BEST PRACTICES IN ONLINE PROGRAM DEVELOPMENT

TEACHING AND LEARNING IN HIGHER EDUCATION
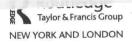
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Best Practices in Online Program Development

Teaching and Learning in Higher Education

Elliot King
Neil Alperstein

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Best Practices in Online Program Development

Best Practices in Online Program Development is a practical, hands-on guide that provides the concrete strategies that academic and administrative departments within institutions of higher learning need to develop in order to create and maintain coherent and effective online educational programs. Unlike individual courses, an online education program requires a comprehensive, inter-departmental effort to be integrated into the ongoing educational project of a college or university. This book focuses on the:

- Integration of online education into the institutional mission
- Complex faculty-related issues including recruiting, training, and teaching
- Multifaceted support required for student retention and success
- Need for multilayered assessment at the course, program, technical, and institutional levels
- Challenges posed to governance and by the need to garner resources across the institution
- Model to insure ongoing, comprehensive development of online educational programs.

Best Practices in Online Program Development covers the above topics and more, giving all the stakeholders in online educational programs the building blocks to foster successful programs while encouraging them to determine what role online education should play in their academic offerings.

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Best Practices in Online Teaching and Learning

Series Editor Susan Ko

Best Practices for Teaching with Emerging Technologies by Michelle Pacansky-Brock

Best Practices in Online Program Development: Teaching and Learning in Higher Education by Elliot King, Neil Alperstein

From Elliot: To Anita, Aliza, Marcie, Jordan, Brad, and baby Lila. You are always first and foremost.

From Neil: To Gabriel and Spencer, who at some point in their lives will undoubtedly attend school online.

Preface

In the spring of 2011, we received the green light to develop what would become the first largely online master's degree program at Loyola University Maryland. We were excited, and perhaps naïve, about this opportunity, as we considered the institutional change this new program would bring to the university. Although we both had experience teaching online and made extensive use of educational technology in our classes, we quickly realized that we had no idea about the complexity of establishing an online program. Soon we found ourselves in meetings with people with whom we had never interacted before— the records office to work out course numbers, student administrative services to hammer out the mechanics of registration for students who would not be coming to campus, regulatory staff members to work on state authorizations, and so on. If only we had a guide to the process, we thought. But none existed, as far as we could tell.

So we decided to write this book. But we didn't want a book that merely reflected our experience, as Loyola is a relatively small largely liberal arts-oriented university, and probably not representative of universities across the United States. As we reflected on our own experience, we conducted interviews with more than a dozen individuals around the country representing various types of institutions to better understand their efforts in online education, and we surveyed the available literature. In doing so, we came to the following two general conclusions: First, while many online programs already exist, their development has been very idiosyncratic and they grew organically as a reflection of their particular institutional settings; and, second, many of the programs in traditional, non-profit universities are clustered in continuing and professional education sequences or college completion programs, and the programs have not yet been integrated into the mainstream educational offerings.

That is about to change. MOOCs (Massive Open Online Courses) have put online education front and center in the debates about higher education. As a result, online education is on the cusp of transitioning from being in the domain of early adopters to the domain of the early majority. Or put more simply, in the words of Malcolm Gladwell, online education seems to be about to hit the "tipping point," in which virtually every institution of higher education is going to have to determine what role online education will play. Some may decide that online education will not play any role at their institution, in the same way that some universities have remained primarily teaching institutions and did not adopt the research model for the university that emerged 100 years

ago. But even those schools will have to develop strategies to confront the challenge posed by online education or be left floundering.

Many colleges and universities, however, will have to determine how they are going to incorporate online programs into their primary educational offerings and then create programs to achieve their educational goals. This book is designed to help those institutions in that process. The move to online education is not just about teaching and learning. Online education will shape the very character of the institution and how it operates. This book is geared to aid the various stakeholders in institutions of higher learning that are at various stages of considering, developing and offering online programs and who will ultimately make important contributions to the success of individual online educational programs.

This book addresses and presents practical guidance to virtually all the different constituencies inside and outside of the university from state legislatures and boards of trustees to administrators, faculty, and students. It will lay the foundation regarding all that it takes to create, develop, and implement an online program, and it will provide a common language for those constituencies to talk to one another. Along the way, the book will offer very concrete advice about how to develop and implement effective online educational programs. Finally, the book is designed to guide colleges and universities that have already entered into online education. It will provide them with tools to assess themselves on all the facets of an online educational program, including the issues that have an impact on faculty, students and the institution generally in a way that leads to continuous improvement of the overall educational experience.

