Preface

EXAMINING THE LANDSCAPE OF ONLINE LEARNING

The concept of distance learning is not new, in fact the first distance education course dates back to the 1700’s when courses were offered via mail. Fast forward hundreds of years later to an increasingly popular and relevant learning environment as a result of the internet and the ability to earn a degree online. In the past ten years online learning has grown tremendously from 1.6 million students taking at least one online course in 2002 to 7.1 million students in 2013 (Allen & Seaman, 2014). Distance is no longer a mitigating factor when it comes to receiving an education. Online learning has been touted by students for the reduced cost, lack of commute time, and flexibility in academic scheduling (Clingerman & Bernard 2004; Crowell & McCarragher, 2007; Kim, 2008).

The trend to offer online courses has been recognized and adopted around the world and the number of higher education institutions who offer online course has increased from 34.5% in 2002 to 62.8% in 2012 (Allen & Seaman, 2013) A major concern for institutions as they continue to increase their online offerings is academic performance (Allen & Zhang, 2016; Rom, 2011). Retention and attrition concerns has plagued online learning since the onset with dropout rates for online learning courses 10-20% higher than traditional courses (Carr, 2000).

Research suggest student retention is strongly correlated to the experiences students have in the classroom and with faculty (Hearn, 2006). Online education is often criticized for a myriad of reasons, including its potential to perpetuate student isolation; which could have negative implications on one’s academic achievement, satisfaction, and self-esteem (Glazer & Wanstree, 2011). As institutions look for solutions to keep students engaged and participating in online classes a growing number of faculty (44.6%) believe the demands of teaching an online course is more than one that is face-to-face (Allen & Seaman, 2013).

Fostering student-instructor relationships and implementing innovative practices are paramount in a time where increased access to online learning has reached an all time high. However at most institutions in the online environment, the concerns is in student workload, conveying appropriate content to students, students achieving learning outcomes, and assessment of student performance (Dahm, 2014). Behind the scenes a considerable amount of work is required for instructors to deliver appropriate content, map to learning outcomes, build engaging interactions, and provide timely and meaningful communication (Priyadarshini, Ponnam, & Banerjee, 2015).
THE ROLE OF THE INSTRUCTOR IN THE ONLINE CLASSROOM

Institutions often focus on how they can best support the student but should also acknowledge the influence of the instructor in student engagement. Instructors are normally commissioned to focus on teaching as well as service and scholarship requirements at their institutions. They also are likely to serve on committees and perform administrative duties. Such a workload can result in faculty members having less time for teaching-related processes. This lack of time can often affect the levels of interaction and quality of performance that instructors realize in the classroom and can have adverse effects on student experience and faculty evaluations.

Instructors will also have scholarship requirements that require significant investment of time and cognitive resources (Priyadarshini et al., 2015). Although scholarship will often inform classroom interactions and communications, the process for research is often contrasting from classroom activities and requires significant demand in faculty productivity. Without appropriate tools and techniques, instructors will often find themselves mentally taxed in trying to balance scholarship with their teaching load (Priyadarshini et al., 2015). Processes that focus on productivity and efficiency can provide a means for better facilitating classroom activities while providing a venue for more open dialogue and sharing of existing research.

Productivity in online instructions normally focuses on the quantity of content delivery, interactions, and communications with students (Fisher, 2010). Quantity of delivery is usually associated with content, map to learning outcomes, lectures and asynchronous or synchronous interactions, and references to additional materials for students (Monks & Schmidt, 2010). Interactions in the online environment focus on the use of assignments, discussions, wikis, online chats, journaling, or some other form of technological tool (Howard & Tomei, 2008). Communication with students can also be in the form of asynchronous or synchronous discussions or chats often coupled with some form of lectures or recorded seminars.

Efficiency for the online instructor is defined by not only the amount of information being transferred between faculty and students, but focuses on the quality of information or message that’s being delivered (Rothstein, 2010). As with general productivity, the amount of information being exchanged is important and provides a measure for evaluating teaching processes and successes. However, efficiency also looks at the quality of the educational interaction and its effectiveness in meeting the desired learning outcome. Efficiency will also take into account the meta-processes, such as engagement and motivation, and outline the effective means for facilitating these conditions (Andres & Akan, 2010).

Creating the optimal learning experience in an online course requires more than content knowledge but an understanding of learning theory and appropriate application of instructional design. Instructional design focuses on the manner in which the learner experiences the classroom environment such as course content and lectures, assignments and feedback, and communication between the instructor and online peers. The instructional design influences the learners’ performance and acquisition of knowledge.

