Chapter 1: Understanding Blended Learning

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Questions to Ponder

- Is it most helpful to think of blended learning as an online enhancement to a face-to-face learning environment, a face-to-face enhancement to an online learning environment, or as something else entirely?
- In what ways can blended learning courses be considered the "best of both worlds" (i.e., face-to-face and online)? What could make blended learning the "worst of both worlds?"
- As you consider designing a blended learning course, what course components are you open to implementing differently than you have in the past? How will you decide which components will occur online and which will take place face-to-face? How will you manage the relationship between these two modalities?
- How often will you meet with students face-to-face? How many hours per week will students be engaged online, and how many hours per week will students meet face-to-face? Is the amount of student time commitment consistent with the total time commitment of comparable courses taught in other modalities (e.g., face-to-face)?

What is Blended Learning?

Blended courses (also known as hybrid or mixed-mode courses) are classes where **a portion of the traditional face-to-face instruction is replaced by web-based online learning.** McGee and Reis (2012) point out that while there is not absolute agreement within higher education on the exact make-up of a blended course, institutions generally use "blended" (or related terms) to refer to some combination of on-campus class meeting and online activities. Graham, Henrie, and Gibbons (2014) concur that "[m]odels adopting the [combining online and face-to-face instruction] definition are the most prominent in the research" (p. 21). Blended learning is a phenomenon subjected to much on-going research. After reviewing over 200 masters' theses and doctoral dissertations related to blended learning, Drysdale, Graham, Spring, and Halverson (2013) concluded that "[m]ore graduate research is being conducted on blended learning each year" (p. 98). Additionally, Dziuban, Picciano, Graham and Moskal (2106) have edited a new collection of research on blended learning as a sequel to the two landmark books previously published (Picciano and Dziuban, 2007; Picciano, Dziuban, and Graham, 2014).

Nevertheless, practical questions often predominate in the minds of faculty and designers new to blended learning. For instance, how much of the face-to-face instruction must be replaced by online coursework? This question will vary greatly by class, discipline, and learning objectives. The Sloan Consortium (a professional organization dedicated to postsecondary online learning) defines blended learning as a course where 30%-70% of the instruction is delivered online. While this is a useful guideline, it may not be sufficient to cover every blended learning configuration.

The EDUCAUSE Learning Initiative (ELI) provides many useful resources related blended learning, including a report on a national focus session and a framework for faculty workshops. ELI's parent organization, EDUCAUSE, has also identified five chapter-length case studies of institutional blended learning models from the eBook *Game Changers: Education and Information Technologies*.

McGee and Reis (2012) observe that in blended learning quite often "the process of design is emphasized as one of re-design, implying that those involved in the design process are willing and able to see beyond what has been done in the traditional classroom and re-conceptualize what can be done in multiple delivery modes" (p. 17). The addition of technology to any academic program must be accompanied by fundamental process re-design.
The National Center for Academic Transformation has done a significant amount of work related to course redesign, including the innovative use of technology for blended learning. With funding from the Next Generation Learning Challenges (NGLC) program, the Blended Learning Toolkit web site has been designed to provide an infrastructure for participating faculty and institutions that includes innovative technology, curricular reinvention, participant training, and ongoing assessment support, all of which are necessary for meaningful, sustainable, *disruptive* transformation of the status quo. (For more on affordances of "disruption," please see http://www.claytonchristensen.com/key-concepts).

Benefits of Blended Learning

Blended course have proven to be among the most popular choices for students at institutions where they are offered (Olson, 2003 cited in Drysdale, Graham, Spring, and Halverson, 2013 and Kaleta, Garnham, and Aycock, 2005). At first glance, this popularity seems intuitive because blended courses allow students and faculty to take advantage of much of the flexibility and convenience of an online course while retaining the benefits of the face-to-face classroom experience.
Although fully online learning has become well established in higher education, many institutions appear to be struggling with conceptualizing and implementing blended learning. Yet, where blended courses have succeeded, they have most often done so when strategically aligned with an institution's mission and goals. The development and delivery of blended courses can be used to address a variety of institutional, faculty, and student needs.

