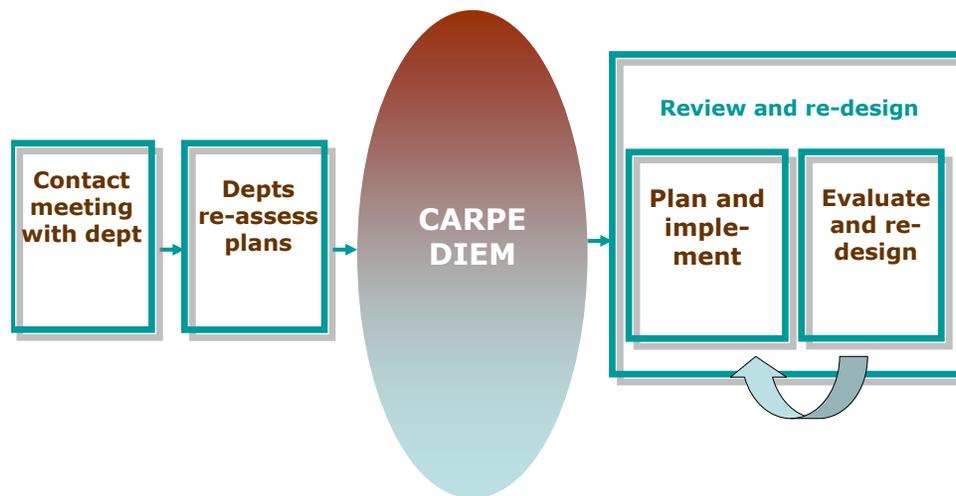
Figure 1:   A framework for intervention

RESEARCH DESIGN

The development of the intervention process and the impact of Carpe Diem on the participants was the subject of the research. The study was designed to guide and shape the on-going development of the ADELIE framework for intervention. It was also designed to find out how participants changed their e-learning practices as a result of the interventions.

The research was qualitative and data collection continued over twelve months. Three mechanisms for collecting data were employed:

- observations of meetings and workshops in the form of audio recordings and notes;
- semi-structured interviews with participants from course teams involved in Carpe Diem workshops;
- collection of artefacts, including course designs and e-tivities (Salmon, 2002) produced in the workshops, plus any later versions developed by course teams during implementation.

Data was collected in the sequence shown in Table 1.

Nature of Data	Prior to workshop	During workshop	After workshop
Observations	Meetings with course teams	Identification of critical moments, salient reactions and observable responses to the activities	Meetings with course teams Follow-up sessions
Interviews	12 academic staff from course teams. One-hour interviews, two to six weeks before Carpe Diem		11 of the same staff, six weeks to two months after Carpe Diem
Course designs and e-tivities		Collected from designs produced	Collected from designs adjusted after implementation in on-campus and distance courses
Semi-structured questionnaire: evaluation of the Carpe Diem experience		At the end of day two of Carpe Diem	

Table 1:   Data collection

This research design made it possible to compare the participants' knowledge, understanding and attitudes to e-learning before and after the ADELIE intervention. Participants' responses in interviews were analysed together with the observations of their engagement in workshops and with the e-learning designs they produced. Qualitative research software was used in the analysis of the triangulated data. This process showed changes in participants' attitudes, skills and understanding over time and revealed connections between types of e-learning design and attitudes to pedagogy. It also showed how and to what extent engagement in the workshop enriched the participants' understanding of pedagogy.

FINDINGS AND DISCUSSION

Between October 2006 and October 2007, the ADELIE team worked closely with 93 members of staff, who were part of 17 course teams in 12 disciplines. Of the 17 teams, 13 focused on developing programmes for distance learning, which is a priority for the University of Leicester.

Two key findings are evidenced by the data:

1. The existence of three clear stages of development in academics' understanding of e-learning pedagogy and design practices (transmissive, interactive and collaborative), illustrated in Figure 2.
2. Significant shifts in participants' designs as a direct consequence of the Carpe Diem process.

