The Emergence of a Blended Online Learning Environment

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Abstract

This paper is based on an ongoing research program examining the implementation of instructional design and technology in university teaching as well as in faculty migration from a distance education design model to an online learning design model. The purpose of this paper is to substantiate an emerging online learning trend termed *blended online learning*, based on a synthesis of existing research and new findings from a three-year, multi-case study. Blended online learning, as defined here, was borne out of an intensive, iterative cycle of rapid prototyping-based design research and is seen as a combination of both blended learning and online learning, i.e. the simultaneous and complimentary integration and implementation of an asynchronous-mode learning environment (i.e. a learning management system, or LMS) and a synchronous desktop conferencing environment (i.e. a virtual classroom). Previous research by the author defined the context, parameters and methodology of this study and identified specific design problems encountered by faculty when designing and developing courses for off-campus outreach. This paper takes a step back and observes how distance education as a field is losing impetus as online learning is gaining momentum.

Keywords: instructional design, design research, distance education, online learning, blended learning

Introduction

Universities world-wide, backed by a thriving communication and information technology industry and an invigorated field of research in instructional design and technology (Reiser & Dempsey, 2007), currently have at their disposal a technological array of options that completely dwarf earlier means to provide students with distance education (Bates, 2005; McGreal & Elliott, 2008). However, initiatives undertaken by universities, namely in North America, to launch stand-alone, asynchronously-based *Web courses* (Boettcher & Conrad, 2004), are meeting with mixed results, from a promise of going mainstream (Allen & Seaman, 2004) to a realization of expectations not being met (Larreamendy-Joerns & Leinhardt, 2006; Zemsky & Massy, 2004). Insufficient reporting may explain some of the discrepancies in these results (OCDE, 2005; Tallent-Runnels, Thomas, Lan, Cooper, Ahern, Shaw & Liu, 2006). However, some initiatives have been criticized for being of uncertain quality, overly administration-led and mainly profit-motivated (Carr-Chellman, 2005; Noble, 2002; Magnussen, 2005). Yet many authors state that faculty, by and large, simply do not have the time or the incentive to devote themselves to learning new skills, mastering new technology and interacting with students in new ways (Brogden & Couros, 2002; Moore & Kearsley, 2004; Sammons & Ruth, 2006).

In this article, a synthesis of research results from earlier articles is presented based on the following research questions: What kind of obstacles are encountered by a group of faculty members with varying levels of motivation, knowledge and skills set as they move from a distance education (DE) design model to an online learning design model? What is the impact of these kinds of obstacles on the evolution of DE and the emergence of online learning (OL)?

Literature Survey: from DE to OL at traditional universities

Universities world-wide have long been interested in distance education, both as a means of increasing accessibility to higher education, thereby promoting social justice (Jung, 2003), and also as a means of

increasing enrolments while decreasing costs (Rumble, 2002). After decades of change and technological innovation in models of DE (Taylor, 2001) and of, at times, mixed results (OCDE, 2005; Tallent-Runnels, Thomas, Lan, Cooper, Ahern, Shaw & Liu, 2006), university administrators are now turning *en masse* to information and communication technologies to develop online components of on-campus courses (Bonk & Graham, 2006; Cook, Owston & Garrison, 2004). As a result, a variety of *blended learning* approaches to course design and delivery has emerged whereby faculty, working with instructional designers, develop, to varying degrees, didactic materials for online delivery which complement on-campus teaching and learning and facilitate distribution of didactic materials (Garrison & Kanuka, 2004; Garrison & Vaughan, 2008; Mortera-Gutierrez, 2006; Shea, Fredericksen, Pickett, & Pelz, 2004).

