The Power of the Model: One Step towards Developing Blended Learning Courses in Higher Education

El Poder del Modelo: Un Paso Hacia el Desarrollo de Cursos de Aprendizaje Combinado en Educación Superior

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Abstract

Online teaching and learning in higher education has been growing rapidly over the past decade. However, many of the teaching staff at higher education institutions are wary of this new direction and loath to take the plunge and start using it in their classrooms. This article suggests a practical way of helping these teachers by presenting them with a model mapping out online teaching tools in an easy to understand manner, followed by a 6-step process which would allow teachers to determine which combination of the aforementioned tools would best serve their particular class, with an emphasis on blended learning of different types. The article ends with a description of how this process was implemented in one class in a teacher education college in Israel, inviting other teachers around the world to try it out for themselves.

Keywords: online teaching, blended learning, course planning, teacher education

Resumen

La enseñanza y aprendizaje online en la educación superior ha crecido rápidamente durante la última década. Sin embargo, gran parte del personal docente en instituciones de educación superior se resiste a esta nueva dirección y es reacio a dar el paso y a usarla en sus clases. Este artículo sugiere una manera práctica de ayudar a esos profesores, con un modelo de asignación de herramientas de enseñanza online fácil de entender, seguido de un proceso de 6 pasos que permite a los profesores determinar qué combinación de las herramientas mencionadas servirá mejor, con énfasis en el aprendizaje combinado de los diferentes tipos. El artículo termina con una descripción de cómo este proceso se llevó a cabo en una clase en un colegio de formación docente en Israel, invitando a profesores de todo el mundo a intentarlo por sí mismos.

Palabras clave: enseñanza online, aprendizaje combinado, planificación de cursos, formación del profesorado

Introduction

Today's world is rapidly changing as a result of technology, and computer-mediated communication is transforming the way people live and work (Galguera & Nicholson, 2010). Use of technology-based tools such as YouTube, Facebook and Wikipedia, which young people consider to be a natural part of their world, is affecting not only the way they spend their leisure time, but also the way they learn and work. The research literature describes the current situation of online learning as a fast developing field, with academic institutions offering more and more online courses, which are becoming increasingly popular among students (Njenga & Fourie, 2010; Power, 2008). Online learning is now presenting a real alternative to traditional classrooms, both at undergraduate and graduate levels (Parker & Martin, 2010), with most institutions focusing on development of both fully online courses and programs as well as blended learning courses of different types in an attempt to meet students' needs and attract larger populations (Power, 2008; Precel, Eshet-Alkalai & Alberton, 2009). The number of students in the US who took at least one online course more than doubled between 2002 and 2006, and has gone up by an astounding 17% (!) between 2007 and 2008 (Allen & Seaman, 2009), and while comparable numbers for the European community do not seem to be available, there is no reason to assume they are very different.

Our student body belongs to the 'net generation' of young people sometimes called 'digital natives' - that is, people speaking the digital language almost from birth (Schrader, 2008); but alas, the teaching staff mostly does not (Precel, Eshet-Alkalai & Alberton, 2009). This creates a meaningful gap, sometimes

called the 'digital disconnect', between the two populations, which can only be narrowed through intentional work with the staff (Galguera & Nicholson, 2010). Today's students expect "anytime, anywhere flexible and high-quality learning environments containing well-organized support services" (Kesim & Agaoglu, 2007, p.4), and any institution wishing to cater to its present and potential student body has to take this into account. We need to stop and consider the present technological situation and its implications for teaching and learning, providing lecturers with time and space to learn, reflect, try things out, and receive assistance where and when necessary (Shemla, 2007).

Technology-based Teaching in Higher Education Institutions

Based on the rapidly developing field of online teaching and learning in higher education described above, one would assume that higher education is open to changes in this direction, welcoming technology-based teaching tools. However, this does not seem to be the case. Indeed, higher education in general tends to take a traditional approach, preferring tried and true methods (i.e. face-to-face lecture mode teaching) over technological innovations, with its teaching staff often particularly opposed to any changes in their teaching (Mills, Yanes & Casebeer, 2009; Power, 2008; Precel, Eshet-Alkalai & Alberton, 2009). When online teaching is introduced into higher education institutions, it is often used as a general framework, using features such as Learning Management Systems (LMS – software applications used for the administration of different teaching/learning activities), use of email for the purpose of communication between students and instructor, etc., ignoring the more sophisticated innovative tools available. A study conducted in a large Israeli university found that most teachers used their online course sites to provide content and manage learning, with only a small minority using more advanced options, such as asynchronous learning tools of different kinds (Shemla, 2007). These findings are echoed by another, later study (Forkosh-Baruch et al., 2010), examining a large sample of lecturers in teacher education colleges in Israel. The findings of this study showed that more than half of the lecturers use online teaching tools of one type or another in their teaching; however, these are mostly quite basic tools, such as e-mail, used for the purpose of communication with students or the possibility of students handing in work online.

