

Success factors for blended learning

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There is now a new landscape in educational technology where physical and virtual environments are blended to support learning in university courses. Blended learning has potential to improve learning but there are also challenges, especially in responding to the complexity of two environments and embedding it as a legitimate learning environment. Owing to the newness of the blended learning concept in higher education, little is known about what makes a successful blended learning experience and this paper provides an overview of success factors that are starting to emerge from the literature, research and our practice. It also offers some suggestions for future research.

Keywords: Blended learning, research, success factors

Introduction

Scenario 1

Sarah is an undergraduate student in a Business course which has weekly on-campus classes integrated with online activities. This week her part-time job, that enables her to fund her study, is scheduled so that she misses the lecture so she downloads the vodcast of her lecture into her ipod, goes online to the university's learning management system and after downloading her reading activities posts her responses to her online collaborative group joining their pre-class discussion so that they can all progress on their collaborative assignment. The class discusses the intervening online discussion as well as a new business problem, its content and the processes required to address it, with the teacher modelling good practice. She introduces the week's continuing online activities which she also posts online. Sarah is able to keep up to date with her studies and learn flexibly in this blended learning environment.

Scenario 2

The Business lecturer is keen to introduce an internet-based synchronous communication tool, Eluminate Live, into her classes so that some weeks even the face-to-face class can be held electronically to provide more flexibility for her students. To gain competence learning about the new technology she joins an on campus workshop to see it demonstrated. She then joins an online community of her fellow lecturers (several on other campuses) who are also learning to use this and other technologies and share ideas about the best pedagogical and technical steps in teaching this way. From time to time they talk by phone or meet to discuss their practice but the blend of online and face-to-face support is a strong motivator to persist in learning about these new technologies.

The scenarios above rely on a new landscape of educational technology that change relationships between people as technology mediates interaction and learning between the virtual and the physical. Over the last decade, a new concept of 'blended learning' has emerged in this new landscape. Terms such as online learning, e-learning and flexible learning tend to emphasise the significance of the electronic environment, but now, the term blended learning recognises the potential of a positive relationship between online and face-to-face environments for both learners and their teachers. However, while much is known about learning in traditional face-to-face settings, and there is an emergent literature about successful learning in online environments, there is little research on how to learn effectively in blended environments in higher education. For students and teachers, there is a higher degree of complexity in dealing with two environments there are also issues of legitimacy and acceptance when online environments are integrated with traditional face-to-face settings. It is therefore timely, at this early stage,

to identify some factors that may promote success in blended learning settings. Success here is defined as practice which promotes achievement of high quality learning outcomes and positive student learning experiences, with high teacher satisfaction and a reasonable workload that allows staff time for research and scholarship. This paper discusses the concept of blended learning and then identifies and discusses some factors which may promote successful blended learning, drawing on both the literature and the authors' research and practice. Because of the newness of the practice of blended learning, the paper finishes with some suggestions for further research in this field.

Blended learning

There are many definitions of blended learning, but the most common is that which recognises some combination of virtual and physical environments for example, Graham (2006), who describes the convergence of face-to-face settings, which are characterised by synchronous and human interaction, and Information and communication technology (ICT) based settings, which are asynchronous, and text-based and where humans operate independently. Mason and Rennie (2006) extend this definition to including "other combinations of technologies, locations or pedagogical approaches" (p.12) and Garrison & Vaughan (2008) define blended learning as "the thoughtful fusion of face-to-face and online learning experiences" (p. 5) emphasising the need for reflection on traditional approaches and for redesigning learning and teaching in this new terrain. Littlejohn and Pegler (2006) also recommend a different approach that they term 'blended e-learning'. This is a useful approach because it changes the focus in learning design by shifting the emphasis from simply considering the face-to-face and online environments to that of considering the design issues of (1) introducing e-learning and (2) the process of blending [the online and face-to-face environments].

As Garrison and Kanuka (2004) commented, this combination of classroom and online settings has a simplicity, but there is also a complexity to the concept which is evident in the wide variety of settings, diversity of the student population and consequent learning designs. Different blends of technology and pedagogy have been documented in both campus-based and distance programmes (Stacey and Gerbic, 2006). The advent of new learning technologies, for example, podcasting and vodcasting, internet based audio and video communication, e-portfolios and social networking tools including blogs and wikis create new blending potentials. The cultural diversity of the student population and the technology rich experiences of some Net Generation students raise further issues for blended learning design. Complexity is also evident in the extent to which ICT has been incorporated or embedded within courses. Some writers (for example, Vaughan, 2007) argue that mere supplementation of a face-to-face course with online learning is not blended learning whereas others (Littlejohn and Pegler, 2006) prefer to talk about 'strong' and 'weak' (p.29) blends to indicate a continuum across significant to very small amounts of e-learning.

In the professional development context, the blend of technologies with face-to-face interaction is a means by which a community of practice is established. The notion of a community of practice, developed well in the writing of Wenger (1998, 1999) and defined by him as those "groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis" (Wenger, McDermott & Snyder, 2002, p 4) has been extended with online communication to enable learning in the workplace through a blend of face-to-face and technological interaction (Stacey, Smith & Barty, 2004). Informal communities of practice and formal communities of learning with an online resource base of web resources and case studies are the basis of much effective institutional professional development. Garrison and Vaughan (2008), in particular, promote a blended faculty *Community of Inquiry* which combines face-to-face workshops, where personal relationships can be established, with a sustainable online community for critical reflection and discussion of practice.