- For universities, blended courses can be part of a strategy to compensate for limited classroom space, as well as a way to think differently about encouraging faculty collaboration.
- For faculty, blended courses can be a method to infuse new engagement opportunities into established courses or, for some, provide a transitional opportunity between fully face-to-face and fully online instruction.
- For students, blended courses offer the conveniences of online learning combined with the social and instructional interactions that may not lend themselves to online delivery (e.g., lab sections or proctored assessments).

If an institution's blended learning strategy can be designed to address the needs and dynamics of all three constituencies (institution, faculty, and student) simultaneously, then blended learning can become a powerful force for institutional transformation.

As cited in the U.S. Department of Education's (2010) "Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies," "Students in online conditions performed modestly better, on average, than those learning the same material through traditional face-to-face instruction" (p. xiv) and, notably, "Instruction combining online and face-to-face elements had a larger advantage relative to purely face-to-face instruction than did purely online instruction" (p. xv). Not only do students perform better in blended courses, but the electronic resources inherent in the modality offer other advantages as well. For example, student performance analytics can be used to study and better understand student learning. Data analytics can also identify students who need early intervention, thus increasing retention. The online tools available in blended courses can also significantly enhance student engagement, ensuring that all students participate in course discussions and benefit from collaborative learning.

When properly implemented, blended learning can result in improved student success, satisfaction, and retention. For instance, the University of Central Florida has consistently seen such results over the 17 years of their own blended learning initiative. Since beginning this initiative, as of the end of the 2015-2016 academic year, UCF has delivered 10,941 blended course sections containing 394,962 student registrations and generating 820,492 semester credit hours.

Designing Blended Learning Courses

Arguably, we seek to understand blended learning so that we might identify whether it has any benefits to offer us. Such affordances are perhaps made most evident by considering the range of approaches to blended learning design. McGee and Reis (2012) analyzed 67 "best practices guides" (p. 9) for blended learning and found that a "loosely articulated design process allows variability and flexibility in the design of blended courses" (p. 17). However, designing any course is an exercise in balancing control and emergence.

Blended Learning Design as a Controlled Process

In 2002 Troha asked "why do so many blended initiatives turn into frustrating boondoggles, consuming far more time… than anyone anticipated?" (Troha, 2002, para 2). Unfortunately, the undesired outcomes often appear during the implementation of the course, or even long after substantial amounts of time, effort, and enthusiasm have been expended. How can the practicing teacher avoid blended learning pitfalls? McGee and Reis (2012) suggest that the answer may lie in the design process: "There is clear consensus that the best strategies for design begins [sic] by clearly defining course objectives before coming up with course activities, assignments and assessments. Course objectives are particularly critical for blended courses because objectives can inform content delivery mechanism (in class or online), pedagogy (bridging between the classroom and online activities), and requisite amount and locations for class meetings and interactions" (p. 11).

This section develops a model of best practices to reduce the potential headaches and realize the promise of blended learning. The importance of planning is reinforced. At each stage, control needs to be maintained from the beginning of the planning stage to ensure desired results. It is assumed that a course design process is being pursued that starts with learning objectives and that includes a general outline used to guide the development of the course, its delivery and evaluation. Guiding questions such the following are helpful to keep in mind: "What's the best mix of traditional, live, teacher-led presentation and synchronous or asynchronous, technology-driven methods of teaching?" It is important to determine your role as a teacher in the learning process. Should it be one that is primarily directive or facilitative? Also, decide the importance of interaction amongst the students. These questions may be answered differently depending on the teaching/learning context. In any event, blended learning lends itself to learner-centered, teacher-guided (as opposed to teacher-directed), interactive, and student-collaborative learning.

Content and learning activities that provide for ample practice must be introduced into the course if the student is to achieve course goals. Blended learning is advantageous to the learner. Research has shown the limitations of applying a generalized style of teaching, rather than modifying lesson plans to fit the needs of the student. "Increasingly, organizations are recognizing the importance of tailoring learning to the individual rather than applying a 'one-size-fits-all' approach." (Thorne, 2003) Of course, common needs exist, but blended learning allows the teacher to look for creative ways and use a variety of media to address the specific needs of his students.
When a teacher designs his lesson plan, it is important to note the type of learning activity (e.g. lecture, case study, role play, simulation, game, etc.) that best conveys the objectives of the lesson. There are two reasons for listing traditional teaching methods only at this point, instead of both classroom and online activities:

- We as teachers usually establish on paper the "ideal" learning experience when you work under a more familiar, traditional style of teaching. It is live, face-to-face, instructor-facilitated and student-collaborative.
- Once you have established the lesson plan for the "ideal" learning experience, you can systematically analyze the elements that can be delivered online without compromising learning effectiveness. You will discover here what might be best left in a classroom setting.