The study presented in this article had its starting point in the context of a traditional university with a long history of DE (Power, 2008a; Power, 2007). Although various course delivery technologies had been implemented over several decades, the provision of distance education at the time of this study was mainly based on subsidized, site-to-site videoconferencing which replicated face-to-face instruction (Berge, 2001). However, funding for such was about to be curtailed and the approaching deadline prompted university administrators to start promoting the development of stand-alone, Web courses (Boettcher & Conrad, 2004) requiring intensive, front-end instructional design and faculty involvement (Power, 2007). However, as the project started and as faculty began to realize the amount of time and the degree of effort which would be required to bring their courses to completion, the need for a more pragmatic and effective approach to DE became obvious, thereby leading to what the author began to term a *blended online learning environment* (Power, 2008b).

Method

The research method adopted to carry out this study was a design research inspired approach (Brown, Collins & Duguid, 1989; Collins, 1992; Jonassen, Cernusca & Ionas, 2007). Collins (1992) stated: "…a design science of education must determine how different designs of learning environments contribute to learning, cooperation, motivation, etc." (p. 24). More recently, Jonassen et al. (2007) focus on the kind of research instructional designers actually conduct:

> "Design research integrates the design of learning environments with the development of *prototheories* (emergent, developmental theories) of learning (Design-Based Research Collective, 2003). That is, we develop theories of learning while designing. Design is research and research is design. Design research uses continuous cycles of design, implementation, analysis and redesign" (p. 48).

Another aspect of the research design approach applied in this study was the determination beforehand of actual course planning practices among faculty in order to subsequently build a faculty-friendly, campus-based university instructional design (ID) model prototype. This was done in the hope of increasing outreach among faculty via DE and increasing their ownership of and full engagement in the design process (Jaffee, 1998).

The steps followed were those of a developmental research study (Richey, Klein & Nelson, 2004; Van der Maren, 1998) using a case study-based, problem-solving approach to data collection (Berg, 2001; Leedy & Ormrod, 1999). After a literature review was carried out on modes of DE, OL and relevant instructional design (ID) models as implemented in higher education, a phase of intensive faculty-instructional designer/researcher (hereafter the "researcher") teamwork ensued in order to establish a working instructional design (hereafter "ID") prototype model which reflected both faculty course planning practices and literature-based, ID models.

Sample population

The sample population selection technique was non random, being composed of ten faculty members in the Humanities (Education, Languages, Law and Music) who were engaged in the process of designing both undergraduate and graduate courses for immediate online delivery and who had volunteered to participate in this study. Over a period of three years, ID-related problems, themes and categories emanating from these ten course projects and the solutions implemented were fully documented as case studies (see Power, 2008a; Power, 2007). The sample size was determined according to standard data saturation techniques (Berg, 2001; Bogdan & Biklen, 1998).

In choosing this research approach, the goal was to promote a form of naturalistic inquiry in which social agents (i.e. faculty and the instructional designer/researcher) would constitute the principal source of information and scientific data.

Data sources

Data for this study originated from several sources. Design-related problems encountered by the researcher working with faculty members during weekly design and development working sessions were recorded in a journal (Power, 2008a). In addition, ongoing, email-based, designer-faculty interaction provided a second source of documentation on emerging design-related problems. The third source of data was from actual faculty course material production, comprised mainly of course syllabus components such as course readings-based learning activities and assessment instruments. Finally, the fourth data source came from *post facto,* semi-structured interviews of the faculty members involved in the study. It should be noted that the study was conducted in a French-language university and that excerpts from verbatim transcriptions presented below are translations provided by the author.

Data analysis

Initial data analysis was iterative in nature, occurring as results from design-related decisions took effect in each case. Analysis was conducted by the researcher in this sequence and was based on available data sources: 1) design problem identification, 2) solution identification, 3) implementation and finally 4) results identification. In detail, the researcher studied each design-related problem as it occurred and proposed a solution which was then developed and applied. Immediate results were then studied to ascertain the degree to which the problem was solved in subsequent cases, i.e. problem perpetuation, problem mutation or problem removal. The results of such were reinvested in subsequent cases. Final data analysis occurred after the ten cases studies were concluded by a thorough review of all design-related problems encountered, all solutions implemented and final results obtained as evidenced by the final version of the design model prototype which was produced.

