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Strategically Integrating Blended Learning to Deliver Lifelong Learning

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1. Introduction

One of the key challenges emerging that is likely to have a significant impact on education in the future is the rapidly changing environment of higher education. Costs continue to rise; budgets are typically shrinking, while demands for new services are growing. This is one of the drivers for an increasing need for distance education with pressure coming not only from non-traditional students seeking flexible options but also from administrative directives to cut costs as well as private providers and corporate universities.

Too often the implementation of computer-based learning has been based on solutions, which are developed based on the latest technological solutions rather than established learning theories (Sloan, 1996). There are many examples of unsuccessful initiatives using technology to address learning needs.

Designing, developing and deploying programmes that are well organised, use multimedia to engage the learner using various intelligences, capturing the experiences and knowledge of the learners, while incorporating and promoting interactivity and training instructors to facilitate online delivery, demands a strategic decision to be made and adequate resources be made available. Blended or hybrid learning can address the potential shortcomings of a purely e-learning approach but only in the context of educators taking a strategic approach and planning appropriately.

With the broad choice available in terms of multimedia based learning solutions there is an increased recognition that it is down to finding the right blend and making sure it is well prepared that is key to attracting, retaining and motivating learners (Trasler, 2002). Blended learning can offer the advantages of both traditional classroom delivery and e-learning. Blended learning can affect the way people learn, can help to promote the experiential learning experience and enable or empower the learner. However, this is a complex undertaking. The challenge is how to configure the blended learning approach. Using a blended learning approach may overcome many of the concerns staff in educational institutions may have with integrating technology as part of the delivery of learning and also help "mitigate" the considerable costs that may be incurred in going to a totally online delivery model.

Successful e-learning participants are highly motivated and self-directed, intellectually more mature, self-disciplined, older, serious and interested in coursework from which they will materially benefit (Schweizer, 2004). A study by Ramsden and Brown (2008) highlights that

throughout the European Union (EU) indicates that up to 2029 the percentage of 18-20 year olds will decline by over 14%. As the demographic profile of the population changes it is likely that a further demand for lifelong learning opportunities will exist. James-Gordon et al. (2003) suggest that the fastest growing sector in educational terms is busy professionals seeking education to advance their careers, increase their self development and/or salaries.

Given the traits of lifelong learners striving to balance a number of challenges in terms of work life balance and their thirst to engage in further up-skilling and learning opportunities, the formulation of a strategic framework which strikes a balance between the traditional instruction and the use of technology in both the delivery and support of learning must acknowledge that all learners have different cognitive preferences. Structuring the blend to effectively meet pedagogical differences is a prerequisite to designing an effective blend.

2. E-Learning

Electronic learning or e-learning, is a term most often used to describe computer-based learning support systems and periodically associated with advanced distributed learning technology. It also can be considered as any virtual act or process used to acquire data or information, or to create knowledge (Bennett and Bennett, 2008). The emphasis in the past with e-learning has been on the "e" i.e. the electronic technology (Hamid, 2002). Factors that need to be considered in developing learning material using technology include (i) learner attitudes, (ii) technological advances and technological constraints, (iii) the skills of instructors in working with technology, (iv) the content to be learned, (v) the quality of the instructional material and (vi) the interactions that take place between students and the instructor and the students themselves (Landen, 1997; Martinez et al., 2007). To promote the use of e-learning the emphasis needs to be less on the technology and more on the "experience", "engagement" and other high level contexts (Hamid, 2002).

Consideration of the pedagogy is vital when attempting to understand the application of e-learning in practice (Mehanna, 2004). Matching cognitive and learning styles with instructional presentation strategies may have an important role to play in enhancing the learner's learning experience (Ford and Chen, 2001). An example of this is a study by Ross and Schulz (1999) that found in a study of the effect of learning styles on learning outcomes, that there was a significant effect of learning style upon learning outcomes and that certain types of learners are at risk of not performing well with certain forms of computer based instruction.

3. Understanding learning

The preferred learning style of the individual is important for learning to be more effective when one is considering using technology based learning for a new skill, increasing knowledge and sharing information (James-Gordon and Bal, 2001 and Ahmed, 2000). Different cognitive style groups benefit from different types of multimedia presentation (Ghinea and Chen, 2003). One of the most attractive features of computer based instruction is its capacity to individualise instruction, present content in a variety of ways (e.g. text, audio, video, and graphics) and allow the user to progress at his or her own pace (Ross and Schulz, 1999). The attractive feature of classroom instruction is that the instructor has the flexibility to change the instructional methodology immediately if the circumstances are appropriate.

Harvey and Beards (2004) in a review of e-learning in Scottish further and higher-education, found that it is very easy to execute e-learning badly and this is more likely to happen if technology and not pedagogy is allowed to drive the process. Detractors of e-learning focus their criticism in five areas; (i) participant isolation online, (ii) high participant dropout rate, (iii) the increased time and money to create and teach online courses, (iv) intellectual property rights and (v) the pedagogical soundness of e-learning (Schweizer, 2004). These are key areas that academic managers must address from a strategic perspective at the outset of any technology facilitated delivery of lifelong learning initiative.