SHIFTING THE STATIC ROLE OF CLASSROOM INSTRUCTOR

With the infusion of technology and other developments within academia, the educational system has moved from an instruction paradigm in which knowledge is transferred one-way from faculty to students to a more socio-constructivist model in which students and faculty collaborate regarding the development of their knowledge. Under this revised paradigm, the instructor’s role is more of coach or collaborator
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than presenter of information. Numerous experts indicate that the use of social media is appropriate for today’s students. Tapscott and Williams (2007) state that the younger generation, including many undergraduate students, “are not content to be passive consumers and increasingly satisfy their desire for choice, convenience, customization, and control by designing and distributing products themselves” (p. 52).

Many argue that the very nature of learning is changing in line with the rest of culture. They suggest that learning occurs in a qualitatively different manner than it did in past generations, with a current emphasis placed on the active co-construction of information between educator and pupil rather than the traditional transmission of information from a presumably more knowledgeable individual to one of lesser knowledge (Thomas & Seely-Brown, 2011).

Further, no longer does the faculty member bear all the responsibility of maintaining the class’s attention and leading the discussion, rather the primary role of faculty is that of facilitator. A range of innovative strategies are being used to engage learners and theoretical frameworks are being developed to address how the online space has evolved as a result of technology.

This phenomenon has also realized the implementation of innovative strategies in the online environment. Instructors are using social media as a tool for learning and teaching. In fact a recent Babson report found two-thirds of faculty using social media as part of their class and over 40% of faculty requiring students to use social media as part of a class assignment (Allen et al., 2012).

Modern online tools can provide instructors with a multitude of engagements, advanced interactions, and communications to support online teaching and learning. Research suggests however that instructors find it difficult to navigate the technology that drives the online environments and integrates effective teaching techniques throughout the online experience (McCarthy, 2015). This balance between instructor time and effort, combined with desired outcomes and performance for students, is the basis for this text and acts as a guideline for a common thread throughout each of the chapters.

Learning theory focuses on the students’ experience as it is shaped by the pedagogical choices of the instructor. Pedagogical choices can influence how peers and instructors interact, the quality and type of feedback, as well as the kind of interactions that occur in an online course. Although technology is often touted to be a means to improve productivity and quality of online instruction, it can be counter-productive if assignment expectations are unclear, course content lacks meaningful learning, and the instructor is perceived as disengaged. Designing instruction within a learning theory framework can support instructors as they facilitate lectures within students’ zone of proximal development, provide feedback that is meaningful and timely, and design tasks that allow students to work at their own pace. This publication focuses on four system areas of course design:

- Design of Courses and Content,
- Communication
- Assignments, and Assessment
- Advanced Design and Interaction

Using this framework an online instructor can shape the learner’s experience to support transfer of course content and create an effective and efficient learning environment. From grade appeals to gamification, discussion boards to video feedback, this book examines the overarching concepts and specific tools and techniques related to increasing instructor performance, productivity, and efficiency. Each chapter will reveal specific tools and techniques, the underlying review of literature, existing solutions
and recommendations, examples of those solutions in the form of case studies and research, specific challenges to using the tools and techniques examined, future research in the use of the particular method, and conclusions for implementing and expanding these processes in the online classroom.

The introduction to the chapter is meant to provide the reader with an overview of the tool and technique that is being discussed as well as the immediate pedagogical implications of using these tools. Pedagogical implications often link the features within the tool or technique that are available to the instructor and the supported educational interaction that is provided. The chapter introduction will often give an overview of the expectations of the chapter and the benefit to the reader.

Each chapter will include a review of literature where authors explore the existing body of knowledge for their particular tool or technique. This review of literature is not meant to be exhaustive but provide an extensive look into historical uses of the tool or technique, the associated technology that surrounds the process, and the link to productivity and efficiency in using the proposed instructional process. This historical look at the provided process will also lead to understanding past implementation of the tool or technique.

Next, the chapter will explore the framework or methodology for employing or delivering the tool or technique in the actual online classroom. This section of the chapter will provide the step-by-step foundation for utilizing the instructional process in order to better assist with increased productivity and efficiency. Readers will walk away with a procedure for implementing the new information in their online classroom.

Offsetting the framework or structured use of the tour technique are the challenges faced by instructors when implementing the solution. These challenges are in the form of historical and foreseeable issues or elements that are presented when applying the instructional process. Although challenges can come in many forms including political, technological, pedagogical, or even the ‘correct fit’ with the instructor, understanding the issues can help with overcoming obstacles when executing the process.