Blended learning is not simply adding an online component to a face-to-face course. Technology in a course should be used wisely – to facilitate student learning. Technology should not be used just to show off technology. Excellent opportunities exist for teachers to make learning interactive, dynamic, and fun when used properly. The technology aspect of a lesson should be like a good baseball umpire – it (like the umpire) is good if it (he) goes unnoticed.

"Since the intent of blended learning is to enhance learning by combining the best of both worlds…elements of the outline that appear to lend themselves to self-study online should be highlighted. Such elements tend to include easy-to-interpret, straightforward information that is relatively easy for the (student) to accurately grasp on his/her own." (Troha, 2003) Students should be able to perform required tasks online with little or no prompting by the

instructor. Of course, teachers should guide their students along, but when a student can accomplish a task online with limited assistance, that student encounters a learning experience that is deeper and more rewarding.

Blended learning courses are dynamic by their very nature. Revisions will need to be made to adapt to the learning needs of its students. Knowing what works and what does not come with experience. The best resource for teachers to create and implement a blended learning course is another teacher or a network of teachers who have had experience with launching such courses.

With purpose and context in mind, the designer can select, combine, and organize different elements of on-line and traditional instruction. Carman (2002) identifies five such elements calling them key "ingredients" (p. 2):

- **Live events.** These are synchronous, instructor-led events. Traditional lectures, video conferences, and synchronous chat sessions such as Blackboard Collaborate, Adobe Connect or YouTube are examples.

- **Self-Paced Learning.** Experiences the learner completes individually on her own time such as an Internet based tutorial.

- **Collaboration.** Learners communicate and create with others. E-mail, threaded discussions, and wikis are all examples.

- **Assessment.** Measurements of whether or to what extent learning has taken place. Assessment is not limited to conventional tests, quizzes, and grades. Narrative feedback, portfolio evaluations and, importantly, a designer's reflection about a blended learning environment's effectiveness or usefulness are all forms of assessment.

- **Support Materials.** These include reference materials, both physical and virtual, FAQ forums, and summaries. Anything that aids learning retention and transfer.

Blended Learning Design as an Emergent Process

Can you make patterns from clouds?

"Part of the plan is knowing that the situation will compel you to change your plan". – Vella (2006)

A course plan can take on a variety of shapes, and is always informed by context: the audience, the venue, and the resources you have available to you. It is also informed by the educational values, beliefs, and philosophies of the design team. With so many possibilities and unknowns, how can we work towards a common language of what planning is all about?

The most basic question to begin with is*, why design* an online course. The emphasis here can be on the word *why*, or on the word *design*. A very common response to the question *why* is that learners will be geographically distributed, and having a course online is an obvious solution. However, an online course, or a course enhanced with online resources and communication tools, will add educational value to any face-to-face course by making resources available to learners and by providing opportunities to deepen learning through dialogue and sharing. In this sense the divisions between online courses and campus-based courses are becoming hazy. So the question of *why* is shifting from technology as a means to change the delivery method to technology as a means to enhance learning.

A more philosophical but very practical question emphasizes the word *design*. Is it important to create a structure in a virtual environment? How much design work should be done before involving the learners in the curriculum process? These questions have challenged educators for some time, and they seem especially complex when applied to designing online courses. Where then do we turn for guidance?

Some would argue that instructional design literature does little to guide the process of planning online courses because there is insufficient consideration for the social context of learning (Le Blanc, 2003). Furthermore, the recent advances in technologies to support networked learning, or more informal connections among people and information, are challenging our notions about advance planning and fixed design of online spaces. [For interesting discussions and resources related to networked learning see the work of Leigh Blackall http://www.leighblackall.blogspot.com] Consider this description by George Siemens:

> By recognizing learning as a messy, nebulous, informal, chaotic process, we need to rethink how we design our instruction.
>
> Instruction is currently largely housed in courses and other artificial constructs of information organization and presentation. Leaving this theory behind and moving towards a networked model requires that we place less emphasis on our tasks of presenting information, and more emphasis on building the learner's ability to navigate the information—or connectivism.
> Blogs, wikis, and other open, collaborative platforms are reshaping learning as a two-way process. Instead of presenting content/information/knowledge in a linear sequential manner, learners can be provided with a rich array of tools and information sources to use in creating their own learning pathways. The instructor or institution can still ensure that critical learning elements are achieved by focusing instead on the creation of the knowledge ecology. The links and connections are formed by the learners themselves. (Siemens,2002)

The best plan will anticipate learner experiences, but provide plenty of opportunities for learner-defined goals and assessments. In broad terms, this would be called design for flexible learning. However, in practice, a systems and linear approach is often favoured because it ensures consistency and is more easily administered and supported at the organizational level. By planning out each module carefully in terms of instructional goals, content, assignments, and assessments, each course can undergo rigorous quality control.

Flexible and systems approaches represent opposite ends of the course planning spectrum, one more learner-centred (or more favourably referred to by Jane Vella (2001) as learning-centred), and the other more teacher-centred. With each approach there are obvious considerations for your own context. While a systems approach may require substantial resources, it may be more effective for managing quality control and for preparing and supporting instructors. Brent Wilson (1995), a pioneer in e-learning, has been cautioning online course designers about the downside of a systems approach for the past decade: An environment that is good for learning cannot be fully prepackaged and defined A more flexible approach will open the doors to more possibilities based on learner goals and needs. However, as pointed out by Bates and Poole (2003), "a flexible approach requires a high level of skill to be effective".

So to revisit the central question: Can we work towards a common language of what planning is all about? What are the patterns in the clouds?
There are many helpful models to guide the design process, each informed by learning theory and each providing a set of actions by phase (often overlapping) in the design process. There are too many to expand on in this short chapter—an Internet search on "instructional design models" will yield a dozen or more.
[See http://carbon.ucdenver.edu/~mryder/itc_data/idmodels.html for a comprehensive list.]

A model is useful for providing a framework for managing course design and ensuring that all decisions are attended to. Furthermore, a good model is cyclical so that evaluation and reflection on implementation will always inform the next iteration of the course design. Keep in mind that while learning theory and prescriptive models help to guide the work, a model "should be used only to the extent that it is manageable for the particular situation or task". In other words, context is always at the core of the planning and design process.
Prepare by considering these four tips:

- Begin with relevant metaphors for learning. Often the language commonly used to describe e-learning dismisses the notion that learning with technology is a valuable experience in its own right. When we speak about "distance learning", "covering course content", and "delivering courses" we are imposing an intent and framework for learning that calls for little involvement from the learner.

- The focus should be first on the learning, and second on the technologies that will support that learning. Think of your primary role in the planning process as keeping learning, and not technology, at the centre of the design process. Plan to include team members in the design process who can provide the expertise required to carry out your plan and also take full advantage of the medium.

- Creating good online learning experiences requires effort. While the basic planning guidelines are the same for both face-to-face and online courses, "the process of planning a quality e-learning experience is very likely to be more complex and time-consuming than planning a conventional classroom experience. (Anderson & Elloumi, 2004)

- Context is king! You can choose an instructional model that suits your project and personal beliefs about teaching and learning, but always be prepared to adapt.

Two Case Studies of Blended Learning Design

Perhaps it will be helpful at this point to consider how blended learning design principles are implemented in practice. It can be quite difficult to portray effectively the interplay between the various components of a well-integrated blended course. Such portrayals are not easy to come by. (Sometimes project summaries such as the Course Redesign Exemplars maintained by the National Center for Academic Transformation are as close as one can come.) Following are two case studies that are quite different in style, scope, and in subject matter/class size of the blended courses described. Even though these case studies date back to 2004, we feel they are still relevant today! What patterns do you see?