Zhang et al. (2004) stated that it is important to realise that there are advantages and disadvantages associated with traditional instruction versus e-learning in delivering learning, summarised in table 1.

	Traditional Classroom Learning	**E-Learning**
Advantages	• Immediate feedback • Being familiar to both instructors and students • Motivating students • Cultivation of a social community	• Learner-centred and self-paced • Time and location flexibility • Cost-effective for learners • Potentially available to global audience • Unlimited access to knowledge • Archival capability for knowledge reuse and sharing
Disadvantages	• Instructor-centred • Time and location constraints • More expensive to deliver	• Lack of immediate feedback in asynchronous e-learning • Increased preparation time for the instructor • Not comfortable to some people • Potentially more frustration, anxiety and confusion

Source: Zhang et al. page 76 2004

Table 1. Traditional Classroom Learning Versus E-learning

There are a wide variety of technologies, ranging from print medium to sophisticated media-rich content delivered over the Internet, which can be used as primary or supportive delivery systems for distance learning programmes. Furthermore number of issues can contribute to the failure of any e-learning initiative including; (i) technologies failing to deliver, (ii) costs growing exponentially, (iii) teaching remaining untransformed, (iv) staff support not adequate, (v) time release to develop material not considered, (vi) management and (vii) systems disputes (Latchem, 2005; Alexander, 2001 and Ruiz et al., 2007).

Schweizer (2004) identified a number of features that should be allowed for in order for participants to benefit from e-learning. These are outlined in table 2.

Feature	Description
Effective e-learning programmes are well organised	Contemporary research demonstrates that the organisational structure of e-learning class, the communications management system employed and the strategies for knowledge sharing are all positively related to the participants' achievement.
Effective courses use multimedia to engage the learner through different senses and capitalise on a variety of intelligences	In addition to conventional text and classroom discussion, multimedia (i.e. audio and video clips, animation, games, audio/video lectures or vignettes, PowerPoint presentations, video conferencing and simulations) must be integrated into the programme.
E-learning courses that incorporate interactivity promote higher learning	Interactivity or the ability of participants to use courseware to correct misunderstandings of material they have used to correct knowledge by using courseware to identify what new information should be explored.
Effective courses require instructors to be trained in the online delivery of learning	Instructors should view themselves as facilitators. They must communicate effectively with participants, personalise the learning environment, act as a discussion leader and manage the course. An effective online instructor must be able to write well and provide unambiguous directions to individual participants and groups. Instructors need to create collaborative, interactive learning opportunities.

Source: Schweizer (2004)

Table 2. Features to Help Participants Benefit From E-learning

The complexity with e-learning is that while it is a well established term; (i) there are many definitions of e-learning, (ii) there are numerous forms of communication available as part of e-learning and (iii) both individuals and instructors display a broad range of skill sets and experiences in using technology as part of learning. Formulating a framework that enables higher education to recognise these complexities and still deploy a successful programme is a key challenge this paper attempts to address.

4. Blended learning

In a traditional classroom situation, the instructor has the opportunity to adapt the instruction to suit individual needs that is not available when material is delivered online (Logan and Thomas, 2002). Blended learning is an approach to the delivery of learning that involves a combination of delivery methods and in some cases learning methodologies (Sloman, 2007). The alternatives available with blended learning may be formal and informal, people based and technology based, team-based and independent and discovery-orientated and directive. Blended learning may include many forms of learning tools such as real-time virtual / collaborative software, self-paced Web-based courses, electronic performance support systems (EPSS) embedded within the job task environment and knowledge management systems (Singh, 2003). Some key factors that continue to pose challenges are;

i. How does one build a blend?
ii. How can a blended approach be delivered?
iii. How are the roles of educators and participants changed in a blended environment?
iv. How to evaluate the blend?

In selecting among the varying technologies within distance learning, a question should not necessarily be, what is the best technology, but rather what combination of media are the most appropriate considering learner and instructor characteristics, instructional goals and strategies, learning environments, and the availability of resources? Through configuring technology in the context of delivering blended learning, the opportunity exists to bridge the gap between industry and the requirements of learners wishing to access lifelong learning opportunities

Learning how to; (i) integrate new technologies in an instructional setting, (ii) when to use them and (iii) why they should be used, always lags the introduction of the technology itself (Kilby, 2001). It is therefore difficult to say that there is one correct model for deploying blended learning that is most effective.

Key drivers in formulating this framework in the delivery of lifelong learning are; (i) appreciating the pedagogy of learning, (ii) reviewing the technologies that are available to deliver e-learning (iii) acknowledging the myriad of challenges management and staff in educational institutions face in deploying blended lifelong learning and (iv) recognising the role of industry, professional bodies and the drivers in maintaining the status of lifelong learning.

One key challenge facing educational institutions is to engage students and staff in an active and flexible learning environment. Technological advances and the Internet have opened up new opportunities for educational providers to configure traditional classroom and technology assisted learning to promote and encourage access to lifelong learning opportunities. The Internet provides new opportunities and promises potential for distance education worldwide (Shen and Scott, 2004).