Results

Throughout this research study, major ID-related problems were encountered, out of which three ID model design-related problem categories emerged: 1) complexity-related problems, 2) limits-related problems, and 3) course delivery-related problems (Power, 2007).

Category 1: Instructional Design (ID) prototype model complexity-related problems

With regard to Category 1 problems, exchanges between faculty members and the researcher began with the introduction of an ID prototype model (hereafter the "prototype") based primarily on an ID theoretical framework but also on campus-based course planning practices. Problems arising as a result of initial use of this prototype (in Cases 1 to 3 inclusively) dealt mainly with difficulties faculty experienced in applying the proposed prototype (see Table 1), described by faculty as being *"heavy"* (Case 1, Power, 2008a), as being *"too difficult to understand"* and *"too theoretical"* (Case 2), as *"too demanding"* given the *"time available"* (Cases 1 and 3), elements suggesting a gap between ID theory and actual course planning practices among faculty.

The solutions applied to these problems involved emphasizing actual course planning practice and experience among faculty while retaining minimal ID requirements for course development. Resolution of this category of problems (occurring towards the end of Case 3) produced a modified version of the prototype (see Table 2) representing a balance between the requirements of a rigorous, front-end ID prototype and faculty-driven course planning practices.

This modified version of the prototype (Table 2), termed the *horizontal course syllabus* (HCS) model aimed at creating a higher level of congruency between syllabus components, severely lacking in the traditional syllabus model. In this model, faculty first linked objectives directly to content, then directly linked content to learning activities, i.e. individual, team or group activities. The model that emerged was thus the result of a consensus reached between faculty members and the researcher in light of severe time constraints with the overall focus of the design work on developing objective- and resource-linked learning activities. This was seen as more profitable than time spent on developing elaborate conceptual

scaffolding which was seen by faculty as being prohibitively effort- and time-consuming as well as being at odds with existing on-campus course planning practices.

Table 1. Initial ID prototype

	1	2	3	4	5	6
Week	Analysis	Module-Building	Teaching Activities Development	Learner Support Activities Development	Evaluation Instruments Development	Items for Ongoing Improvement
X						

Table 2. The horizontal course syllabus model

Week X	Main objective(s)			
Specific Objectives	Content description	Before class learning activities		In-class learning activities
		Individual Activities	Team Activities	

It should be noted that, at this point, faculty envisaged having some form of synchronous-based technology with which to interact in real-time with their students. To wit, based on comments from faculty, the solution didn't necessary have to include video. The faculty member in case study 3 stated: *"We have to be able to hear one another, but not necessarily see one another. Written communication just doesn't cut it… the human voice is so rich in emotion, even in sarcasm and irony…"* (Case 3, p. 45, l. 12). As noted previously, given the huge investment in time and effort which would have been required on their part to develop self-paced Web courses, faculty resolved, despite the wishes of the administration, to abandon this pursuit. The design and technical team were thus challenged to find an alternative course delivery option which will be further discussed below, in the Category 3 section.

Getting back to the HCSM prototype, a "win-win" compromise was achieved in that both faculty limits and basic instructional design exigencies were recognized. Thus, the resulting design prototype may be described as a *descending staircase* approach to learning design (inspired by Chomsky, 2006, and Marton, Hounsell & Entwistle, 1997) in that learners, as they move from activity to activity, immerse themselves ever more deeply in discussing and understanding subject matter, thereby attaining objectives linked to increasingly more elaborate knowledge construction (see Table 3).

Post-study interview data suggested that, in relationship to Category 1 (ID prototype complexity issues), faculty were generally pleased with the model. One faculty member said the design prototype "…*made me think of structuring my teaching more"* (Case 1, p. 13, l. 27). Another faculty member stated that, although she found the process "*difficult and sometimes annoying"*, she had the feeling that it had *"greatly improved the inner structure and overall logic of* [her] *course"* (Case 3, p. 42, l. 26). One Case 4 faculty member felt that using the HCS prototype allowed her to solve several problems:

> *"It was the first time I had ever used this kind of syllabus model. Usually, I provide information about my course vertically, not horizontally* […]. *The first thing I did this time around was tidy things up, particularly my weekly readings. That helped me see what was working and what wasn't … like weeks where there were too many or too few readings. That, in turn, helped me see if there was a direct link between each of my objectives and each of my readings."* (Case 4, p.57, l.42).