Factors that promote successful blended learning

The literature on blended learning is dominated by insider accounts of its introduction in campus-based courses, generally using a learning management system and often including online discussions. These reports are often highly descriptive and factors that might promote successful blended learning are often hidden in the form of concluding observations, and recommendations and rarely identified more explicitly. The recommendations that follow are grouped under four headings which have been developed from the emergent literature, where there is an overall emphasis on pedagogic factors.

Institutional success factors

- Blended learning models should be developed that respond to local, community or organisational needs rather than using a generic approach (Sharpe, Benfield, Robert and Francis (2006). However, Mason and Rennie (2006) advocate putting the learners' needs first, ahead of the context or the biases of the teacher in making such choices.
- It is important that the institutional building blocks are in place including organisational readiness, sufficient technical resources, motivated faculty, good communication and feedback channels with students (Tabor, 2007).
- There is room for staff to develop their own meanings for blended learning, currently poorly defined to include face-to-face classes and active learning and build commitment to the concept (Sharpe, Benfield, Robert and Francis (2006).
- Blended learning should be introduced as a scholarly and transformative redesign process within the institution, that rebuilds the course rather than simply adding on technology (Sharpe, Benfield, Robert and Francis, 2006; Littlejohn and Pegler, 2007; Garrison and Vaughan, 2008).
- There should be institutional practice of carrying out regular evaluations and publicising the results (Sharpe, Benfield, Robert and Francis, 2006).

Regarding teachers

- The importance of, and need for, continuing professional development for teachers with sufficient time for development should be acknowledged (Vaughan, 2007).
- Ongoing pedagogical and technical support through membership of a blended community of practice is a proven model that sustains such teacher innovation (Garrison and Vaughan, 2008).
- The importance of dealing with teachers' fears of loss of control, lower student feedback grades and general uneasiness about the impact of online learning on classroom relationships should be considered (Vaughan, 2007).
- The impact on teachers' workloads must be taken into account. Littlejohn and Pegler (2006) identify the costliness in terms of both institutional and teacher investment and suggest the creation of shareable and reuseable digital resources in an effort to ensure that blended learning is sustainable.

Regarding students

- Students' learning maturity and readiness for blending learning with its demands for independent learning must be considered (Tabor, 2007).
- Student expectations, especially their ideas that fewer face-to-face classes mean less work and the need to develop more responsibility for their learning and time management skills must be taken into account (Vaughan, 2007; Tabor, 2007).
- Consistent and transparent communication around the new expectations is needed in order to help students understand the blended learning process (Sharpe, Benfield, Robert and Francis (2006).

Pedagogic considerations

- The combination of the virtual and physical environments should be made on the basis of an understanding of the strengths and weaknesses of each environment as well as the appropriateness of choice to the learners involved.
- Examples of good practice in the online discussion literature can inform blended learning design, for example, Meyer (2004). Walker and Arnold (2004) have extended this by providing a pedagogical framework where the different phases of the course utilise the strengths of the different media and add value to the learning activities.
- The importance of a strong integration between the two environments (Garrison and Kanuka (2004). More recently, Garrison and Vaughan (2007) have operationalised the integration requirement in a four phase model which is anchored around the face-to-face environment. A sequence of activities before, during, after and in preparation for the next face-to-face session are described with suggestions for various technology options which incorporate the strengths of both environments. The central role of the face-to-face environment in the model provides the comfort of a traditional learning environment for students and teachers. The model also reflects existing good practice where teachers often plan courses around the idea of learning activities 'before, during and after' class.
- Careful consideration of the role of the teacher. In her research, Gerbic (2006) found that encouragement, reminders from the teacher and discussion of the rationale for addition of online discussions was not especially effective in connecting online discussions to the classroom and the course and the new online environment was marginalised by the students. The more effective process

involved the teacher providing feedback on the quality of the online discussion in the face-to-face class and activities which prepared and skilled students for their online activities. The teacher's attention in class to the new virtual environment legitimised it as part of the course and endorsed its importance for learning.

Some recommendations for future research

In their review of research on blended learning, Bluic, Goodyear and Ellis (2007) argued that research so far has been focused on different aspects of blended learning, especially the technology, and they argue for a more holistic approach which seeks to understand the complexity of blended settings and processes as a whole system. The authors agree with this view and, based on our discussion above, suggest additional avenues for future research in blending learning:

- more insights into the factors and approaches which can improve connections between the virtual and physical elements of blended courses within universities,
- comparative research into the strengths and weakness of different ICT, especially the new technologies integrated with face-to-face environments, to investigate the characteristics of optimal blends for learning,
- pedagogical frameworks to support blended learning for teachers and students and
- more investigation of successful models of professional development and support of teachers who take up this new mode of teaching.

As our scenarios illustrated, blended learning provides a flexibility in learning for both students and teachers. Integration of the virtual and physical landscapes enable both teachers and students to become learners but this is most effective when there is institutional support through provision of professional learning and the opportunity for redesigning courses for the most appropriate blend.

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