5. Integrating technology in blended lifelong learning

Research by Collis and can der Wende (2002), Reisman et al. (2001) and DG Education and Culture of EU Commission (2004) suggests that there are different models and phases that educational institutions embrace with respect to incorporating technology in the delivery of teaching and learning. More innovative and flexible approaches will be required to sustain these educational institutions looking to the future. The growth of the Internet and web 2.0 technologies, coupled with the emergence of a new student population and in many cases a decline in real terms in government funding makes it a strong case for educational institutions to look at new methods and approaches to delivering learning. Key in the delivery of this is how staff can be empowered to meet this challenge.

6. Supporting the Instructor

Sun et al. (2007) suggest that instructors' attitude towards e-learning has a key influence on driving the success of any e-learning initiative. Lehner et al. (2003) argue that electronic education should not attempt to replace traditional education, but rather support both staff

and students through the provision of services that facilitate teaching, learning and education-related administrative tasks. The most important component in the deployment of a blended learning programme is to recognise the role of the instructor and the new roles and responsibilities that the instructor must take on.

However, integrating more sophisticated technologies requires a strategic decision, to train, support and adequately reward staff involved in such initiatives. For instructors, there is a significant adjustment required in their role. Berge (1998) and Vrasidas and Zembylas (2004) suggest that instructors are often asked to develop programmes using technology to support their deliver without the proper skill-sets or supports in place. Staff enablers as identified by this research include further up-skilling, support in the creation of web pages and support in the use of synchronous technologies such as voice over IP (VoIP) and web technologies. Greater flexibility, learning and integration of new technologies, and providing feedback in a more flexible manner are all roles that management in institutions must facilitate. In summary, if these challenges are addressed, synchronous communication technologies such as whiteboards or VoIP can play a key role in the successful deployment of programmes.

The instructor has a key role to play in the successful delivery of a blended learning programme. The instructor's engagement will be a key determinant of the success or otherwise of any blended learning initiative. For educational institutions, the challenge is in communicating effectively to the wider community the details and features of these types of programmes and ensuring the programme is effectively structured and delivered. Adams (2004) suggests that computer based learning has three elements; (i) hardware, (ii) software and (iii) 'underware' – the pedagogy that underpins the e-learning development. Tham and Werner (2005) would suggest that as educators there is a requirement for a variety of skills sets or "hats" including (i) a technological hat, (ii) a pedagogical hat and (iii) a social hat.

7. Online instructional skills

Tham and Werner (2005) highlight studies that indicate that instructors in an online environment must fulfil many roles or "hats". These hats include:

- A technological hat – educators must understand the application software and also the implications of technology for adopting different strategies in teaching. Using the available technology to enhance student learning is not an easy undertaking.
- A pedagogical hat – with a virtual classroom the tool/applications used to monitor or raise the intellectual skills of students requires the instructor to adopt the right tools and not simply use the tools that are available. Creativity is elementary to design of a course that brings students closer in an online environment.
- A social hat – in an online environment for the instructor to establish a rapport with students the technical communication tools should be used to establish a friendly, cohesive and comfortable learning environment.

Senior management in institutions must harness the power of technology to deliver the curriculum to lifelong learners while recognising that the set of instructional skills required are quite different, the cohort of students are different and the role of the institution, instructor and student must adopt to this changing dynamic.

8. Challenges for educational management

It is incumbent on management in higher education to make a strategic decision on the role of technology in the delivery of learning. If the strategic decision is to embrace technology in the delivery of learning, then budgets need to be dedicated to resourcing appropriately the technological infrastructure, support and training mechanisms and appropriate rewards and recognition systems for staff involved in the delivery of programmes.

For staff new to this type of programme delivery, some training should be provided to guide instructors on how to manage a course and to create online content. Given that most institutions will start with a learning management system (LMS) as the fundamental hosting framework for the delivery of these types of programmes, sufficient training should also be provided on the deploying of the features within these systems.

In deploying these types of programmes effectively there is a "hardware" perspective, i.e. technological component, that needs to be considered, and a "software" perspective, i.e. the various instructional roles and approaches, that the instructor must assume. Based on the literature review and the analysis of the programme in Waterford Institute of Technology (WIT) in Ireland, strategically there are a number of key steps that should be considered in deploying initiatives of this type. These are outlined in table 3.