Table 3: A *descending staircase* approach to learning

Week X	Objectives	Content	Before-class learning activities		In-class learning activities
			Individual Activities	Team Activities	
	Define…	Fundamentals	**Readings**		
	Distinguish…	Philosophies…	**Writing assignment**		
	Compare…	Authors…		**Team assignment**	
	Summarize…	Positions…			**Synthesis Discussion**

To sum up, the main outcome of resolving these ID complexity-related problems was the creation of what may be termed an "*ID-lite*" course syllabus prototype which balanced maintaining essential instructional design principles while integrating existing faculty course planning practices and respecting their limits. The resulting approach to design was a direct and measured response to the limited knowledge of design principles among faculty and to their limited willingness to even engage in a design process.

Category 2: ID prototype limits-related problems

With regard to Category 2 problems which spanned virtually all of the ten cases, faculty felt pressured, as alluded to earlier, by administrators to quickly produce high-quality, stand-alone and complete Web courses. As the design process unfolded, faculty resistance stiffened as they began to realize that they would simply not be able to develop courses consistent with administration expectations. This was due mainly to two critical limits-related factors: 1) the impending start-up of their courses (in several cases, within 1 to 3 months) and 2) faculty's contending priorities (namely, research taking precedence over teaching), resulting in a basic lack of time to devote to intensive course design. As a result, the courses that did emerge were more *Web-enriched* courses than actual *Web courses* (Boettcher & Conrad, 2004). Indeed, throughout the study, time constraints represented a permanent limit on ID activity. For instance, a Case 8 faculty member, reflecting on the time he spent on course design, inferred that it was an essentially unsustainable process: "*For a whole year now, I have done nothing else but design this course. I haven't written a book, not even an article… I don't have time to do anything else. It doesn't make any sense, it's just too much... and it's not all done yet!"* (Case 8, p. 105, l. 31). This is quite a surprising statement given the fact that the prototype ultimately implemented, as seen in Table 2, was actually far less demanding than the original prototype. Interestingly, at the very outset of this study, the very need for high-level, front-end design was questioned by Case 1 faculty member: "*Actually, my course planning is ongoing… I'm always looking for new sources, new case studies, news about developments in my field".* (Case 1, p. 13, l. 37).

Another limits-related problem that emerged, especially during cases 5, 6 and 7, was a lack of requisite technical expertise among faculty in two areas: 1) entry-level competency in website maintenance which would have allowed faculty some of autonomy in maintaining and updating course-related materials without requiring constant technical support and 2) basic knowledge of media and technology capabilities which would have allowed faculty to conceive of varied and imaginative learning objects and activities specific to their field.

The principal outcome of resolving these limits-related problems, achieved by more streamlined operations and improved, just-in-time technical support, was a reinforced conviction that complete Web

courses could be built within the available timeframe and institutional infrastructure, given low-level faculty availability and technical competency.

Category 3: ID course delivery-related problems

As mentioned earlier, the emergence of Category 3 problems occurred mainly in Cases 6 to 8. Subsequent solutions applied to such suggested the maturation of the ID prototype development process in that it dealt less with theoretical considerations and more with practical and logistical issues, especially with borderless course delivery. As mentioned in the introduction, videoconferencing had been the initial delivery technology deployed by the university. However, a phase-out was underway because of its prohibitively high cost and reliability issues. At this point in the study, given faculty reluctance/refusal to envisage complete asynchronous online course design and delivery, the researcher and technical staff started to explore other Internet-based alternatives. Since faculty had clearly requested ongoing, real-time interaction with their students, it was deemed that any viable and sustainable solution would necessarily have to include a synchronous component.