Organization of the Book

This book serves as handbook for all aspects of developing an online education program. In doing so, it addresses the issues facing or posed by each of the major constituencies involved in higher education—the students, the faculty and the administration of both the academic and institutional leadership, and the stewards of higher education including boards of trustees, regulatory bodies and Federal and state governments. The book presents the challenges to developing high quality online educational programs, and it offers solutions to the problems that online program developers face. As would be expected, many of the issues raised by the development of online educational programs have an impact on many of the constituencies involved. Those issues will be explored in each chapter from the perspective of that constituency. This approach can help clarify the different perspectives within the organizational complexity of institutions of higher learning.

The book has seven chapters:

Chapter 1: The Online Revolution is Upon Us
Chapter 2: Moving Online Programs Forward

Chapter 1 describes the economic, social, political, and technological drivers behind the growth of online education and places the turbulence higher education is now experiencing within the history of reform in higher education. Colleges and universities have undergone radical reformation several times. Chapter 2 lays out an overview to creating online educational programs and the internal and external approval processes for online educational programs. The subsequent three chapters take an in-depth look at the issues online educational programs raise for faculty, program development, and students. Chapter 6 surveys the challenges to staff and other stakeholders posed by online program development and suggests a set of best practices for addressing those issues. The final chapter proposes a Generational Model of Online Program Development that can help institutions assess the state of online program development across many dimensions and guide them in implementing stable and effective practices. Overall, this book serves as a way to facilitate a campus-wide conversation about the role of online education and provides a basis for determining the appropriate approach to online education given the history and goals of the institution.

University 5.0. That is what we believe will emerge as online education and other applications of educational technology impact the student experience. University 5.0 refers to the next iteration of higher education, a phase in which place—literally geographic location—is becoming less of a central factor. With the advent of blended learning, flipped classrooms, and other collaborative approaches, among other alternatives to traditional learning, the university is extending beyond its physical borders. With online education, there literally are no borders.

We see higher education and online education as being at major turning points. But it is not the first turning point colleges and universities have faced. In the mid-19th Century, higher education embraced teaching practical arts along with the classical liberal arts. In the early 20th Century, colleges and universities were transformed into research centers charged with creating new knowledge and also became the gatekeepers to an array of professions, including medicine and law. And in the 1960s, colleges and universities opened their doors to women and other underserved populations. In each period, new colleges and universities were created and existing colleges and universities had to craft strategies to survive. In each case, some schools flourished and grew while others did not succeed. This book is geared to help colleges and universities navigate through these turbulent times and help them craft and implement strategies that will lead to their success for generations to come.

Acknowledgments

This book represents the culmination of ideas, practices, and experiences regarding the use of educational technology in teaching and learning over the past 25 years. The university where we both teach has been generous in letting us be early adopters of those new technologies and to use that experience to launch Loyola University Maryland's first online program. The Emerging Media graduate program has attracted students from across the United States. Setting it up hasn't been easy, but we have learned a lot in the process and would like to thank our first cohort of students in joining us on this journey. You know who you are.

We would also like to thank the following people at Loyola who have been instrumental in establishing our program: Dr. Timothy Law Snyder, who championed online education at Loyola from the beginning, Dr. Amanda Thomas, who guided the process in creating the program, Dr. Cindy Moore, who was our immediate point of contact, and Dr. Sharon Nell who was the right person at the right meeting and got it all started. In the Instructional Design team, we would like to thank Tracy McMahon, Suzanne Monthie, Ryan Servant, Simone Christian and Louise Finn, Loyola's CIO, for their assistance and support.

When we first started thinking about writing a book about online education, we became aware that there are a lot of people forging new ideas in this area. We are particularly grateful for the insights we received from the following people already deeply involved in developing online educational opportunities at their campuses and elsewhere: George Otte, City University of New York, Ronald Chambers, Hofstra University, Brian Salerno, Brandeis University, Kristin Palmer, University of Virginia, Dennis McElhoe, University of North Carolina at Charlotte and Holly Shiflett at Deltak. Neil found Cathy Davidson's MOOC, The Future (Mostly) of Higher Education helpful in giving the project a sense of history regarding higher education.

We thank Alex Masulis, our editor at Routledge (Taylor & Francis) for agreeing that online education program development is fertile ground and for his assistance in shaping the book, as well we thank Daniel Schwartz and the production team at Routledge. We thank Susan Ko for including us in the series of which she is the general editor.

Finally, Neil would like to make his most important acknowledgment: "I literally would not be here were it not for my wife Nancy. She is a great partner who I can bounce ideas off of, knowing I'll get sound feedback. She is, in a way, a shadow writer of this book. But most important, Nancy is my collaborator in

life in all the things I do, and I thank her for all the support she has provided during the writing of this book." Elliot would like to give a shout out to his wife Anita as well: "Your faith and confidence in me helps me to tackle new projects. You are my life partner always."