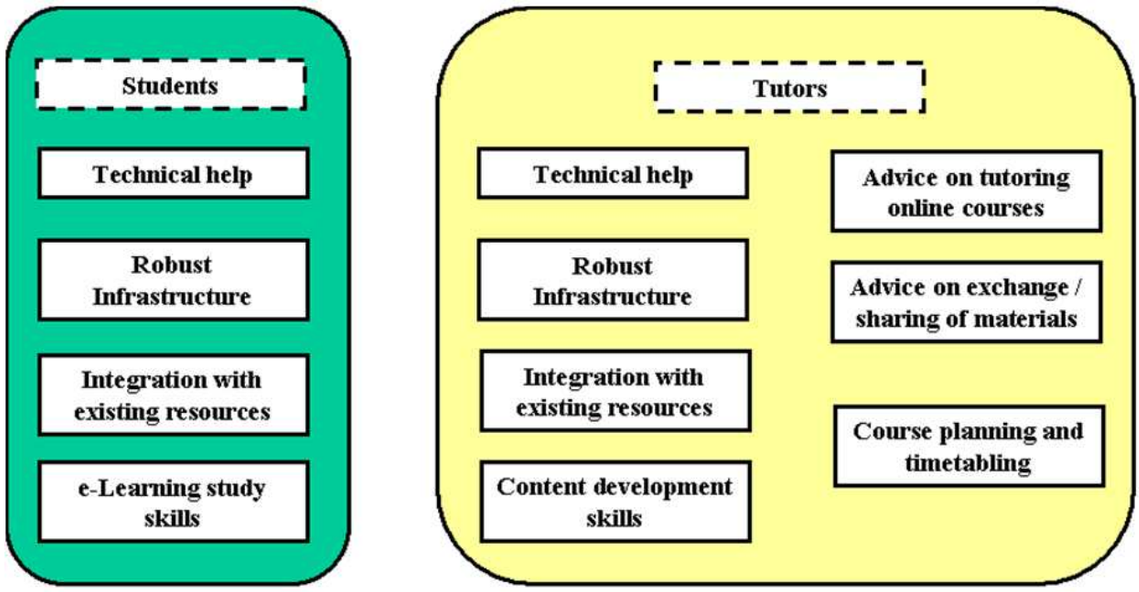
Step	Action Point	Some Key Choices
1	Recognise and reward staff	Nature of rewards systems and provide adequate technical and training support
2	Selection of LMS	Open solution versus vendor solution
3	Ensure all staff are trained in using various features of the LMS	Have appropriate support infrastructure to provide training and support to the group
2	Presentation programme	PowerPoint
4	Creating web-pages	HTML Editor
5	Voice over IP solution	Skype
6	Application Sharing	Open source versus vendor solution

Table 3. Steps to Enable Delivery of a Blended Learning Programme

As funding mechanisms continue to change and rapid advances in information and communications technology (ICT) continue to transform the way education is delivered, developing a framework to deploy learning to address the diverse lifelong learning needs of professionals presents a challenge. Adopting ICT to support and facilitate the development of educational programmes is at various stages of the technological adoption cycle in higher education. It represents in many cases an unknown and as such carries significant risk in terms of costs if not deployed successfully. A review of the literature suggests that there is no unique formula to apply for the successful development and delivery of blended learning. For many institutions the new technologies that are available represent largely additional expenses that are difficult to quantify (Twigg, 2003). Coupled with this, the range of cost estimates that can be incurred in the development of e-learning vary, from small financial resources required to huge financial commitment (Mayer, 2003).

With the growing acceptance of e-learning technologies and the increasing need of access to remote learning opportunities, administrators of higher-level institutions face; (i)

technological, (ii) organisational, (iii) pedagogical and (iv) cultural challenges in helping to integrate these changes (Howell et al., 2004). This research supports the work of Forsyth (2003), which suggests that students and tutors have different support needs as outlined in figure 1.



Source: Forsyth (2003)

Fig. 1. Summary of Tutor and Student Support Needs

The design, development and implementation of e-learning in the delivery of learning can represent a significant investment without any guarantee of success. Therefore it is vital that a strategic approach is embraced in deploying any initiative using technology. Embracing a strategic approach can result in the successful deployment of a blended programme meeting the needs of professionals.

As demonstrated earlier in the literature and succinctly captured by Sadler-Smith et al. (2000), individuals who involve themselves in continuing professional development (CPD) are likely to have clear preferences for different learning methods and activities. These are key considerations in developing e-learning programmes addressing the CPD needs of learners.

The integration and interaction of (i) technology, (ii) traditional instruction, (iii) the instructor and (iv) the participant are key components in any blended learning programme. Based on a review of the literature and previous initiatives, "flexibility" captures the most significant change that must be embraced for a blended learning CPD approach to be successful. Educational institutions, individual instructors and participants must become flexible in the successful collaboration and delivery of a blended programme.

As identified by Thomas (1995) and Browell (2000), the benefits to higher education in becoming involved in providing lifelong learning include; (i) offering the potential for closer links with industry and the professions, (ii) opportunity for funding to carry out research and consultancy and (iii) information feeds back into undergraduate programmes to ensure relevance to industry requirements.