The search for a solution thus culminated in the testing and subsequent adoption of a synchronous desktop conferencing (SDC) environment, or virtual classroom. SDC is a Web-based, often Java-enabled descendent of earlier and more costly, site-to-site, video-conferencing systems (Finkelstein, 2006; Mahony, Sullivan & McShane, 2003). Until recently, they have been a relative rarity in the university setting (Ng, 2007), being more prevalent in the corporate world (Bersin, 2006). By adopting this technological solution, faculty and the researcher began to realize that the same low-level, front-end design as evidenced in on-campus courses could be effectively implemented, as opposed to administration-promoted, high-level, front-end ID required by asynchronously-delivered online courses. Moreover, through the SDC emulation of the familiar classroom experience, faculty could compensate for the lack of front end-designed material by substituting real-time classroom interaction and on-the-spot feedback. Finally, since classes were recorded, they were accessible online for review.

With the introduction of an SDC solution for online course delivery, the researcher and faculty received immediate feedback from learners to the effect that this environment proved not only to be a useful tool but that it allowed them multiple and enhanced levels of knowledge construction through real-time negotiation of meaning and on-the-spot feedback from their professors and peers: "*This method* [sic] *promotes group knowledge construction by leveraging each student's ideas*" (student feedback). As such, the researcher and faculty found that this environment effectively addressed the delivery-related problems previously encountered.

Yet, despite all the pains taken to allow for real-time dialogue in a new-age setting, one faculty member ironically alluded to an age-old problem dealing with student preparation for and participation in class: "*Some students don't do the required reading and so don't know what to say* [in class]*; others read everything but don't understand and so don't say a thing whereas others read everything and understand everything and so don't say a word".* (Case 8, p. 104, l. 7). There are obviously limits to the extent that any technology can assist in learning.

The ultimate outcome of resolving these course delivery-related problems was the adoption of a synchronous-mode learning platform which reduced the need for high-level, front-end course design, thereby optimizing faculty availability for teaching online through an emulation of on-campus teaching practices.

Discussion

This study demonstrated that, for a successful ID prototype to be successfully implemented in a traditional university setting, it had to be based on low "structure" and high "dialog" (Moore, 1993) and must emulate traditional university practices and operations. This is supported by Jaffee's (1998) contention that:

> "… the receptivity and perceived legitimacy of new educational delivery modes is strongly related to the extent to which these instructional technologies reinforce or retain the central elements of the institutionalized and identity-enhancing classroom setting". (Jaffee, 1998: p. 28).

This suggests the need for university administrators to adopt an OL deployment model which is closely linked to traditional university course delivery operations rather than a classical DE design and development-focused model which is essentially foreign in its functioning to mainstream universities (Keegan, 1996). Faculty would thus not only have access to a feasible means of teaching online in a manner to which they are accustomed but, more importantly, they would utilize a thoroughly socioconstructivist-oriented learning environment which would be in stark contrast to the sorely criticized, behaviorist-associated, lock-step ID model as implemented worldwide by open and DE universities (Evans, 2001). Henceforth, by accessing a delivery-focused model, students and faculty are able to interact in a fashion quite similar to the on-campus experience while accessing powerful screen-sharing and Web browsing functions (Hamilton & Cherniavsky, 2006). Moreover, faculty experience a resumption of quality control over DE which has either been delegated to surrogate actors in higher education or even quietly extirpated from the hands of faculty by increasingly prevalent and highly influential corporate interests (Magnussen, 2005; Noble, 2002).

