Rethinking the Doctorate:

Introducing the First Hybrid Doctoral Program in Educational Technology

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Abstract

In 2010 Michigan State University launched the first hybrid doctoral program in Educational Technology. This 5-year program blends face-to-face and online components to engage experienced, working education professionals in doctoral study. In this paper, we describe the design and evolution of the program as well as the response from students. We outline key programmatic challenges and opportunities in offering a hybrid doctoral program side by side with an existing face-to-face program. We conclude with two examples of the hybrid doctoral program in action (redesigning coursework and virtual talks) to demonstrate how we confronted these challenges and opportunities in the design of the program.

Keywords: hybrid learning, online learning, e-learning, higher education, doctoral education

Institutions of higher education stand at a crossroads. Historical and market forces have put pressure on doctoral degree holders to move beyond the academy for their career prospects (Atwell, 1996). Students interested in a Ph.D. are older and more experienced than in past decades. With established careers, potential students are less likely to give up their current positions and embrace an austere life for themselves and their families.

At the same time, there is a growing demand for experienced leaders who understand how technology, especially online learning, is transforming the world of education (Roblyer & Knezek, 2003). With today's emphasis on data-driven accountability, educational leaders need rigorous preparation in research and evaluation of learning with technology (Flanagan, & Jacobsen, 2003; Shulman, Golde, Bueschel, & Garabedian, 2006).

Established professionals represent ideal candidates for doctoral education because their leadership skills can be developed into accomplished research skills. It is less clear that the reverse is true. The gap between theory and practice has long been a criticism of the academy. Practitioners pursuing a Ph.D. are uniquely poised to overcome this gap, using their hard-won expertise in classroom and school communities to inform academic research. In addition, the results of research conducted in academic realms are more readily translated to the world of the practitioners. It is this recursive process, whereby theory and practice inform one another, that holds tremendous potential for improving education (Barnett, Harwood, Keating, & Samm, 2010; Kezar, 2000; Rust, 2009).

Within this context, Michigan State University designed a hybrid doctoral program that would attract working professionals interested in pursuing a Ph.D. An overview of the program,

perspectives that influenced the design of the program, and examples of the program in action are detailed in the sections that follow.

Overview and Design of the Hybrid Doctoral Program in Educational Technology

We launched the hybrid doctoral program in educational technology in the summer of 2010. Currently, the 5-year program targets experienced education professionals who want to earn a Ph.D. while continuing in their current positions. It blends face-to-face components and online components to complete the degree. During the summer, students complete two courses (6 credits) in a hybrid format (some face-to-face and some online). During the fall and spring semesters, students complete one fully online course.

The program utilizes the cohort model. During summer semesters, students within the same cohort travel to campus for two weeks of intensive face-to-face instruction in courses required for the degree. This instruction consists of 6-8 hours in the classroom each day of the week. This is supplemented with between 4-8 weeks of online instruction generally after the two weeks on campus, but in some instances (depending on the instructor and course), some online instruction happens before the on-campus time. During the fall and spring semesters, students take one course of their choosing. At least two courses are available in the online format, and in some semesters as many as four courses are available. This is dependent upon whether instructors are able to offer their courses either entirely online or are able to offer an online option to their face-to-face courses.

Key Design Considerations

We faced a number of challenges in the design of the program, specifically around the consistency of the hybrid program with our face-to-face program, and how we chose to combine technology, pedagogy, and content (Mishra & Koehler, 2006). We had to consider how to integrate content across multiple modes of delivery (face-to-face, online, hybrid) and with existing program structures. We also had to address how to use technology to support the functions of a doctoral program in innovative ways. For instance, we wanted to avoid a situation in which the hybrid program became synonymous with telecommuting to class.

Beyond these overarching design principles, the following specific design considerations were important to the current makeup of the program:

- *Targeting Working Professionals* – Our experiences in talking to potential doctoral students had shown that many highly experienced and qualified students were interested in the program, but ultimately decided against applying because of the potential impact upon their careers and personal lives. We understood that a doctoral program targeted to working professionals could be very successful.