To capitalise on this research and bridge the gap between, (i) higher education, (ii) the requirements of the various professional bodies and (iii) the needs of industry, there are a series of steps that should be undertaken. These are:

1. Establish and test the infrastructure and framework which will act as the host platform for the technology-facilitated lifelong learning initiative
2. Establish the appropriate learning outcomes and competencies required by the professional bodies
3. Determine the breakdown of traditional and online delivery of the learning. As part of this, ensure that as many methods of instruction and learning as possible, i.e. both formal and informal methods of learning, are incorporated
4. Ensure that the content delivered will be recognised by the professional bodies, industry, regulatory bodies and individual as eligible as part of CPD. For educational institutions, this means building links with the professional bodies and ensuring the quality of the delivered learning will meet both the competencies and learning outcomes required by multitude of stakeholders

Through the execution of these various steps, an effective programme of lifelong learning, meeting both the professional institutions and industry's learning needs can be deployed. Educational institutions are in a better position than most to capitilise on this through the formal quality assurance systems that exist in the sector and in individual institutions, through undergraduate programmes developed which fulfil the criteria of the various professional bodies to meet industry needs.

9. Framework for blended learning

Developing and deploying an initiative to deliver lifelong learning addressing the continuing learning needs of professionals can be a challenging task, which can consume considerable time and resources without any guarantee that the outcome will be successful. The creation of effective online resources, also identified as important, is a complex challenge that educational institutions and educators continue to face.

The term blended learning has been widely adopted to depict combinations of face-to-face and technology-based learning (Stubbs et al., 2006). No two blended learning designs are identical, which introduces the great complexity of blended learning (Garrison and Kanuka, 2004). Both previous research and the analysis that has been undertaken in this exploration, indicate that in the development of a framework for deploying blended lifelong learning is a complex undertaking. However, it may be useful to construct a framework that will assist in deploying lifelong learning. This framework, outlined in figure 2, is constructed around four key parameters:

1. Participants
2. The delivery of the instruction
3. Online learning
4. Traditional Instruction.

Blended learning offers institutions the opportunity to engage in using technology in conjunction with traditional delivery to offer learning.

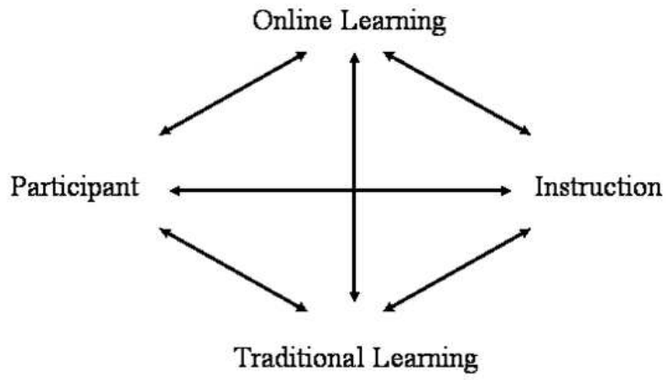


Fig. 2. Framework of Parameters in Blended Learning

There is a balance to be struck between online learning and traditional learning and between the participant and the relationship formed with the instructor as part of any module to be delivered. A change in any one of these parameters has consequences for any other elements of the framework. The emphasis on instruction method, the balance of online to traditional instruction and the degree of directed and independent learning will change, based on the individual's learning preferences, the material to be learned, the skills, ability and instructional methodology of the instructor and the prior experience of the individual.

Campbell et al. (2007) identify the selection of appropriate models and strategies for e-learning as one of the top 10 teaching and learning issues facing higher education. Wall and Ahmed (2008) outlines a proposed framework for deploying blended learning lifelong learning, identifying milestones, looking at key aspects of each milestone, suggesting possible activities to be undertaken to address the key aspects identified and identifying the possible benefits as a result, outlined in table 4.

Milestone	Aspect	Key Considerations	Potential Benefits
1	Appreciate the learning process	Appreciate that everyone learns differently, so use multiple instructional methodologies. Recognise that a "one size fits all" approach will not work. Individuals have different prior learning experiences. Use Learning Style Profiling Tool(s).	Instructors are aware that various instructional methodologies in both the classroom and online environment can enhance the learning experience. Can plan instructional methods to capture peer learning.
2	Learning Management System	Investigate current LMS system in organisation. Invest in LMS, either purchase or use open sources system.	An established protected environment with a series of resources, administrative functions and tools that can act as the platform for more sophisticated development and integration of resources over time.

Milestone	Aspect	Key Considerations	Potential Benefits
3	Agree standards in the delivery of material	Posting notes on LMS. All communication through LMS. Assignments posted through LMS. Use a voice over IP communication platform.	Consistency from the participants' perspective. Different possible communications platforms that address learners' needs, increasing flexibility and overcoming any sense of isolation and ensures that participants are continuously engaged.
4	Agree breakdown of classroom and online elements	Once module has been designed and learning outcomes agreed, agree on elements that will be delivered in a traditional setting and the elements that may be delivered online.	Overcomes the sense of isolation that participants may experience.
5	Assessment	Agree breakdown of assessment methodologies. Attempt to integrate assessment with work.	More engaged with work / improves work performance. Can encourage work-based learning.
6	Agree dates for traditional delivery and programme of work at the commencement of the programme	Appoint a leader to coordinate the scheduling of assignments, dates for delivery of traditional instruction and online instruction and collaboration.	Participants can plan both work and private life, as they are informed in advance, for the times when formal traditional instruction takes place well in advance.
7	ICT infrastructure of participants	Survey participant's ICT ability and infrastructure both at work and home. Consider including purchase of laptop or distribution of a CD with requisite course material and software loaded.	Understanding of IT ability and infrastructure of the participants may help in tailoring some elements of the instructional methodologies to better meet participants' needs and circumstances.
8	Provide adequate induction	Develop guides. Using of LMS. Voice over IP communication. Relevant software packages. Library infrastructure / remote access facilities.	Less administrative and communication challenges once programme is up and running.