The authors have collaborated with each other for more than 20 years. It has been a relationship of mutual support not often found in the academic world. We have built a successful department that is a leader in the use of educational technology and now the home for Loyola's first online program. We thank our colleagues in our department for creating such a great environment in which to work. We are all partners in this project.

Finally, to those who read this book, we hope it will inspire you to move your college or university forward in a way that makes online education programs not a stepchild of the university, but a central function that stands side by side with traditional residential education. We recognize that online program development starts with an idea, and we hope that this book will stimulate ideas for your institution. Whether the idea for an online program comes from the administration, faculty or staff, we all need to embrace the future, which will to a greater extent take place online.

Contents

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The Online Revolution is Upon Us

If you are not worried about the impact of online education on the nature and structure of higher education, you should be. And if you are not excited about the impact of online education on the nature and shape of higher education, you should be. For many reasons, higher education has entered a turbulent period. Online education is a major element of that turbulence. Every college and university and every stakeholder in higher education including students, faculty, staff, administrators, top leadership, boards of trustees and governmental bodies have to react and respond to the disruption taking place. How you respond may help shape the character of your institution for the generation to come.

You may know that the largest graduate class offered on the campus of Stanford University in the fall of 2013 was CS229 (Kosner 2013). The course covered both statistical and biological approaches to machine learning and was taught by Andrew Ng, a professor of computer science with a specialization in artificial intelligence. It was no surprise that Ng's course would be popular. Ng had built the largest computer-based artificial brain in the world, with more than 11 billion neural connections running on 16 computer servers (Gillespie 2014). But the 760 students Ng attracted to his course in machine learning were practically the equivalent of an intimate class compared to the number of students that enrolled in a course taught by his colleague Daphne Koller in the fall of 2011. That semester, more than 100,000 students enrolled. The huge enrollment was spurred by the fact that the course was free and online. But the scale and scope of the course in 2011 helped to focus the higher education community as well as the general public on a potentially new alternative in higher education—the Massive Open Online Course or MOOC.

And then it was off to the races. The following spring, the *New York Times'* John Markoff reported that Ng had raised $16 million in venture capital and partnered with Stanford, the University of Pennsylvania, Princeton University and the University of Michigan to launch a new company called Coursera (Markoff 2012). Another professor of computer science at Stanford, Sebastian Thrun, had taught a course on artificial intelligence with

Peter Norvig, a colleague at Google, which had attracted 160,000 students. A course Thrun taught in the spring of 2012 about building a search engine had 90,000 people sign up (Lewin 2013). MOOCs were the new darlings of higher education. *New York Times* columnist and technology evangelist Thomas Friedman rhapsodized that MOOCs represented a revolution in college education and would provide students around the world with access to the very best education (Friedman 2012). He imagined a time when the United States might rent space in a remote village in Egypt, install a couple of dozen computers and a high speed Internet connection via satellite, and those students would have access to a world class education. He reported anecdotes in which students and professors opined that MOOCs were more intellectually exciting than their traditional classroom experiences. And he forecast a time when people would design their own college degrees selecting courses from the best professors from around the world and paying small sums for certificates of completion (Friedman 2013). In December, *Time* magazine called 2012 "The Year of the MOOC." The article noted that three dozen major universities including Duke and Princeton had signed deals with Ng's Coursera. Thrun had established a second company to develop and support MOOCs called Udacity. And Harvard and the Massachusetts Institute of Technology had partnered to establish yet a third MOOC initiative called edX. In 2012, more than one million students had enrolled in MOOCs (Webley 2012).

The allure was not hard to understand. World-class name brand universities were apparently willing to open some of their courses to anybody, anywhere, for free. The opportunity seemed to be amazing. After all, Harvard's freshman acceptance rate in 2012 was 5.9%. Stanford's acceptance rate was 6.6% and MIT's was 8.9%. If the availability of Internet technology forced other industries to begin to give away their best product for free, most notably newspapers, perhaps the same sort of process would take place in higher education. But as quickly as the hullabaloo about MOOCs swelled, it faded. First, many observers noted that although thousands of students enrolled in MOOCs, far fewer completed them. A study conducted jointly by Harvard and MIT examining 17 MOOCs offered by those institutions found that only 5% of the nearly 850,000 students who enrolled received a certificate of completion and 35% never viewed any course material. Of the 5% that did complete the course, almost 75% already held at least one college degree (Kolowich 2014). A study by researchers at the University of Pennsylvania Graduate School of Education, pointed out that of the 16 MOOCs that the university offered, the average completion rate was 4%, with a range of 2% on the low end and 14% at the top (Penn 2014). And perhaps most troubling, a study by a team at Princeton University, based on an assessment of 73 courses, found that not only did student participation plunge during the course of a MOOC, but also faculty participation fell (Brinton et al. 2014).