The realization that this study brought to the author, that DE was approaching mainstream higher education, also brought with it, paradoxically, an insight into the decline of DE as it had been known. In its stead, OL appears to be fully emerging as a viable successor (Anderson, 2008). Furthermore, the ID prototype emerging from this study redefined OL with regard to how it had been known for most of its short lifespan, i.e. the online continuation of a DE-based, pre-designed, anywhere-anytime, asynchronous, student-paced learning environment (Harasim, 1995; Hiltz, Teles & Turoff, 1995; Hiltz & Goldman, 2005). The emerging prototype was a blend of the past and the future, on the one hand hearkening back to an era when teaching and learning always occurred simultaneously in time and in space (in the classroom) but, on the other hand, reaching forward under its new guise to an era of borderless, online communications freed from the limits of space, reminiscent of a reported shift from structural to relational considerations in OL (Garrison, 2000). In experiencing new freedom from old limits, faculty became cognizant of their reassertion of direct ownership of their teaching and student support duties which, in the classical DE model, had been typically delegated to tutors (Keegan, 1996).

Throughout this study, the design and technical team had to balance concerns expressed firstly by administration and their concern for increasing levels of cost-effective outreach and, secondly, by faculty, primarily concerned with instructional quality, technical support and overall workload management issues. As the asynchronous and synchronous components of this environment were fully integrated and an understanding of the implications of doing so matured, the author realized that the simultaneous blending of a synchronous environment with an asynchronous course management system produced a variation of the campus-based, *blended learning* model, as defined by Garrison & Vaughan (2008):

> "The basic principle [of blended learning] is that 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" (Garrison & Vaughan, 2008: p. 42).

The completely online solution was subsequently termed the *blended online learning environment*, being the natural extension of both blended learning as defined by Garrison & Vaughan (2008) and OL as defined, for instance, by http://www.aln.org/. In Figure 1, the *blended online learning environment* design model is described as the completely online, simultaneous and complimentary integration and implementation of an asynchronous-mode, partially system-managed, partially faculty-led learning environment (i.e. a course management system, or CMS) and a synchronous-mode, partially system-managed, partially faculty-led learning environment (i.e. a virtual classroom environment).

In more detail, the traditional, faculty-led, campus-based course teaching/learning model (in the bottom left-hand corner) is juxtaposed, on the x-axis, with the asynchronous online teaching/learning model (in the top right-hand corner). Along the y-axis, faculty-led instruction, usually synchronous and taking place on campus (bottom left-hand side of the figure), is juxtaposed with asynchronous system-led instruction, i.e. online, tutor-supported instruction, common in open and distance university course delivery models (top right-hand side of the figure). The ovals labeled “traditional on-campus learning” (including teaching) and “online learning” represent, respectively, the width and breadth of each system within its own sphere. *Blended learning* is seen here as bridging both spheres, increasingly existing in numerous and varied forms (Garrison & Vaughan, 2008; Mortera-Gutierrez, 2006). Finally, blended online learning is

seen as bridging both asynchronous and synchronous forms of instruction, thereby occupying the whole of the OL space.