Milestone	Aspect	Key Considerations	Potential Benefits
9	Use of multiple methods of communication with participants	Email (both work and student email). LMS. Mobile devices. Voice over IP communication.	Emails to work act as a reminder to participants. VoIP allows for collaboration and collaborative learning to take place. Use of video and audio presentations where appropriate can facilitate collaborative learning. Discussion boards or blogs can be an effective learning resource.
10	Plan in social events	Informal get-together for meal or drinks events at commencement and throughout the programme.	Breaks down barriers. Participants may find it easier to contribute particularly in the online environment as barriers have been broken down. Allows for further networking opportunities.
11	Creation of online resources	Can be costly and staff delivering the programme may not have the expertise to develop sophisticated online resources. Strategic decision to set aside funding on a continuing basis to facilitate online resource development and training.	Can enhance the learning experience when instructionally-effective resources are developed. Research integration of existing available resources.
12	Look at new / novel methods to focus on active learning	Use of problem based learning; integrate existing developed resources such as games / simulations as part of modules / assessment.	Encourages collaborative and peer learning. Allows for informal learning to take place.
13	Recognition of the effort of staff delivering modules	Provide adequate training. Allow staff sufficient time to develop resources. Provide adequate reward scheme. Staff required to be more flexible in dealing with participants.	Staff more motivated. New skills sets developed. Broadens the institution's reach into industry.

Source: Adopted from Wall and Ahmed (2008)

Table 4. Proposed Framework for Deploying CPD

It is fundamental at the outset to appreciate the learning process (1). By acknowledging that learning is complex, instructors and educational institutions should be open to new ideas / increased flexibility. The use of a learning style profiling tool such as Kolb's LSI can assist in making instructors aware that there are many learner types and plan for a variety of instructional strategies, ensuring that the benefits of understanding the variety of learner types. Establishing the appropriate infrastructure (2) and standards of delivery (3) will ensure a minimum standard of consistency. This still recognises that instructors may be at different levels of confidence and experience in the use of technology in the delivery of learning. It will also encourage instructors who gain confidence to become more sophisticated and advanced in their use of technology over time.

By agreeing the breakdown of classroom and online elements (4) prior to the commencement of the programme, instructors know what is expected and participants can plan how to integrate formal CPD into their work and personal life. It helps to plan dates and times for traditional delivery (6) far enough in advance. By focusing explicitly on assessment (5) at the outset, instructors can plan a coherent assessment strategy and an evenly distributed workload can be achieved. Recognising the ICT infrastructure (7) of the participants' highlights at the outset any potential problems, allowing for these challenges to be overcome / mitigated early on the programme. This will help in providing an appropriate level of induction (8), ensuring a smooth delivery and administration of the programme. The use of multiple methods of communication (9) allows for the integration of both asynchronous and synchronous communications and also acknowledges the variety of possible learning styles recognised by (1) earlier. The usefulness of social events (10) should not be under-estimated. As well as breaking down barriers, it can help build community and morale on the programme.

Identifying the creation of online resources (11) as a discrete milestone, challenges institutions to take a strategic approach to deploying blended CPD. Searching for new / novel methods to encourage active learning (12) helps to build on the experiential learning of the group and encourages a continuous search for new instructional approaches. Finally, recognising the key role of staff (13) will ensure the initial and ongoing level of success or otherwise of the blended approach.

Much of the research into deploying e-learning initiatives suggests that it is a complex undertaking and that educational institutions are at various stages in the development and deployment of technology-facilitated initiatives. This proposed framework is based on the research carried out in deploying a new blended learning CPD programme. The framework suggests that through appropriate planning and by scoping out the key aspects as outlined in the framework, that were identified as part of this initiative, a template is postulated that may be embraced by other educational institutions who wish to deploy these types of programmes.

10. Conclusion

The Internet and the continued development of technological infrastructure to support lifelong learning create new challenges and opportunities for both participants of lifelong learning programmes and instructors on these programmes. However, while a number of factors related to the integration of the technology will always need to be considered, it is

important to bear in mind that technology is only a tool by which the training will be delivered. It is never the technology alone that one can attribute as the reason for failure in any e-learning project. Either a poor understanding of learning theories, a lack of appreciation of the learning styles of different learners or poor consideration of instructional design will contribute to failure.