Three stages in the e-learning design change process

Three stages in course teams' practices in e-learning design were identified: transmissive, interactive and collaborative (Figure 2).
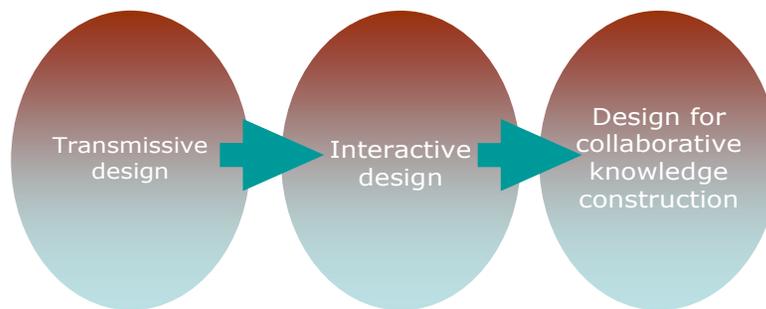
Figure 2:   Stages in e-learning design

Transmissive design

This approach was the predominant one for course teams before they attended Carpe Diem.

Most academics came to Carpe Diem with the belief that e-learning primarily means uploading information to an internet server for on and off-campus students to access. The emphasis is on delivering resources using, for example, a VLE as a repository of materials. Tutor support, offered typically by telephone or email, is limited. This use supports lecturing by providing electronic versions of hand-outs and slides. The resources may contain activities aimed at learners' cognitive development, self-testing their understanding of concepts or engaging them in various interactions with the course materials. However, the course material - especially in a distance learning context - is self-contained and designed to teach with minimal or no tutor involvement in the learning process: the ideal scenario is for a school or department to deliver the course materials to its learners, who should submit their assignments for marking a few months later.

Staff reported use of discussion boards for administrative issues and general enquiries, such as dates of submission of work. Forums were also available for voluntary, largely unmoderated discussion between students, "in case there are any queries". No attempt was

made to designate topics to be discussed, or to design activities for the students to do together. The tutors reported that discussion boards were hardly ever used.

Typically, e-tivities are not part of this approach. The evidence suggests that where tasks are present, they normally require the production of a short essay based on learners' views on a certain article, book or web resource. These activities are knowledge-checking and unassessed. Students who actually do the activities tend to email their responses to the tutor (the only intended audience), rather than post them to the relevant forum for the benefit of their peers.

Interactive, single-loop design

The *interactive,* 'single-loop' approach fosters limited participation, particularly in discussion forums. Participants may be asked to share experiences of their interactions with the course material or post the results of their work. Tasks are designed to encourage students to post a single reply, which may be assessed, but not to engage learners and tutors in knowledge-generating collaboration. Exchanges begin with a task set by the tutor and normally end with each learner's individual response to that task, hence the single loop. Designs do not foster further exchanges between students.

Although these designs support interactions, they are closer to teacher-centred rather than learner-centred approaches though they do show more awareness of the value of interactions. However, tutors continue to regard content as 'king'. Moderation of online forums, if any, is minimal. Figure 3 provides an example of an interactive, single-loop e-tivity designed in Carpe Diem, which forms part of the assessment for a module.

	Module 6 E-tivity 2c: Questionnaire for pilot study You will now be given the opportunity to pilot the questionnaire on your own sample and to gain feedback from your participants on their views of the questionnaire.
Purpose:	To gain experience of piloting a questionnaire.
Task:	You should administer the final version of the questionnaire to a pilot sample of family/friends. Your sample should be between six and ten people. You may like to consider what instructions you will need to provide your participants before they complete the questionnaire and the conditions under which you administer the questionnaire. You will also need to consider what questions you might ask your participants after they have completed the questionnaire in order to assess the validity of your questionnaire (Hint: face and content validity). You should complete your pilot study by **Friday 13th April**.
Respond:	Write a report describing how you conducted your pilot study, the recording of your results, your interpretations of your findings and your conclusions on the adequacy of the questionnaire in its current form for assessing the impact of a distance learning MSc on work/life balance. You should use no more that 650 words. This part of the assignment will be worth 80% of your marks. You are required to submit your report by **5pm on Thursday 3rd May 2007.**

Figure 3:   An interactive, assessed, 'single-loop' e-tivity produced by Department P

Collaborative design

The third, *collaborative* approach, is characterised by an understanding that collaboration between learners and tutors as well as among students via focused, multiple-loop interactions, is central to learning. Learners depend on each other's input to complete tasks. Each task can trigger several contributions from each student on a forum, wiki or blog. Through e-moderation, the tutor identifies gaps that generate meaningful engagement and additional learning opportunities. This approach maps onto Bates's third generation of distance education (Bates, 2005) and shows a learner-centred orientation (Samuelowicz and Bain, 2001).