Blended Learning Case Study 1: Broad Conceptualization

McCracken and Dobson (2004) provide an example of how learning purpose, context, and blended learning ingredients lead particular learning methods. They propose a process with "five main design activities" (p.491) as a framework for designing blended learning courses. The process is illustrated with a case study of the redesign of a class at The University of Alberta called Philosophy 101 (pp. 494 – 495):

- **Identifying learning and teaching principles.** The teaching and learning goals were described as requiring active participation, sustained discussion, and, most importantly, inquiry and critical analysis.
- **Describing organizational contexts** Team teaching with three professors and up to eleven graduate teaching assistants to engage a class of 250 students in dialogue around ethical and political philosophy.
- **Describing discipline-specific factors** The designers are described as being concerned about stereotypes of philosophy as "bearded men professing absolute truths" (p.495). The desire was to represent philosophy as an activity, not a set truths to be absorbed.
- **Selecting and situating appropriate learning technologies** Learning activities focused on the process of engagement: presenting and defending a thesis and responding to opposing views. For example, a face-to-face lecture would feature contemporary ethical dilemmas with newspaper headlines or a video clip. Or, the instructors would stage a debate in which they would assume the role of a philosopher under study and then argue from the philosopher's point of view. Online threaded discussion supplemented small group seminar sections.
- **Articulating the complementary interaction between classroom and online learning activities** In the Philosophy 101 example, it was noted how the face-to-face engagement was complemented by more deliberative, asynchronous discourse.

Even this simplified description illustrates the multilayered, multifaceted nature of blended learning environments. With such a large canvass, the most important design principle might be to start small. "Creating a blended learning strategy is an evolutionary process." (Singh and Reed, 2001).

Blended Learning Case Study 2: Detailed Personal Reflection

A story of blended instruction

Typically described as an instructional strategy that incorporates the best of face-to-face learning and online content and discussion groups, blended instruction often meets with mixed success. A key challenge to designing blended learning strategies is to sort out what content is best suited to which format—online or face-to-face. If that decision is not well considered at the design level, the workload for both the teacher and students may seem overwhelming, and the learning experience may be inconsistent with the curricular goals.

In blended learning, typically the face-to-face component is supported by supplementary online content. This is usually contained within an LMS, often with asynchronous discussion groups and synchronous sessions, and it may take the form of blogs, podcasts and multimedia simulations. Conversely, a blended course might exist primarily online, with a few face-to-face meetings for more experiential learning opportunities such as labs, visits to specific sites, or face-to-face orientation sessions so students can meet each other and the instructor.

In winter of 2004 I [Susan Crichton] had the opportunity to design a campus-based course for pre-service teachers. It was entitled Distributed Learning: Teaching and Learning Online. The desire to build and teach this course came directly from my personal experience as a K–12 online educator, as well as my research into the

practices of K– 12 online teachers. I felt the course had to model excellent practice and leverage emerging technologies, as it would introduce blended and online learning to preservice teachers.

The course, an elective, met on Friday mornings for three hours, and it was assumed that students would work an additional three hours per week independently. Further, all similar electives within the program, required students to complete an inquiry paper based on action research.

Before the semester started, I met with the students and determined that none of them had taken an online course before. The majority had very limited technology skills and were actually enrolled in the course to gain them. Therefore, I started the design of the course by considering the amount of time available (13 weeks) and listing the learning experiences that I wanted the students to have; I then organized the content to fit those constraints. I sorted the content into experiences that I felt were best shared, either face-to-face during the Friday sessions or online during the expected independent study time. Further, I modified the inquiry paper to include the development of a student-negotiated learning object.
I planned for the final face-to-face class to be a celebration of learning where the students could share their learning objects and talk about their successes and challenges. Therefore, I was left with 11 sessions to present content, develop technology skills, and model more student-centred approaches to learning.

Assuming the first session and the last were orientation, introduction and celebration, respectively, I distributed specific content to each of the other 11 sessions, covering topics such as roles and responsibilities for online educators, content development, issues of pedagogy and assessment, characteristics of asynchronous and synchronous learning, global issues—digital divide, employment opportunities, and universal design. Paralleling each topic were weekly online content structured within the LMS and opportunities for students to practise moderating the discussion forum. The face-to-face sessions became workshop opportunities, with matching software complementing the various topics. For example, the week on content development was supported by concept mapping using Inspiration software for storyboarding and an introductory, hands-on session in digital filmmaking.

The most critical design decision on my part was where on the continuum (Figure 31.3) I should start. As our program is inquiry-based, I felt it would have been inappropriate to start with online instruction only. Further, because there was an existing face-to-face expectation, the facilitated online instruction model would not work either. The choice rested with a blended approach or a studio-based approach, and I chose blended, designing the face-to-face sessions as a studio-based model in terms of the hands-on learning and open critiques of the products and process.