Chapters will next provide solutions and recommendations based on the research surrounding the tool or technique being proposed. Solutions and recommendations may be in the form of research studies, case studies, or best practices in using particular tools and techniques in the online classroom. The result will act as an actual demonstration of the solution and process, while demonstrating the outcomes realized in normal online classroom settings. Experimental research and pilot studies also provide some statistical measures to verify the productivity and efficiency that can be realized in the implementation of the tool or technique.

Future research is explored in each chapter and provides a means for taking a deeper look into the process presented. In many cases for the online environment, the technology will expand or advance allowing for new processes to be discovered and implemented in the online classroom. These innovations can often lead to increased productivity and efficiency, and the future research section provides a way of exploring these possibilities. Readers are encouraged to continue their research in the tool or technique with the guidance of this section.

Finally, conclusions for each chapter are provided and a summary of the chapter is given. Authors provide an overview of the utilization of the tool or technique, its historic or research background, a framework overview, a look into existing examples or studies, challenges that come with the process, and future research for expanding on the chapter. All chapter sections are designed to give a clear pathway for instructors to implement the tool or technique provided and begin to realize the impact on productivity and efficiency.
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In order to best understand the different tools and techniques that can be employed by instructors in the online environment and their associated benefit in terms of productivity and efficiency, this book is divided into four major sections: Design of Content and Courses, Communication, Assignments and Assessment, and Advanced Design and Interaction. The book section on design of content and courses focuses on the instructor’s aspects of introducing and organizing course content, while balancing the workload of the instructor and student through planned interactions and communications in the online course. The Communication section focuses on instructor to student interactions, as well as student to student interactions, that are both synchronous and asynchronous such as discussion boards, MOOCs, online chats, and grading. Assignments and Assessment section explores student driven interactions that include collaborative and authentic assignments, wikis, journals, and exams. The last section on Advanced Design and Interaction examines the use of simulations, gaming, and advanced media communications in order to provide a complex framework for productivity and efficiency while increasing student and faculty involvement.

DETAILED TABLE OF CONTENTS

Section 1: Design of Content and Courses

The first section provides a foundation for designing online courses and content. An examination of the fundamentals of constructing, organizing, and populating modern online courses based on sound pedagogic and andragogic foundations is deeply rooted in these four chapters. Developing courses and content requires attention to knowing the student and the types of experiences they seek in an online course, the structure of information for student consumption and the instructor workload throughout the construction process. Organization of course elements, including assignments, assessments, and interactions, creates overhead and workload at the initialization or onset of the teaching process. This section investigates the strategies to fill courses with meaningful content that is best positioned to facilitate a streamlined and effective instructor and student experience.

Chapter 1, “Instructional Design for Millennials: Instructor Efficiency in Streamlining Content, Assignments, and Assessments,” explores how online course instructors and designers need to know the types of students that will be engaged in their course and how the course will best prepare the student for the experiences they will have in the real world. Effective design of online instruction takes into consideration the audience and the real-world experiences students will need to be effective. Effective design creates a learning platform that seamlessly blends technology and real-life interactions. The authors in this chapter provide an exploration of course and content design tools and techniques for mapping instruction to technology. Data driven instruction is also paramount for instructional and course designers to consider in a time where accreditation is paramount. The authors expand these concepts to account for a backward design approach to map learning outcomes with national and state standards. The chapter concludes that ‘thinking anew’ through faculty ideation is a must for IHEs as the changing learner demands changing practice.

Chapter 2, “The Online Course Maximizers of Visualization, Gaming, Analytics: Online Course Maximizers,” looks at how instructors need to be forward thinking in terms of where online education is positioned to move as technology is constantly changing. This chapter provides an examination of visualization, gaming, and analytics in the online classroom and provides a broad overview of research
in the area with practical application and examples of use. Integrating these three factors to enhance the online learning environment can have profound effect on students’ engagement and achievement. Examples of brain research and assistive learning further this chapter’s reach and demonstrates various techniques for improving efficiency.