Figure 4 is an example of an e-tivity in this category developed by one of the ADELIE course teams. The e-tivity is explicit about its relevance to the assignment. Three sources of information are given at the top of the e-tivity (the 'spark'): a Word document (brought to Carpe Diem by the course team) and two audio files, which they produced during the workshop. To complete the task, learners should engage with the resources, post their responses and return to the forum within days for subsequent critique and elaboration. Learners need their peers' input to meet the requirements of the task.

	E-tivity 3a: Is Performance Appraisal Working? ***This e-tivity is not the assignment itself. It helps you plan the content of the report you are required to submit for assessment.*** You have been given privileged access to one document and two audio recordings. All parties have given their consent for you to see and use this information, which will help you understand some of the issues that you could include in your report. **(1)** Document: **Job, performance and statistics information.doc** **(2)** Interviewer Training Audio File (55 seconds). **(3)** Audio File of a "typical" performance appraisal for In-Branch Customer Services Staff (2 minutes and 34 seconds).
Purpose	To identify and elaborate on three key issues on performance appraisal.
Task	Identify 3 major issues that arise when you have listened to and read these resources. In no more than 150 words explain why you have chosen these 3 issues. Post your message to the discussion group by **Friday 2nd March 2007**.
Respond	By the **Friday 9th March 2007** return to the forum and elaborate on one or more of your fellow participants' posts, responding to their arguments.

Figure 4:   collaborative e-tivity produced by Department P

CARPE DIEM AND CHANGE

Interviews and observations revealed course teams' typical teaching activities using technology before and after taking part in the Carpe Diem. Table 2 shows these activities classified into the categories described in Figure 2 (transmissive, interactive, collaborative). Before attending Carpe Diem, the predominant teaching method amongst the participants was transmissive. Though several departments made provision for unstructured and unmoderated voluntary discussion forums, none of the course teams used online activities in a systematic way and therefore did not enable any form of structured, moderated online collaboration or feedback in their courses.

While departments continued to use the VLE to transmit course information after the Carpe Diem workshop, their course designs supported a much wider range of activities as participants developed and later piloted interactive and collaborative designs. Not every course team changed in the same way or at the same speed, but all showed signs of change towards the collaborative category.

	Transmissive →→	Interactive →→	Collaborative
Technology use before Carpe Diem	One-way delivery of content in the form of PowerPoint slides and notes uploaded onto the VLE VLE used for administering the course, providing information to students about assignments Paper-based distance learning material posted to students	Extensive use of email between tutor and student Unmoderated, unstructured discussion forums (rarely used)	No collaborative use of technology
Technology use after Carpe Diem	Provision of online information about the course VLE continues to be used as a repository of material **3 course teams remained in this category**	Single loop e-tivities involving a limited amount of interaction Voluntary, unmoderated discussion forums, normally 'single loop' (Figure 2) **7 course teams shifted to this category**	Tasks designed and structured to scaffold peer, multiple-loop collaboration (e.g. Figure 4) Moderated discussion forums structured around e-tivities Group production of text on wikis Shared assignments **7 course teams generated collaborative designs**

Table 2:   Teaching activities before and after the Carpe Diem workshops

Course teams who chose to remain at the transmissive stage are now aware of the opportunities afforded by technology-enhanced design and can make informed decisions on how those designs may change their future practice. A shift to the interactive (single-loop) stage, as part of a change process, constitutes a significant improvement for the tutors involved and their learners. Shifting to the multiple-loop stage, which provides for collaborative learning, indicates significant change.

The development process continues after course teams have returned to their departments. Several participants whose e-learning design at the end of the workshop employed limited

interactive e-tivities have gone on to produce collaborative e-tivities for their actual course designs. This process needs more time for embedding and further research.

In addition to changes in teams' practices in designing for learning, the Carpe Diem process has raised awareness of key pedagogical and technological issues. Tutors who have taken part in Carpe Diem realise how stable, normalised technologies can facilitate effective, learner-centred design that fosters active participation. Technology can help them move course materials away from the heart of a course, in favour of activities that increase learner motivation and engagement by encouraging purposeful involvement with the content and collaboration.

CONCLUSION

The ADELIE project was set up to make a positive impact on the way teachers plan and design for effective e-learning at the University of Leicester. 93 academics from 12 disciplines have embarked on a process of change in e-learning design based on the use of e-tivities (Salmon, 2002). The Carpe Diem model has been central to this process. Three stages of tutor development in designing for e-learning were identified. From a transmissive approach to course design, course teams shifted to designing interactive, single-loop e-tivities. Some tutors went further and designed collaborative, multiple-loop ones, which constitutes significant change in their e-learning design practices. This task-based, student-centred approach differs from the one in which learners are solely presented with representations of knowledge as constructed by their tutors.