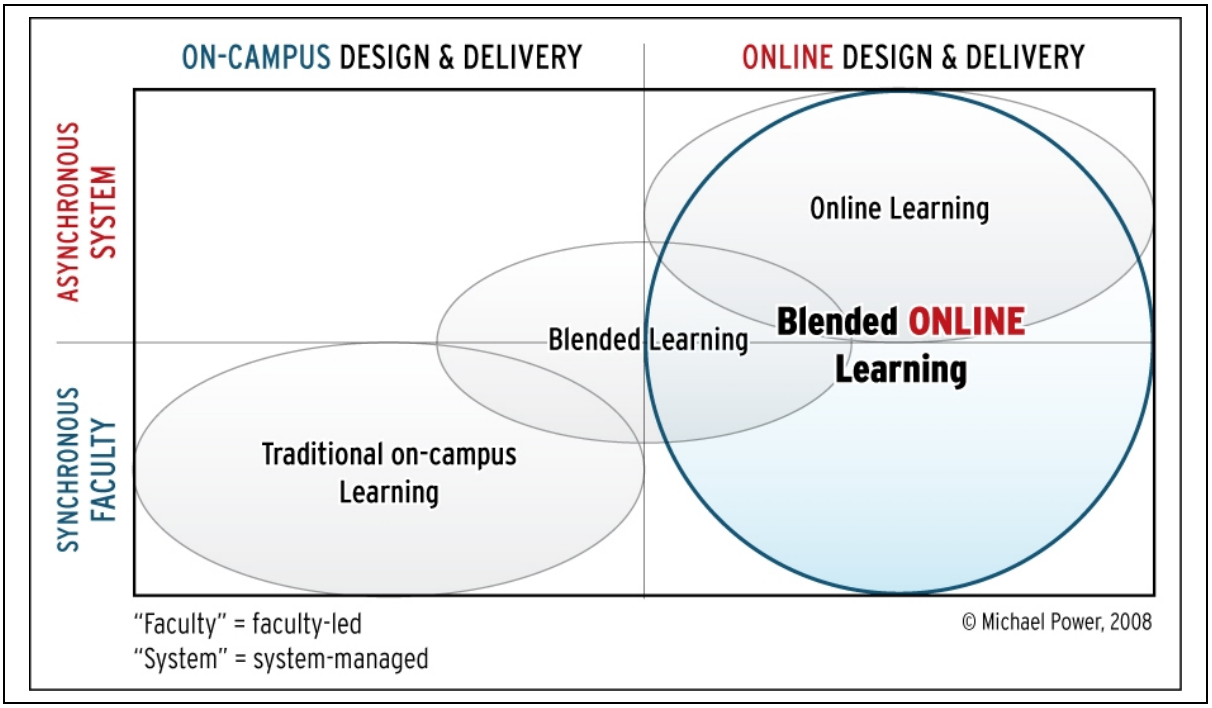

Figure 1. The relative position of Blended Online Learning

This environment represents a series of trade-offs between high-level and high quality but equally high-priced, front end-designed Web courses and high-level dialogue, albeit cost-prohibitive, videoconferencing-delivered courses. As such, it combines faculty attainable- and sustainable-level structure via the asynchronous learning environment and sustainable-level, faculty-student dialog via the synchronous learning environment. It also represents a low learning curve approach to faculty online migration and an administration-friendly, cost-effective approach to increasing university outreach.

As a result of these developments, the author began reflecting on changes occurring in the entire field of distance education. In Figure 2, the emergence of the blended online learning environment is set in the overall context of DE and OL. It is posited here that DE as a field is currently undergoing a major shift in impetus and expansion. For well over a century, DE, a subset of mainstream higher education (Moore & Kearsley, 2004), is now emerging as a major force worldwide, but under a new form. OL is seen as the successor of DE, the natural outgrowth of the field, fueled by the Internet and by increasingly pervasive, available and cost-effective information and communication technologies (McGreal & Elliott, 2008). It is furthermore posited that first-generation OL, after a decade of trial and error during which time it was known mainly as an asynchronous-based form of education (Hiltz & Goldman, 2005; Twigg, 2004), is currently entering its second generation, that of blended online learning, a generation characterized by the redesign of university courses (Garrison & Vaughan, 2008). As a result, increasingly numerous forms of blended learning are currently being implemented on campuses throughout North America (Park & Bonk, 2007), combining various kinds of OL activities and culminating in what is termed the blended online learning environment. It should be noted that the so-called 5th generation of DE (Taylor, 2001) has intentionally not been included here as it is felt that it might better be described as first-generation online learning.