- *Loading up on Summer Time* – Our experience in teaching a masters program for working teachers informed the structure of the hybrid doctoral program. Teachers, in our experience, were willing to complete courses in spring and fall semesters, so long as most of the work could get accomplished in the summer. As such, this was the starting point for the design of the hybrid doctoral program.

- *Hybrid, not Online* – Long faculty deliberations led to a collective agreement that we could do a quality *hybrid* doctoral program, but not a quality *online* doctoral program. Although much of what we do could be moved online, there were some essential pieces of the doctoral education process that required face-to-face interaction. This includes key advisor-student interactions, student-student interactions, and students' participation in a community. Faculty felt that an online-only format would greatly diminish the quality of these key interactions.

- *Cohort Model* – Based upon our experiences in the masters program, we thought the hybrid program was best designed as a cohort model. That is, students would derive great benefits from interacting and working with one another repeatedly, especially early in the program. As such, students take the same courses together each summer, and for the first fall and spring semesters. Later in the program, they take elective courses as students' course of study becomes more individualized.

- *5-Year Program* – We initially designed the doctorate as a 4-year program. We did this by having students complete 3 courses each summer for 3 summers. Based upon feedback from the first cohort and from faculty teaching in the program, we re-designed the program to be a 5-year program. Students now complete 2 courses each summer for 4 summers (leaving 1.5 years to complete a dissertation).

Table 1. 2010 and 2012 Cohort descriptions

Cohort	Inquiries	Completed Applications	Students Admitted	Accepted Offers	Age Range of Students	Geographic Range of Students
2010	200+	30	14	14	28 - 49	5 states, 2 countries
2012	300	70	16	12	29 - 48	7 states

- *Program Rigor* – We understood as a faculty that a hybrid program would have to be designed somewhat differently than the face-to-face program. The faculty, however, were not willing to compromise the rigor of the program in any way. The hybrid doctoral program is a change in format only--all the degree requirements (preliminary exam, research practicum, comprehensive exams, dissertation) are identical for students in both the hybrid and face-to-face programs.

- *Online, Not Asynchronous* – It is important to note that while aspects of the program have moved online, they are not all asynchronous. For example, many (not all) of the online courses require students to attend synchronous course meetings via Go2Meeting, Skype or some other technology. In designing their courses, instructors decide on best pedagogical practices and for many instructors these practices have been best supported through synchronous interactions.

Impact of the Design on Admissions

The program was launched in 2010 with a commitment to admit a new cohort every other year. The 2010 cohort was admitted in May and began classes in June. The second cohort began classes in June, 2012. Table 1 presents key information about the applicants and eventual students in the program.

A comparison of the 14 students admitted to the first cohort to students in the face-face-program on such measures as Graduate Record Examination (GRE) scores, graduate degrees and grade point averages showed them to be fully comparable. Interestingly, these 14 students turn out to be far more "qualified" if one takes as a valid metric the number of years of experience teaching and working in educational contexts. The students had a combined total of 141 years of teaching experience, for an average of approximately 10 years.

In contrast, many (but not all) students entering the on-campus Ph.D. have only a few years of teaching experience, if any. This is not to undervalue what they bring to their studies, but only to suggest that experience in schools is one aspect of qualification for graduate study.

It is clear, based both on the high level of interest and high quality of the applicants to the hybrid-version of the program, that there exists an unmet demand for access to a Ph.D. by educators who wish to maintain their careers while acquiring a Ph.D.

Experience of the Students

Students in the program have been highly supportive of the program. Of the 26 students admitted to the program, only one has dropped out of the program and one has transferred to the face-to-face program. This is far less attrition than is typically seen in our face-to-face cohorts.

For the most part, students' reactions to the hybrid doctoral program have been typical of responses to any doctoral program. They are initially surprised by the amount of reading, writing and thinking involved in Ph.D. program; they are challenged by notions of what it means to "do research"; initially struggle to define and redefine their research interests; and generally struggle with the transition from undergraduate and masters study to that of doctoral study. This seems to be no different than what students in the face-to-face program experience.