There seem to be several reasons for this situation. Higher education institutions usually enjoy varied technological possibilities and many resources, and the management often supports the use of technology in teaching, providing financial support for this endeavor. However, the lecturers lack motivation for transforming their teaching practices, and show little inclination to learn new skills, whether they be technological or pedagogical (Mills, Yanes & Casebeer, 2009), justifying this with the age-old saying "If it ain't broke, why fix it?", i.e. why change something that works and has worked well for generations?! It is often the case that technology forges full-steam ahead with pedagogy lagging behind, and technological advances are not accompanied by matching pedagogical tools (Njenga & Fourie, 2010). The integration of online teaching and learning into higher education institutions is a complex process (Shemla, 2007), requiring coordination among people, machines, materials and finances. In addition, internal and external politics are often involved, complicating matters. Teachers find it difficult to keep up with technological advances, and often find themselves so confused and unable to meet their own and others' expectations, that they simply give up completely. In addition, the domain of technology-based teaching within the institution is often managed by the technological rather than the pedagogical staff, making it even harder for the teachers to find their place (Hannon & Bretag, 2010). Thus, the great potential of online teaching and learning in higher education is often not realized.

Blended Learning

Today, teaching and learning are no longer considered in the polarized terms of 'face-to-face' vs. 'online'. Rather, we often combine the two in different ways, in what has become known as 'blended learning', also called sometimes 'hybrid learning' or 'mixed mode learning' (Doering & Veletsianos, 2008; Downes, 2008; Harasim, 2000). Downes (2008) defines blended learning simply as "traditional in-class learning supplemented by online activities and resources" (p.25), while Garrison & Vaughan (2008) take this further, emphasizing its pedagogical rather than technological qualities: "…face-to-face oral communication and online written communication are optimally integrated such that the strengths of each are blended into a unique learning experience congruent with the context and intended educational purpose" (p.42). Thus, teachers more often than not combine different online and offline activities, tools and resources to form a 'blend' uniquely suitable to their particular teaching situation, taking into account the students, the context, and their own educational beliefs and practices (Forkosh-Baruch et al., 2010).

The blended learning approach has several distinct advantages: it offers a larger number of possible variations through use of different teaching format combinations; it allows the teacher to achieve

maximum suitability between the teaching/learning format and the target group; and it maximizes the advantages and minimizes the disadvantages of each teaching/learning option by using a complementary format to offset these disadvantages. For example, use of asynchronous learning may cause the students to feel lonely and somewhat alienated from their peers; if a synchronous teaching tool is used in the same course, it may go a long way towards solving this problem. On the other hand, using too many technologies can be confusing and difficult for both teacher and students, particularly if they are mismatched, and over-enthusiasm with technology may cause pedagogical problems that would not have existed had the teacher used traditional teaching only. For example, an inexperienced teacher may not be able to match assessment methods and tools to new online teaching formats, causing confusion and unrest among the students. Most researchers today agree that the blended learning approach is the best one for implementing online teaching and learning, but they also agree that there is much to be improved regarding the ways in which it is understood and implemented in practice (Precel, Eshet-Alkalai & Alberton, 2009).

The Blended Learning Model

Taking into account the two situations described above: the need for further education and support of teaching staffs in higher education institutions regarding the use of online teaching, and the seeming advantages of blended learning, the next logical step would be helping teachers to use blended learning in their classes in the best possible manner. The model described below attempts to do just that.

In discussing the debate of synchronous vs. asynchronous online learning, Hrastinski (2008) advocates a very practical approach: "…instead of trying to determine the best medium, the e-learning community needs an understanding of when, why, and how to use different types of e-learning" (p.52). This is also true for blended learning in the wider sense – making informed choices regarding all types of face-to-face and online learning approaches, as described above. There is no perfect or ideal formula presenting the 'right' mixture for a blended learning course (Precel, Eshet-Alkalai & Alberton, 2009), or as Steen (2008) puts it so succinctly, no "one-size-fits-all" (p.1). The following section presents a model mapping the different options of face-to-face and online teaching, and explaining its use by teachers in helping them create blended learning courses suitable for their own teaching situations.