Continuum Type	**Online Instruction**	**Facilitated Online Instruction**	**Blended Instruction**	**Studio-based Instruction**
Role of teacher / student	Teacher-prepared contentTeacher-directed instructionTeacher has minimal or no direct involvement with studentsNeed for students to participate online	Teacher-prepared contentTeacher-directed instructionInteraction between teacher and studentsNeed for both to participate face-to-face and online	Teacher-prepared contentTeacher-directed instructionIncreased interaction among teacher and studentsOpportunity for student-negotiated tasksNeed for both to participate face-to-face and online	Teacher-prepared learning environment and initial problems / taskStudent-centred approachActive interaction between students / teachersChanged role for teacher and student
Online Approach	Asynchronous teaching / learningLearning controlled by time—fixed start / stop time	Synchronous teaching / learning optionsAsynchronous optionsCollaborative optionsLearning controlled by teacher	Synchronous teaching / learningIncreased opportunities for asynchronous learningOpportunity for face-to-face	Asynchronous learning with synchronous support Collaboration Online gallery with forum for crits Learning negotiated

			CollaborationLearning controlled by teacher	by teacher / student
Example of software	Content managed in learning management system (LMS) such as Blackboard, D2L, Moodle, WebCT; assessment via computer-marked quizzes	Content in LMS, support via email or synchronous software (e.g., Elluminate Live, MSN Messenger); online discussions	Online discussions, LMS, synchronous conferencingPhysical classroom/lab environment	Collaborative software (e.g., CMAP, shared whiteboards); simulations, VR, LMS, synchronous conferencing
Instructional strategy	Lecture / information transfer	Lecture, discussion	Lecture, discussion, task negotiation	Lecture, discussion, task negotiation, problem-solving
Evaluation	Testing / computer marked (true or false, multiple choice, short answer	Formal testing / teacher marked	Formal testing / teacher marked, potential for alternative, more open-ended assessment (essay, project, etc.)	Authentic assessment using checklists / rubrics for project assessment
Link to Bloom's Taxonomy	Knowledge level	Knowledge levelComprehension level	Knowledge level Comprehension level Application level Analysis level	Potential for all levels, including the higher-order thinking tasks of synthesis and evaluation
Role of Media	Text to readAudio files (podcasts to hear)Images to watch	Text to readAudio files (podcasts to hear)Images to watchExhibits to exploreSimulations to engage with	Text to readAudio files (podcasts to hear)Images to watchExhibits to exploreSimulations to engage withDemonstrations to discuss	Potential for all media to be usedUse media to dramatize personal experiencesUse media as a starting point for personalized learning and individual demonstration of understandingCreate own media

Figure 31.3. Continuum of Instructional Practice Typically Found in Online and Blended Learning

This course has been offered each year since its introduction in 2004, and students have been hired directly from the course for jobs in online teaching for the local school board. Each year, the course content has changed as new technology emerges. In the last offering, I included podcasting, wikis, and blogs, and I am still exploring options for the upcoming course. The course has exceeded my expectations, and the evaluations have been excellent.

During the first offering, a graduate student (Shervey,2005) researched this course for her thesis. The study was positive and reaffirming, as it revealed that the students' perceptions of promise and potential of online learning changed as they experienced them firsthand.

Blended learning worked well for the Distributed Learning course. For example, it allowed me to share asynchronous technologies during the sessions on asynchronous and synchronous learning. Rather than attend class, I encouraged the students to connect from home during the Friday class, letting them experience what it felt like to be learning along from home. One of the most successful sessions was the discussion of employment. I invited colleagues who work in various online professions to join the discussion forum. I created a forum topic for each of them, introducing them to the course and explaining to the students how I knew them or had worked with

them, thereby personalizing these potentially anonymous guests. Each guest then posted a description of their work and invited the students to ask questions. And question they did, asking everything from who are you, to how much do you make, and are you lonely sitting at home.

Over the three offerings of this course, I have done little to change the structure or my instructional strategies, which appear to be working well, but the design is flexible enough to allow me to change the content as new things emerge. I cannot imagine offering this course in anything other than a blended approach, as I have learned that our face-to-face time is as important as our online time.