And that's not all. Shortly after the president of San Jose State announced the university's interest in experimenting with MOOCs, the faculty objected. In an open letter to Michael Sandal, a Harvard University professor who had created an online course about justice that was offered via edX, Harvard and MIT's joint MOOC platform, members of the philosophy department at San Jose State opined that the idea of offering the same course about justice across the country was "downright scary." The Philosophy faculty worried that the quality of education would be hurt if people untrained in an academic field would offer the course and rely solely on the material offered through the MOOC. And while administrators at San Jose State argued that no one was compelled to use Sandel's MOOC in their classroom, several professors said that they felt administrative pressure to do so (Lewin 2013). The growth of MOOCs raised several other thorny issues as well. And by 2013, Sebastian Thrun himself suggested that MOOCs did not offer a very good education product, describing them in one interview as "a lousy product" (Chafkin 2013).

But both the enthusiasm sparked by MOOCs and the objections to them are beside the point. What you have to recognize is that MOOCs drove the issue of online education from the margins of higher education to the mainstream. Once largely the domain of continuing and professional education or a way to serve non-traditional students such as older students, working students, or those whose college education had been interrupted by military service, MOOCs positioned online education as one of the most exciting innovations in higher education over the last generation and one of the most viable options to addressing the perceived flaws in higher education.

The rise of the Internet has disrupted many aspects of society and forced many institutions to adjust. The news media, the music industry, retailing and telecommunications have been completely reshaped over the past 20 years. In contrast, in many ways, mainstream higher education has been slow to react to the potential of the Internet. Educational policy to some degree is stuck in the late 19th and early 20th Centuries. But it has become increasingly clear that for many colleges and universities, the current models for higher education rooted in 19th Century thinking are no longer viable. A new paradigm, in which online education will inevitably play a significant role, must be created. As Mitchell Daniels, the president of Purdue University and former governor of Indiana, pointed out in an open letter to the Purdue community regarding the ten initiatives he felt would reshape Purdue for the future:

> When critics and skeptics contrive dramatic metaphors like "tsunami" and "avalanche" to forecast wrenching changes in higher education, they are thinking of two intersecting phenomena: first, the appearance of disruptive alternatives to site-based, "seat-time" residential education.

Why, he wondered, will students still find it wise to pay lots of money to go and live somewhere for four or more years, when a host of competitors are offering to bring them excellent teachers and instruction inexpensively in the comfort of their own homes?

Daniels was not alone in expressing his concern about the future. In 2010, Smith College, under the leadership of Carol T. Christ, laid out its vision for the future. With a storied history and an endowment of over $1 billion, Smith is a pillar of higher education. Nonetheless, the Smith task force that crafted the document anticipated that the nine-month residential experience will play an increasingly smaller role in higher education over time, with online education, education at other institutions and a variety of other learning experiences playing a larger role (The Futures Initiative 2010/2011). If the residential model for higher education is going to contract, every stakeholder in the institution is going to have to play a role in determining what will come next. Traditionally, the gathering of scholars and students in one place represented the very heart of higher education. But over the next decade, every institution will have to develop a strategy reflecting the technology-based world in which we live. And once that strategy is in place, every institution will have to learn how to develop and implement, along with other new and emerging technologies, online educational programs in response to the growing pressure from many quadrants within society, not the least of which are internal to institutions of higher learning.

Waves of Change

While the popular image of colleges and universities makes it seem as though they are cloistered institutions impervious to change, that is not true. Clark Kerr, the former president of the University of California, once observed that approximately 85 institutions have survived in a recognizable form for the past 500 years. Among them are the Catholic Church and the Parliament in Iceland as well as 70 universities (Tagg 2012). To be able to survive for 500 years, you have to be nimble. And it is critical to understand the dynamics of change in higher education among those 70 surviving institutions of higher learning to determine how online education can be incorporated effectively in modern colleges and universities.