In his article "The Emergence of a Blended Online Learning Environment", Michael Power presents a two-dimensional model of blended online learning, with the two dimensions being on-campus/off-campus design and delivery (i.e. place) and synchronous/asynchronous faculty and system (i.e. time) (Power, 2008, p.510). This is a good model, but insufficient for the purpose of mapping out all online teaching possibilities, as it ignores another extremely important dimension, namely the individual/cooperative learning one. This aspect of learning has become central in most discussions of online teaching and learning, with much of the current literature emphasizing the importance of learning as a social endeavor (Arnold & Ducate, 2006; Garrison, Anderson & Archer, 2000; Lear, Ansorge & Steckelberg, 2010; Levin, He & Robbins, 2006), and the move from individual learning typical of the first generation of online learning (Web 1.0) to social and cooperative learning typical of the present generation (Web 2.0) and exemplified by social software tools such as Wikis, discussion forums, etc. (Deters, Cuthrell & Stapleton, 2010; Hart, 2008; Kesim & Agaoglu, 2007). An extended discussion of this issue is beyond the scope of the present article, but most researchers agree that it forms the core of present day online learning (Chou & Chen, 2008; Deters, Cuthrell & Stapleton, 2010; Downes, 2008; Garrison, Anderson & Archer, 2000; Hughes & Narayan, 2009; Kesim & Agaoglu, 2007; Lear, Ansorge & Steckelberg, 2010; Shner, 2008). Thus, the model presented in Figure 1 is a three-dimensional one, mapping out the present teaching/learning options available to teachers. No less important, whatever future developments in this field are, it should be possible to map them on the same model, thus making it useful in the (at least foreseeable) future as well as in the present.

How the Model Works

As can be seen in Figure 1, the model is presented in the shape of a three-dimensional cube, with *time*, *place* and *learning* being the three dimensions, each one presenting two options. Each online learning tool is shown as 'covering' certain parts of the cube. For example, *a blog* is an asynchronous, individual, online tool, therefore represented by the upper, back, left-hand part of the cube; Learning Management System (LMS) is an online synchronous/asynchronous, individual/cooperative tool, therefore represented by the entire upper part of the cube; and *e-mail* is an individual/cooperative, online, asynchronous tool, therefore represented by the upper, left-hand side of the cube, both front and back. Face-to-face teaching/learning is also represented on the model, despite not being an online learning tool, as it is one of the options teachers may use in planning a blended learning course.
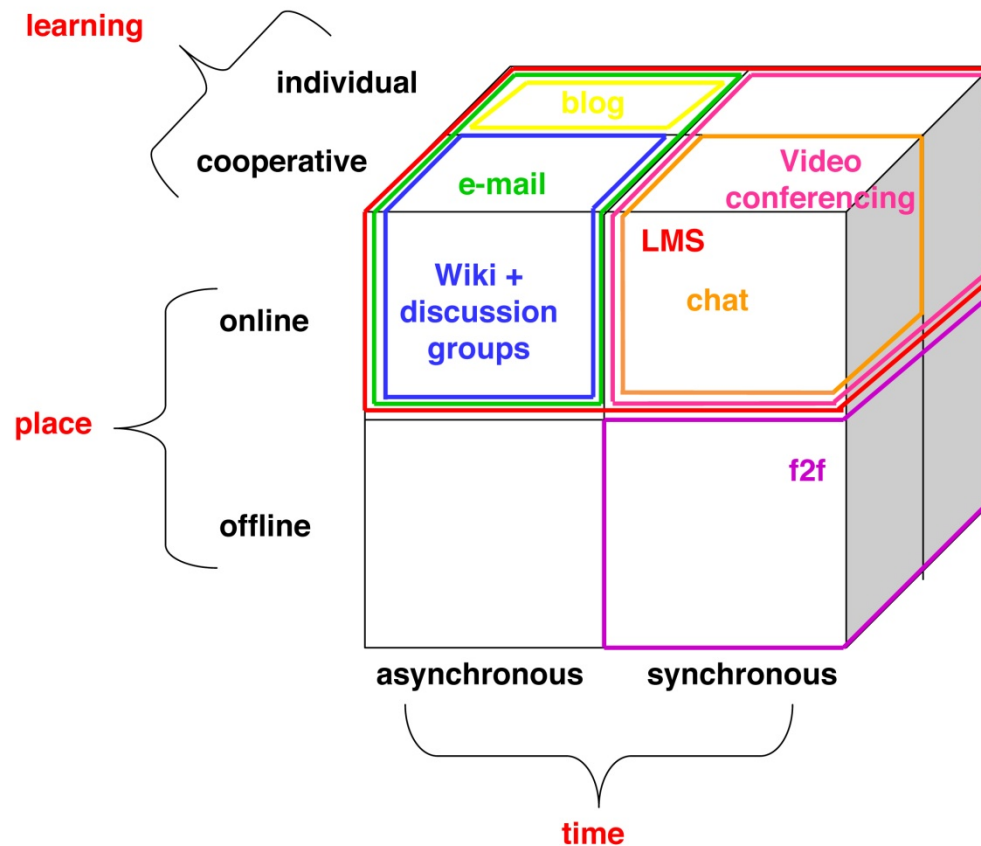
Figure 1. *The Teaching/Learning Options Model*