The discipline-specific nature of Carpe Diem and the collaboration with subject librarians and learning technologists before, during and after the two-day workshop provide epistemological safety and a sharp focus on the needs of course teams. Participants have regarded these features, not offered by traditional staff development approaches, as most valuable and appropriate for changing their practice.

The impact of the intervention has permeated departmental structures. New teams are requesting Carpe Diem workshops to enhance their e-learning design. Teaching practice in on-campus, blended and distance learning settings has been enhanced, as the results of the second round of Benchmarking at Leicester in 2007 show.

ADELIE has been successful in generating and researching incremental change in e-learning design. However, the process has not produced immediate, observable online dialogue across all courses that were designed or re-designed during Carpe Diem. The longer-term embedding of change in e-learning design based on e-tivities requires sustained support and further research.

REFERENCES

Bain J. and McNaught, C. (2006) 'How academics use technology in teaching and learning: understanding the relationship between beliefs and practice'. In *Journal of Computer Assisted Learning 22, 99-113.*

Bates, A.W. (2005) *Technology, e-learning and distance education* (2nd Ed). Abingdon: Routledge.

Bax, S. (2003) CALL – past, present and future. *System* 31(1), 13–28.

Becher, T. (1989) *Academic tribes and territories: Intellectual inquiry and the culture of disciplines.* Buckingham: SRHE/Open University Press.

Becher, T. and Trowler, P.R. (2001) *Academic tribes and territories* (2nd Ed). Buckingham: SRHE/Open University Press.

Dickson, T. (2004) Things to come, conference opening address at *When worlds collide*, JISC infoNet Conference, York (York, JISC infoNet and HEFCE).

Garrett, R. and Jokirvirta, L. (2004) *Online learning in commonwealth universities: selected data from the 2004 Observatory Survey, Part1* report no. 20 (London, The Observatory on Borderless Higher Education).

Hedburgh, J. (2006) 'E-learning futures? Speculations for a time yet to come'. In *Studies in Continuing Education, 28(2), 171-183.*

HEFCE (2005) HEFCE Strategy for e-learning, available at http://www.rsc-south-west.ac.uk/files/HEFCE%20elng%20strategy.doc (last accessed 2 January 2008).

Jenkins, A. (1996) 'Discipline-based educational development'. In *International Journal for Academic Development 1(1), 50-62.*

Jenkins, M., Browne T. and Walker, R. (2005) A longitudinal perspective between March 2001, March 2003 and March 2005 for Higher Education in the United Kingdom. ©UCISA 2005, available at http://www.ucisa.ac.uk/groups/tlig/vle/vle_survey_2005.doc (last accessed 30 October 2007).

Kember, D. (1997) 'A reconceptualisation of the research into university academics conceptualisations of teaching'. In *Learning and Instruction 7, 225 – 275.*

Prosser, M. and Trigwell, K. (1998) *Teaching for Learning in Higher Education*. Buckingham: Open University Press.

Ramsden, P. (2003) *Learning to Teach in Higher Education* (2nd rev Edition). London: RoutledgeFalmer.

Salmon, G. (2002) *E-tivities: The Key to On-Line Learning*. London and New York: Routledge.

Samuelowicz, K. and Bain, J. (1992) 'Conceptions of teaching held by academic teachers'. In *Higher Education 24, 93-111.*

Samuelowicz, K. and Bain, J. (2001) 'Revisiting academic beliefs about teaching and learning'. In *Higher Education 41, 299-325.*

Shortland, S. (2004) 'Peer observation: a tool for staff development or compliance?' In *Journal of Further and Higher Education* 28(2), 219 - 228.

Trigwell, K., Prosser, M. and Taylor, P. (1994) 'Qualitative differences in approaches to teaching first year university science'. In *Higher Education 27, 75-84.*

Trigwell, K. and Prosser M. (1996) 'Congruence between intention and strategy in university science teachers' approaches to teaching'. In *Higher Education 30, 1-11.*

Zemsky, R. and Massy, W. (2004) Thwarted innovation: what happened to e-learning and why. Weatherstation Project, University of Pennsylvania. Available at http://www.irhe.upenn.edu/Docs/Jun2004/ThwartedInnovation.pdf (last accessed 3 January 2008).

Correspondence

Alejandro Armellini   aa277@le.ac.uk