Chapter 3, “The Adaptation of a Residential Course to Web-Based Environment for Increasing Productivity,” examines when institutions are challenged with the question “where do I begin” when considering moving courses to an online platform, this chapter provides the foundation for beginning that process. As more institutions begin to migrate their courses into an online learning format, they will need to be aware of best practices in course migration as well as what approaches are most effective for designing an online learning management system. The authors of this chapter explore the process and ways in which face-to-face classes can be converted into an online course. A detailed explanation is provided for initiating the design process, creating and delivering course content in a modern learning management system. The chapter leverages existing instructional design techniques to maximize the utility of delivery while maintaining a productive process for instructors. The authors’ demonstrates the use of specific multimedia technologies to enhance the online classroom.

Chapter 4, “A Review of Grade Appeals Informing Productivity and Efficiency in Teaching,” looks at how student retention is a mitigating factor in the success of online courses. Institutions need to be aware of what factors influence student achievement and what kinds of experiences impact student dissatisfaction. This chapter examines these issues through the lens of the grade appeal process. Investigating the link between grade appeals and instructor time and efficiency can have strong implications for an instructors’ practice. Tools and techniques for safe guarding against conflict and disagreement in assessment are presented and explored. By demonstrating the history and resolutions to grade appeals, the chapter provides a means to minimize discrepancies and disagreement while aligning with best practice in course delivery.

Section 2: Communication

Effective communication is vital in the learning environment. Setting clear expectations for course learning outcomes should be in place before the first day of class. Communication is a component of instructor productivity and efficiency that provides the direct link to learning. Communications tools and techniques vary in the online environment from rubrics to virtual chat the ways and means communication is established can strongly enhance student productivity and satisfaction in the course. The need for clear messages, meaningful feedback, and enhanced connectedness remain the priority for instruction. This section of the book reveals various methods and practical examples of how to apply concrete communication in the online classroom.

Chapter 5, “Utilizing Social Media to Engage Students in Online Learning,” explores how social media has the robustness to support an anytime anyplace functionality through integration across devices and platforms. It is incumbent on instructors to know best practices in using social media to build interpersonal relationships outside of the learning management system. Social media can be easily integrated in learning management systems and offers the flexibility of access via mobile devices. Whether, integrated into the learning environment or utilizing existing social networks, instructors can help build emotional connectedness into the online experience in order to facilitate better educational involvement. The authors share best practice for online integration of social media as well specific use of tools in the social educational network.
Chapter 6, “Leveraging Online Collaboration to Optimize Faculty Efficiency, Student Engagement, and Self-Efficacy,” looks at how traditional lecture style university courses can have upwards to a few hundred students or more. Such a large scale class can be a tremendous undertaking for even the most efficient instructor. Instructors who teach large courses need to be dynamic in how they utilize learning management systems for workflow. In this chapter online collaboration which includes students driven feedback, support and direction, from other classmates creates an interdisciplinary exchange of student-generate dialogue. This model similar to a Massive Open Online Course (MOOC) holds much promise for universities who are looking to bring a large lecture style course online and may be especially effective in a course where students from a variety of disciplines interface. Using a model in which workflow is a by-product rather than an end-product can be an effective means to bring online course to scale. This model also is an effective means to create a socially constructed online paradigm in which student workflow is in flux and driven by peer feedback. Utilizing a self-directed framework the author examines the value of blended communications for increasing productivity, efficiency, and wellness in the online classroom. The author gives direct insight from students and research on active learning processes and procedures via case study. The chapter also provides examples on managing technology to maximize instructor use of time.

Chapter 7, “Communicating with Students in Online Learning Environments: Using Tools to Communicate, Monitor, and Provide Feedback to Your Online Students,” explores how technology holds much promise as a means to support communication in a timely and effective manner for classroom instructors. However it can also hold much frustration for students and instructors alike when online tools are not seamlessly integrated into course learning outcomes, management systems and methods of communication. Online instructors need to be mindful of the tools they select for communication as well as the ways in which they implement these tools. Having clear expectations for students and set goals for communication is paramount to effective use of online tools. This chapter demonstrates practical ways to utilize learning systems to communicate effectively in online classes. The author provides examples of creative ways to communicate using mobile apps and social media. In addition, desktop software and advance communication technologies are discussed.