Using the Model

As explained above, the model presented in Figure 1 maps existing teaching/learning options, with the intent of assisting teachers confused by the multiple aspects, tools and possibilities of online teaching. However, simply being aware of the options is not sufficient. The main task facing confused teachers is the choice they have to make among all the options mapped out on the model when attempting to formulate a blended-learning course for a particular class. In order to make this choice in the best manner possible, it is suggested that the teachers follow the steps presented below, intended to help them go through an instructional design process culminating with a blended learning course designed to match their particular teaching situation. Following these steps will enable the teachers to formulate the best 'blend' for a particular class, hopefully in a manner which would enable both teacher and students to make good, efficient use of the course in question and what it has to offer. It is also recommended that teachers intending to team-teach or planning to work with similar classes undergo this planning process together, helping each other, giving mutual feedback, etc.

Blended Learning Course Design Steps

These steps to be taken by the teacher are based on the principles of instructional design (Reigeluth, 1999), and given shape based on the special needs of blended learning in higher education.

   Step 1 – Analysis of teaching context – what characterizes the present teaching situation (the institution, student population, subject matter)?

   Step 2 – Definition of teaching objectives – what are the intended outcomes of the course (defined in terms of student learning)?

   Step 3 - Blended learning – which online teaching/learning tools would be most appropriate for use in this course based on Steps 1 and 2 above?

   Step 4 – Implementation – how will this work in practice?

      Step 5 – Assessment – have the intended teaching objectives and learning outcomes (step 2 above) been achieved?

      Step 6 – Generalization – what can be learned from this experience regarding blended learning in general and its usage in other teaching situations?

Putting the Model to Practical Use

This section describes how the model was put to use by the author in a course taught as part of a graduate program in a teacher education college in Israel. As this is a case study, no broad rigorous research was undertaken to assess the results. Rather, the author would like to describe her experience in using the model, encouraging other higher education teachers to try it out and make suggestions towards improving it for the benefit of the entire community of higher education teachers.

Description of Course

The course in question forms part of a graduate degree program in a teacher education college in Israel, offering an M.Ed. degree in teaching foreign languages. The year the model was developed the course included 24 students, all of them experienced English teachers, ranging in age from mid-twenties to late forties, 21 women and four men. The content of the course included several different topics related to the teaching of English as a foreign language, such as Heterogeneity in the Classroom, Professional Development and Evaluation and Assessment. The class met once a week for a 90 minute session throughout the academic year (October to June).

Description of Process

The course was taught by the author for several years in a traditional (face-to-face) manner, at which point the possibility of employing online teaching methods became a real one. When attempting to plan accordingly many questions arose, and the confusion and frustration described in the literature keenly felt. In an attempt to meet the problem head on the model (as shown in Figure 1) was developed, and the steps to be taken by the teacher (described above) worked out. Assessment was undertaken in the form of student feedback, as described below.

Blended Learning Course Design Steps

Step 1 – Analysis of teaching context

The college in question was a teacher education institution, and the particular program an in-service graduate degree program. Thus, it focused heavily on pedagogical matters, attempting to provide the students not only with serious academic content, but also with modeling of up-to-date teaching practices. In addition, the students were all older than the average college student, had families and jobs, and very full, busy personal and professional lives – they all taught part time at the same time as attending the graduate program. They were also practicing teachers, thus quite opinionated regarding their expectations of the program and the lecturers on the one hand, but also quite appreciative of what they were provided by said program and lecturers on the other. The course content was eclectic, and not dictated by college administration. Topics were picked by the teacher according to her judgment of their suitability, with criteria being their interest to the student population and relevance to English teachers in the Israeli educational system in the 21st century. Topics were not necessarily carried on from year to year, rather being re-evaluated every year anew for interest and relevance.