Conclusion

In this chapter we considered the place of blended learning in higher education, and we began to grapple with some of the design issues associated with such courses. We explored design as a more mechanistic, controlled process, and we contemplated how design of blended courses can be undertaken as a more emergent pursuit. Perhaps we can see something of the “loosely articulated design process” identified by McGee and Reis (2012, p.17) in their study of blended learning best practices. As we turn our attention to interaction in the next chapter, we should continue to keep the design process in mind.

References

Anderson, T. & Elloumi, F. (2004). Theory and practice of online learning. Athabasca: Athabasca University.

Bates, A. W. & Poole, G. (2003). Effective teaching with technology in higher education: Foundations for success. San Francisco: Jossey-Bass.

Carman, J.M. (October, 2002). Blended learning design: five key elements. Agilant Learning. Retrieved from http://www.agilantlearning.com/pdf/Blended%20Learning%20Design.pdf

Drysdale, J.S., Graham, C.R., Spring, K.J., and Halverson, L.R. (2013). An analysis of research trends in dissertations and theses studying blended learning. The Internet and Higher Education, 17, 90-100. http://dx.doi.org/10.1016/j.iheduc.2012.11.003

Dziuban, C. D., Picciano, A. G., Graham, C. R., & Moskal, P. D. (2016). Conducting research in online and blended learning environments: New pedagogical frontiers. New York: Routledge. https://www.amazon.com/Conducting-Research-Blended-Learning-Environments-ebook/dp/B012FWHXZ0

Graham, C.R., Henrie, C.R., and Gibbons, A.S. (2014). Developing models and theories for blended learning research, In A. Picciano, C. Dziuban, and C. Graham (Eds.), Blended learning: Research perspectives, volume 2. NY: Routledge.

Kaleta, R., Garnham, C., and Aycock, A. (2005). Hybrid courses: Obstacles and solutions for faculty and students. Proceedings from 19th Annual Conference on Distance Teaching and Learning, Madison, WI. Retrieved from http://www.uwex.edu/disted/conference/Resource_library/proceedings/03_72.pdf

Le Blanc, D. (2003). Instructional design for distributed collaborative learning environments based on sociocultural constructivist theories (Unpublished manuscript): Simon Fraser University.

McCracken, J. & Dobson, M. (2004). Blended learning design. In V. Uskov (Ed.), Proceeding of the Seventh IASTED International Conference: Computers and Advanced Technology in Education – 2004 (pp. 491-496). Calgary: ACTA Press.

McGee, P. & Reis, A. (2012). Blended course design: A synthesis of best practices. Journal of Asynchronous Learning Networks, 16(4). Retrieved from http://onlinelearningconsortium.org/sites/default/files/jaln_v16n4_1_Blended_Course_Design_A_Synthesis_of_Best_Practices.pdf

Picciano, A. and Dziuban, C. (2007). Blended learning: Research perspectives. Needham, MA: Sloan Consortium of Colleges and Universities.

Picciano, A., Dziuban, C. and Graham, C. (2014). Blended learning: Research perspectives, volume 2. NY: Routledge.

Shervey, M. (2005). The impact of online teaching and learning on pre-service teachers. Unpublished master's thesis, University of Calgary, Calgary. Alberta, Canada.

Siemens, G. (2002, September 30, 2002). Instructional Design in Elearning. Retrieved from http://www.elearnspace.org/Articles/InstructionalDesign.htm

Singh, H. & Reed, C. (2001). A white paper: achieving success with blended learning. Centra Software. Retrieved from http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.114.821&rep=rep1&type=pdf

Thorne, K. (2003). Blended learning: How to integrate online & traditional learning. VA: London and Sterling.

Troha, F. (2002). Bulletproof instructional Design: A model for blended learning. USDLA Journal, 16(5).

Troha, F. (2003). Bulletproof Blended Learning Design: Process, Principles, and Tips. 1st Books Library.

U.S. Department of Education. (2010). Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies, Washington, D.C. Retrieved from http://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf

Vella, J. (2001). Taking learning to task: Creative strategies for teaching adults. San Francisco: Jossey-Bass.

Vella, J. (2006). Dialogue Education: What are the basics? Presented at Dialogue in Teaching and Learning: An Educational Framework for Linking Coursework and Community. Simon Fraser University, Burnaby, British Columbia.

Wilson, B. G. (1995). Metaphors for instruction: Why we talk about learning environments. Educational Technology, pp. 25–30.