There is an opportunity for higher education to strategically address this through the formulation of lifelong learning programmes using e-learning. Developing both the infrastructure and content to deploy technology-enabled learning is a resource intensive and time consuming exercise. The challenge remains in developing a suitable framework that integrates technology in the delivery of lifelong learning, while addressing the concerns of work and personal commitments of learners and the issues those new technologies present, in terms of pedagogical, technical and financial challenges to both management and staff in educational institutions.

Deploying blended learning is a complex and demanding undertaking from a pedagogical and technological perspective which places new roles and responsibilities on both the participant and the instructor. In one respect the costs can be prohibitive and can stymie an initiative principally due to the fear of unknown costs without any assurance of a successful outcome. Conversely, if planned for appropriately as part of blended learning, technology may be effectively harnessed as part of deploying blended lifelong learning. The frameworks suggested in this paper are an attempt to address these challenges through a structure that recognises the complexity involved and attempts to address the uncertainty that exists by putting a series of milestones in place in deploying an initiative.

11. References

Adams A. M., Issues and Innovations in Nursing Education Pedagogical underpinnings of computer-based learning, Journal of Advanced Nursing, Vol. 46, No. 1, 2004, pp 5 – 12

Ahmed V., The Effectiveness of Computer Assisted Learning in Construction, PhD. Thesis, 2000, Loughborough

Alexander S., E-Learning developments and experiences, Education and Training, Vol. 43, No. 4/5, 2001, pp 240 – 248

Bennett A. and Bennett D., e-learning as energetic learning, Vine, Vol. 38, No. 2, 2008, pp 206 – 220

Berge Z. L. Barriers to online teaching in post-secondary institutions: can policy changes fix it?, 1998, Online Journal of Distance Learning Administration, Vol. 2, No. 1, available at http://www.westga.edu/~distance/Berge12.html accessed 3rd November 2004

Browell S., Staff development and professional education: a cooperative model, Journal of Workplace Learning, Vol. 12, Iss. 2, 2000, pp 57 – 65

Campbell J., P. Oblinger D. G. and Colleagues, Top-Ten Teaching and Learning Issues, 2007, Educause Quarterly, No. 3, 2007

Collis, B. and van der Wende, M.[Eds., 2002]., Models of Technology and Change in Higher Education: An international comparative survey on the current and future uses of ICT in Higher Education, Centre for Higher Education Policy, Twente University, 2002, Netherlands, available to download at http://www.utwente.nl/cheps/publications accessed 19th May 2004

DG Education and Culture, Studies in the Context of the E-learning Initiative: Virtual Models of European Universities (Lot1) Draft Final Report to the EU Commission, 2004, available to download at http://www.elearningeuropa.info/index.php?page=doc&doc_id=5082&doclng=1 accessed January 15th 2005

Ford N. and Chen S. Y., Matching/mismatching revisited: an empirical study of learning and teaching styles, British Journal of Educational Technology, Vol. 32, No. 1, 2001, pp 5 – 22

Forsyth R., Supporting e-learning: an overview of the needs of users, The New Review of Academic Librarianship, 2003, pp 131 – 140

Garrison D. R. and Kanuka H., Blended learning: Uncovering its transformative potential in higher education, Internet and Higher Education, Vol. 7, Iss. 2, 2004, pp 95 – 105

Ghinea G. and Chen S. Y., The impact of cognitive styles on perceptual distributed multimedia quality, British Journal of Educational Technology, Vol. 34, Iss. 4, 2003, pp 292 – 406

Hamid A. A., e-learning Is it the "e" or the Learning that matters?, The Internet and Higher Education, Vol. 4, 2002, pp 311 – 316

Harvey B. and Beards D., E-learning in Scottish further and higher education, Education and Training, Vol. 46, No. 6/7, 2004, pp 353 – 360

Howell S. L., Saba F., Lindsay N. K. and Williams P. B., Seven strategies for enabling faculty success in distance education, Internet and Higher Education, Vol. 7, 2004, pp 33 – 49

James-Gordon Y. and Bal J., The effects of technology-based learning on design engineers and the organisation, Industrial and Commercial Training, Vol. 33, No. 5, 2001, pp 167 – 174

James-Gordon Y., Young A. and Bal J., External environmental forces affecting e-learning providers, Marketing Intelligence and Planning, Vol. 21, Iss. 3, 2003, pp 168 – 172

Kilby T., The direction of Web-based training: a practitioner's view, The Learning Organisation, Vol. 8, No. 5, 2001, pp 194 – 199

Landen M., The role of technology in education and training, Industrial and Commercial Training, Vol. 29, No. 7, 1997, pp 230 – 235

Latchem C., Failure – the key to understanding success, British Journal of Educational Technology, Vol. 36, No. 4, 2005, pp 665 – 667

Lehner F., Nosekabel H. and Lehmann H., Wireless E-Learning and Communication Environment: WELCOME at the University of Regensburg, E-Services Journal, Vol. 2, Iss. 3, 2003, pp 23 – 42

Logan K. and Thomas P., Learning Styles in Distance Education Students Learning to Program, Proceedings 14th Workshop of the Psychology of Programming Interest Group, Brunel University, 2002, pp 29 – 44