Step 2 – Definition of teaching objectives

The teaching objectives for this course were two-pronged: (a) to discuss the theory and practice of foreign language teaching in the Israeli context, encouraging the students to reflect on their own work as teachers; and (b) to model modern teaching and assessment methods for the students to consider and perhaps adopt in their own teaching.

Step 3 - Blended learning

As the students in this course led very busy personal and professional lives, they sometimes found it difficult to attend classes due to pressing family demands (e.g. a sick child) or professional ones (e.g. going on a class trip). Balancing all this seemed to be a sore issue with most of them, and online teaching options were sought to alleviate some of this pressure. On the other hand, many of the students saw their weekly meetings at the college as a much-needed break from their daily personal and professional routines, and did not wish to adopt a full online option. Thus, it was decided to employ blended learning in an attempt to meet students' needs regarding their overloaded lives and the instructor's wishes to model more up-to-date teaching methods, i.e. online teaching of different kinds.

When taking into account these two major issues, and after much study of the different options mapped out by the model, it was decided to replace a third of the classroom sessions by synchronous video conferencing sessions taking place in the evenings, thus freeing some of the students' mornings for other needs, either personal or professional, and to add an element of work done at home through the Wiki platform, allowing for group thinking and writing done without the students having to meet physically.

The video conferencing program used, called AT&T Connect, is the tool used by most Israeli teacher education colleges, allowing the teacher and students to conduct synchronous online sessions at a pre-determined time through use of a previously downloaded program the students receive gratis from the college. The students were given a list of dates on which they had to connect to the program at 9 pm and participate in a 90 minute synchronous session run by the teacher. The screen on each of the students' computers displayed the Powerpoint presentation prepared by the teacher, and individual students could ask for and receive permission to speak, "write" on the screen, etc.

The Wiki platform is a collaborative writing tool, used in many ways (the most popular of them being Wikipedia) on the Internet in general and in education specifically. In this particular course use was made of Wiki in the following manner: each student had to pick an article from the course bibliography, summarize it and relate its content to the material studied in the course. The other students were then invited to read this text and relate to it on the Wiki's Discussion section. The original author was expected to periodically read the comments and make any necessary changes in the original text. In addition, as the texts were put up, the students were expected to continuously make hyperlinks to others' Wiki texts, thus creating a web of material related to the course content.

In this way the course provided examples of both synchronous and a-synchronous online learning (in addition to the traditional face-to-face component), emphasizing both individual and cooperative work. Thus the particular blend of on- and off-line teaching options selected for this particular course would hopefully meet the course objectives described above (dealing with course content and modeling current teaching/learning options).

Step 4 – Implementation

The plan was implemented in the course described above, with no major pedagogical or technical problems. The problems encountered were all of a minor nature and easily dealt with.

Step 5 – Assessment

Feedback was collected from the students at the end of the year in the form of a questionnaire including six open-ended questions which they were asked to reply to anonymously. All students complied, and the answered were analyzed using content analysis (Krippendorff, 2004). The feedback indicated an overall satisfaction with the blended learning format as described above. Twenty of the 24 students had never taken a course which integrated technology prior to the one in question. When they heard how the course was to be organized, they had mostly fears and very few positive expectations. However, when asked if they would now (following their experience) choose to study face-to-face, completely online, or through a blended learning format, 17 of the 24 students indicated a preference for blended learning, three for online learning, and two for face-to-face learning (two students did not answer this question). Fifteen of the 24 students mentioned the lack of a clear division between personal and study time as the most positive aspect of blended learning, while the most often mentioned negative aspect was the technological issue, which seven of the 24 students found to be a problem.

Step 6 – Generalization

All in all, this course was a very positive experience for the instructor, both as a teacher and as a blended-learning course designer. It was suitable to the specific teaching context, and seemed to help both teacher and students attain the course objectives. However, it was not problem-free, and some course components need to be reconsidered. For example, many students complained about technical issues related to the synchronous sessions. At this point in time it is unclear whether a simple change of program will solve these issues, or whether they are built into the idea of a synchronous session, and more work will have to be done there. In addition, clearly this format may be completely unsuitable in another teaching context, for example for undergraduate students, so the level of generalizability is not high. It is, however, hoped, that this experience will now enable the teacher to be more adept at planning other courses with different characteristics.

Summary

The model and accompanying 6-step process described in this article are intended to provide higher education teachers who are not sufficiently conversant with online teaching with a way of designing a blended learning course. The article describes one case of this model being implemented, clearly not enough to label it a success. Further research is needed in order to improve the suggested model and process and determine their validity. However, this may be deemed a good beginning in encouraging more and more teachers in higher education to turn to online teaching as a viable option in their work.

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