Since the founding of what is generally seen as the first Western university in the 11th Century, the University of Bologna in Italy in 1088 (the first university to use the term at its founding and still in operation), higher education has experienced waves of radical innovations driven by changing economic, political and social conditions. The initial universities were corporations of students and teachers and this is the very concept that online education challenges, and if it is not implemented appropriately, the idea of the university as a gathering place of teachers and students could be diminished if not destroyed. Instruction

at the University of Bologna focused on civil and canon law, and religious education was its primary mission. It often required six years to obtain a Bachelor of Arts degree and the instruction focused on what were called the liberal arts: arithmetic, geometry, astronomy, music theory, grammar, logic, and rhetoric, with a special emphasis on logic. Master's and doctorate degrees were offered in law, medicine, and theology. Course offerings were fixed and revolved around specific books. The liberal arts curriculum, geared toward the upper class, remained as the centerpiece in university education for several hundred years. For example, Harvard University was founded in the United States in 1636 primarily to train ministers and magistrates. Those who intended to enter other professions generally apprenticed with a master in that field. And access to universities was limited to a relatively select group. According to one estimate, by 1800 there were approximately 200 professors at the 19 institutions that offered Bachelor of Arts degrees in America. Fifty years earlier there were as few as ten professors (Carrell 1968).

In their first incarnation, colleges and universities were hardly democratic social institutions. However, that began to change in the 19th Century when the groundwork for universities in their current configuration began to be put in place. Starting in the 1820s, states began to establish universities whose scope stretched beyond classical education and training of clergy and to other members of the elite to include instruction in the practical arts associated with farming and industry. In 1855, the Agricultural College of the State of Michigan, the forerunner of Michigan State University, was chartered, which was followed shortly thereafter by the Farmers' High School of Pennsylvania that awarded its first degree as the College of Agricultural Sciences in 1861 and eventually served as the foundation for Penn State University.

The movement to broaden the purview of, and access to, higher education was accelerated by the passage of the Morrill Act of 1862 that directed Congress to give the states 30,000 acres for each member of their congressional delegation. The land was then to be sold and the proceeds used to establish public universities to "promote the liberal and practical education of the industrial classes in the several pursuits and professions in life" (1862). The universities established by the act were not expected to exclude teaching the liberal arts, sciences or military tactics but the core project was to teach subjects associated with agriculture and the mechanical arts. Over time, 69 universities were funded by these land grants, including Cornell University and the Massachusetts Institute of Technology.

The land-grant universities established a dichotomy in higher education between practical knowledge that can be usefully applied in industry and elsewhere and a liberal arts-oriented education geared toward developing mental discipline, habits of the mind and a general progressive attitude toward education. This split was further amplified as online educational programs became more common, as most are geared toward teaching applied skills; as well, there

is some concern regarding whether online students can develop the critical thinking associated with liberal arts education.

As the land-grant institutions began to expand and flourish in the last part of the 19th Century, two additional strands in higher education began to emerge in the United States. The first was the idea that universities should be producers of knowledge as well as distributors of knowledge, that is, the concept of the research university. The second was that people entering various careers such as medicine, law, business, journalism, and other areas, previously assigned to apprenticeships and vocational education, should receive post-graduate education at the university level, that is, the concept of the professional school.

The research university, or the notion that one of the roles of university faculty is to discover new knowledge, has its roots in Germany in the early 1800s. In the 1820s, faculty at German universities began to conduct research in philology and linguistics. To do so, they needed access to primary texts and universities with larger libraries began to have an advantage. In 1826, a German chemist established the first laboratory devoted to both teaching and research. As German industrialization accelerated during the 19th Century, research at universities began to give them a competitive advantage. In the United States, although faculty at land-grant universities were expected to conduct research, particularly in fields of interest like agriculture, the idea of a research institution did not really gain traction until the 1870s, when U.S. industrialization boomed. While Harvard established the Jefferson Physical Laboratory in the early 1870s, new universities, often underwritten by wealthy benefactors, such as Johns Hopkins University and Stanford University, established the first laboratories at U.S. universities devoted to research and teaching. Johns Hopkins was established in 1876 as a research institution and over the next two decades awarded more PhD degrees than Harvard and Yale combined (Atkinson, & Blanpied).

The critical role that research played at universities expanded significantly after World War II. In 1945, Vannevar Bush, an esteemed scientist and the director of the U.S. Office of Scientific Research and Development, which had been established to coordinate scientific research and application in the war effort, wrote a report called "Science The Endless Frontier," in which he argued that a steady flow of new scientific knowledge was critical to making progress on everything from the fight against disease to industrial development to national defense, and he argued that new knowledge could only be discovered through basic research. In short, basic research was critical to the nation's health, prosperity and security. He proposed the creation of a permanent Federal agency geared to funding basic research in the colleges, universities, and research institutes in medicine, the natural sciences, and new military weapons (Bush 1945). In 1945, the National Institute of Health, an arm of the Public Health Service, began to fund external research projects. And in 1950, the National Science Foundation was established (National Science Foundation 1994). From that