Chapter 8, “The Discussion Forum: Maximize Student Learning with Manageable Faculty Workload,” examines how discussion boards are traditionally positioned as a means for asynchronous exchange between the student and instructor, and the student and their peers. Discussion boards can be extremely effective when they are completed in a timely manner, require students to think divergently about a topic and provide the instructor with formative feedback about the students understanding. However one may also argue that discussion boards lack rigor, originality and creativity from the student. Given the plethora of online tools and possibilities in a learning management system there are a variety of possibilities for student-drive products as an alternative to the discussion board. If you find yourself and your students dreading the thread (as in the discussion board thread) this chapter will provide you with a variety of possibilities to maximize formative assessment and provide an engaging alternative to the discussion board. The authors’ examine learning theory coupled with creative instruction to provide communication beyond a standard set of technologies. This chapter also examines faculty workload and expediting instructor tasks through course technology, tools, and techniques.
Section 3: Assignments and Assessment

At the heart of online learning is the tasks and activities that students complete. Carefully crafted assignments and activities that require students to do more than regurgitate information can be complex to facilitate in an online learning management system. However in a marketplace where higher order thinking is in high demand it is incumbent upon instructors to provide an opportunity for students to collaborate, demonstrate critical thinking, application and analysis. This section is an examination of specific tools and techniques aimed at well-crafted online experiences through creation and execution of learning exercises and exams. The three chapters in this section provide insight into using the learning management system in conjunction with course organization to bolster the interactions with students. Instructor productivity and efficiency are realized through optimizing the tools and processes within the course assignment and quizzes in the online course.

Chapter 9, “Assessment in the Online Classroom: A Critical Review of Two Major Strategies – Online Quizzes/Tests and Discussion Boards,” looks at a research study of online learners and their reaction to various forms of assessments. The chapter outlines the best practices for creating quizzes and discussion boards for helping instructors provide efficient feedback. Additionally, the chapter examines instructor productivity through exam planning and development.

Chapter 10, “Real World Collaborative Projects Increasing Self-Directed Learning in Online Master’s Programs,” looks at group work in the online classroom, which requires students to be self-directed in completing tasks. The authors share their experiences for developing and facilitating instructor and peer exercises in the online classroom. This chapter looks at these exercises from the adult learning perspective and provides tools and techniques to uniquely reach this audience. The chapter also examines the benefits to instructors and students through self-directly learning.

Chapter 11, “A Model of Designing Online Assignments Based on the Revision of Bloom’s Taxonomy,” examines learning theory and assignment design in order to provide tools and techniques for instructor productivity. Using these expanded models of learning, the chapter demonstrates the development of various types of knowledge and the practice for realizing this potential in students. Practical examples of revised Bloom’s Taxonomy applied to assignment creation and facilitation are provided.

Section 4: Advanced Design and Interaction

This section explores the research, tools, and techniques for complex or innovative uses of technology in order to assist instructors in course facilitation. This section provides the details for creating content and course interactions as well bringing disparate teaching tools together in order to realize increased productivity and efficiency. Chapters provide the theoretical foundation and real world application of new technologies and instructional practice.

Chapter 12, “Micro-Feedback via the Cloud: Sustainable Monitoring of Online Student Responses,” is an examination of online tools for capturing student feedback and reporting to instructors. These online tools provide communication analysis and on demand access to data on student interaction in order find points of concern or clarification in the course itself. By focusing on real time information, the chapter demonstrates specific tools and techniques for increase productivity and efficiency through better instructor data access.

Chapter 13, “Facilitating Game Design in the Online Classroom,” looks at student built games as a means for advance interaction for students and instructors. The game design methodology also provides
detailed examples of former online implementation and demonstrates successful courses. The chapter reveals specific tools and techniques for instructor productivity and efficiency while facilitating the game process.

Chapter 14, “Authentic Online Branching Simulations: Promoting Discourse around Problems of Practice,” explores the use of various tools to create unique learning experiences. The chapter’s research proves the validity and success of student learning, while bridging the need for benefit to instructor facilitation of simulations. The chapter includes a look into social learning and social cognition as applied to online instruction and instructor productivity.

Chapter 15, “Advanced Feedback Using Dynamic Rubrics, Video, and Audio: Student Perception and Teacher Efficiency with Advanced Tools in Online Grading,” is an exploration into existing feedback systems and the benefits of advanced online tools for grading. Through observation and research the effects of an advanced online grading systems are demonstrated and the benefits to instructor productivity and efficiency are quantified. Instructors are given details steps on implementing these tools and techniques in the online classroom.

Online course instructors are confronted with two challenges, delivering subject matter content and creating an online learning environment that is engaging, meaningful and conducive to teaching and learning. There is limited research exploring the efficacy of interactive online delivery of content, particularly from a student perception point-of-view. The purpose of this book is to explore best practices of teaching online specifically from a student-centered perspective and in terms of maximizing the instructor’s efficiency and productivity in teaching online.

REFERENCES