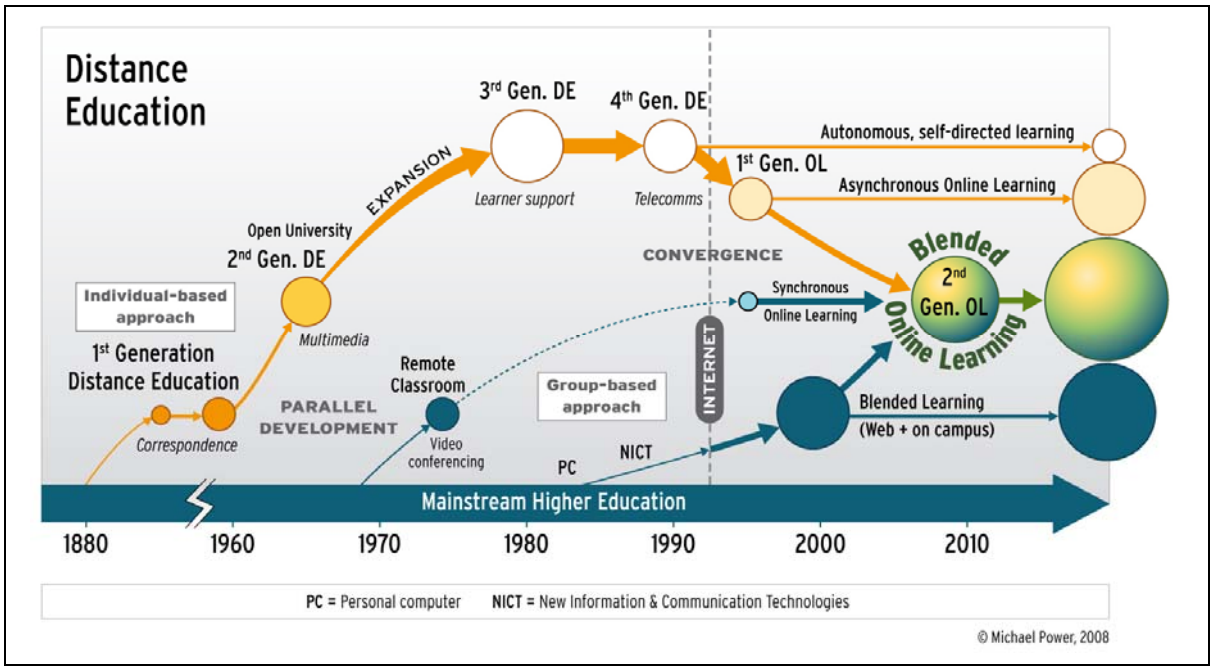

Figure 2. The emergence of Blended Online Learning

Conclusion

With regard to the questions asked at the outset (What kind of obstacles are encountered by a group of faculty members with varying levels of motivation, knowledge and skills set as they move from a DE design model to an OL design model? What is the impact of these kinds of obstacles on the evolution of DE and the emergence of OL?), the results of this study suggest that, in short, 1) faculty are increasingly encouraged to support university outreach; 2) as they do so, they are encountering obstacles which prevent their applying the classical DE model and 3) recent technological innovations are reacquainting faculty with "*continuity of practice*" in their pedagogy (Power, 2008c). Because synchronous-mode, virtual classrooms are not yet mainstream in higher education (Keegan, Schwenke, Fritsch, Kenny, Kismihok, Biro, Gabor, O'Suilleabhain, & Nix, 2005; Ng, 2007), more research, especially field research (Abrami & Bernard, 2006), into this promising field of inquiry is important. This study, based directly on field observations and documented case studies, introduces the *blending online learning environment* concept and identifies its import to higher education, alluding also to possible positive effects on the field of instructional design and technology. It is felt that this study contributes to sparse yet necessary research for sustainable and cost-effective university outreach as well as to effective human and material resources deployment.

More specifically, this study addresses a need for a teaching and learning environment that accurately reflects faculty realities, providing both a resource-rich structure and multiple opportunities for both real-time and differed dialog between learners as well as between learners and faculty. It suggests that there is a need for balance between the aims of administration, faculty limits and learner needs and it establishes bottom-line requirements for structure and dialogue in a workable teaching-learning environment. It is posited that this can be achieved by blending available information and communication technologies (ICT) to provide online learners with a complete OL environment, faculty with a feasible alternative to restrictive on-campus teaching and administration with the means to manage responsible outreach. Despite some research design-related limits (limited sample, on-going studies), the findings and related theorizations in this article may enable designers, faculty members as well as administrators to better understand and act upon some of the basic issues surrounding the design, redesign and delivery of blended online learning.

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