Martinez R.-A., del Bosch M., Herrero M. and Nuno A. Psychopedagogical components and processes in e-learning. Lessons from an unsuccessful on-line course Computers in Human Behavior, Vol. 23, 2007, pp 146 – 161

Mayer R. E., The promise of multimedia learning: using the same instructional design methods across different media, Learning and Instruction, Vol. 13, 2003, pp 125 – 139

Mehanna W. N., e-Pedagogy: the pedagogies of e-learning, Association for Learning Technology Journal, Vol.12, No. 3, 2004, pp 279 – 29

Ramsden B. and Brown N., The future size and shape of the higher education sector in the UK: demographic projections, Universities UK, 2008

Reisman S., Dear R. and Edge D., Evolution of Web-based distance learning strategies, The International Journal of Education Management, Vol. 15, No. 5, 2001, pp 245 – 251

Ross J. and Schulz R., Can computer-aided instruction accommodate all learners equally?, British Journal of Educational Technology, Vol. 30, No. 1, 1999, pp 5 – 24

Ruiz J. G., Teasdale T. A., Hajjar I., Shaughnessy M. and Mintzer M. J., The Consortium of E-Learning in Geriatrics Instruction, Journal of American Geriatrics Society, Vol. 55, No. 3, March 2007, pp 458 – 463

Sadler-Smith E., Allinson C. W. and Hayes J., Learning Preferences and Cognitive Style Some Implications for Continuing Professional Development, Management Learning, 2000, pp 239 – 256

Shen Q. and Scott D., A web-based online postgraduate programme in project management, International Journal of IT in Architecture, Engineering and Construction, Vol. 2, Iss. 1, 2004, pp 47 – 60

Schweizer H., E-Learning in Business, Journal of Management Education, Vol. 28, No. 6, 2004, pp 674 – 692

Singh H., Building Effective Learning Programmes, Educational Technology, Vol. 42, No. 6, 2003, pp 51 – 54

Sloan B., The Use of Computer-Assisted Learning in the Education and Training of Construction Professionals, The Organisation and Management of Construction: Shaping Theory and Practice, Vol. 3, 1996, pp 334 – 347

Sloman M., Making sense of blended learning, Industrial and Commercial Training, Vol. 39, No. 6, 2007, pp 315 – 318

Sun L., Williams S. and Liu K., Knowledge Construction in e-Learning: designing an e-Learning environment, Proceedings of the 5th International Conference on Enterprise Information Systems, Angers, France, Vol. 4, 2003, pp 111 – 118, available to download at http://www.ais.reading.ac.uk/papers/con-Knowledge%20Construction%20in%20eLearning2003.pdf accessed 15th April 2006

Tham C. M. and Werner J. M., Designing and Evaluating E-Learning in Higher Education: A Review and Recommendations, Journal of Leadership and Organizational Studies, Vol. 11, Iss. 2, 2005, pp 15 – 26

Thomas E. J., Developing continuing education and training in European universities, Journal of European Industrial Training, Vol. 19, Iss. 4, 1995, pp 11 – 16

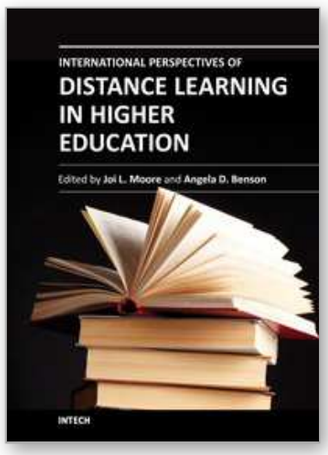
Trasler J., Effective learning depends on the blend, Industrial and Commercial Training, Vol. 34, No. 5, 2002, pp 191 – 193

Twigg C., Improved Learning and Reducing Costs: New Models for Online Learning, Educause Review, September/October 2003, pp 28 – 38

Vrasidas C. and Zembylas M., Online professional development: lessons from the field, Education and Training, Volume 46, Number 6/7, pp 326 – 334

Wall J. and Ahmed V., 2008, Lessons learned from a case study in deploying blended learning continuing professional development, Engineering Construction and Architectural Management, Vol. 15, No. 2, pp 185 – 202

Zhang D., Zhao L., Lina Z. and Nunamaker J. Jr., Can E-learning Replace Classroom Learning?, Communications of the ACM, Vol. 47, No. 5, May 2004, pp 74 – 79



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This book, written by authors representing 12 countries and five continents, is a collection of international perspectives on distance learning and distance learning implementations in higher education. The perspectives are presented in the form of practical case studies of distance learning implementations, research studies on teaching and learning in distance learning environments, and conceptual and theoretical frameworks for designing and developing distance learning tools, courses and programs. The book will appeal to distance learning practitioners, researchers, and higher education administrators. To address the different needs and interests of audience members, the book is organized into five sections: Distance Education Management, Distance Education and Teacher Development, Distance Learning Pedagogy, Distance Learning Students, and Distance Learning Educational Tools.

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