Speaking to the more unique aspects of the program, students who have joined the program have sought to enrich their understanding of practice. One student in the hybrid program wrote:

"I've been teaching long enough to understand pedagogy, but what I wanted to learn more about was how research could inform my practice and how maybe how I could add to the knowledge base as both a researcher and

practitioner myself... I have questions about what goes on in my classroom, questions that can be answered through conversing regularly with experts in the field ... When I inquired into other doctoral programs, they all told me I'd have to leave my classroom and go to their university. That didn't work for me."

This anecdote reflects the initial recognition of the faculty that a hybrid program was needed in order to support such students. Students, however, have had varied success in connecting research training to their established practice. As one student wrote, "At the best of times, my doctoral studies inform my practice and vice versa." This was initially difficult for every student, but as they have progressed through the program, connections between theory and practice have become more evident to students.

Distance learning has not been as big an issue for students as it has been, perhaps, for program faculty. Students have been very patient and understanding as instructors have designed (different) models of instruction to teach students in the online portion of the program. "For most courses, the distance thing works very well," wrote one student. "We read research and discuss it either asynchronously or synchronously using video chats or text-based discussion forums. A lot of that is just as good from a distance."

Not everything has functioned equally well online. The same student noted that some of the instruction could use more dynamic tools, like modeling software, to get instructional points across. "I'd like to see the professor play with variables and see how that effects a model. Computer generated modeling seems like a way to bridge the face-to-face/hybrid gap in interaction a bit." The investment the students have in making the hybrid program exceptional is reflected in their eagerness to offer their expertise and suggestions as to best practices in the program.

Students have also been understanding about and engaged with, the continual redesign of the program. We have built the program iteratively, changing and refining as we have gained experience, and students have been instrumental in this process. One student wrote:

As a classroom teacher who deals with the changing landscape of integrating technology into the language arts and media classes I teach, I ask my students to adapt all the time. You can't study and teach ed. tech. and not be willing to experiment with the affordances and constraints of new apps and tools. I never expected that the program wouldn't change as we went through it, as a matter of fact I'd be disappointed if it didn't. Adaptability and flexibility are core features of teaching and learning today.

This adaptability has been noted by the students and faculty alike and has been a boon to the running of the program. In summary, students have been effective partners in the design process. Coming to the program as expert practitioners, they have embraced their role as budding researchers, even as they struggle at times with this new identity.

Programmatic Challenges and Opportunities

So far, the program has been an overwhelming success. We have built a program that has attracted high-quality students, redesigned the program to better fit our students and faculty and achieved a program that has been well received by students. There are, however, some programmatic challenges and opportunities that present themselves as the program moves forward. We explore each of these below.

The Same and not the Same

A major challenge in designing the hybrid doctorate has been finding ways to deliver the same, highly ranked, rigorous program already in place at MSU, while changing the fundamental modes of delivery. This goal has meant a commitment to maintaining the same degree requirements for both branches of the program (face-to-face and hybrid), including the same requirements for program milestones such as coursework, preliminary exams, research practicum, comprehensive exams and dissertation. What has changed, however, is how we deliver instruction in the hybrid program and how students in the hybrid program interact with other students, faculty and other scholars at Michigan State University.

Redesigning Doctoral Coursework to Become Hybrid

How we deliver instruction in the hybrid program has meant two main changes. First, students complete much of their required coursework in the summer in order to take advantage of educators' increased availability during summer months. Moving a significant portion of the core instruction to the summer months has presented a number of challenges, including finding the model that makes the best use of students' time in both the face-to-face sessions and the online portions of the courses; the "sweet spot" in terms of how much work can get done during

a summer session; and staffing all the new summer courses with program faculty.

Second, moving courses to the hybrid format has occurred during the fall and spring semesters, when students in the hybrid program complete coursework entirely online. These design challenges include: how to move doctoral instruction "online;" how to design courses that work for face-to-face and online students simultaneously in the same class; and how to foster communication across the two groups of students.

The design of hybrid instruction has also presented the doctoral faculty with opportunities. First and foremost, this activity has re-invigorated attention to the design of courses. As evidence of this increased attention, two courses designed for the hybrid program have won the MSU AT&T Best Course awards (one for best blended course, the other for best online course).

Designing the New Student Experience

One of the great challenges of an effective hybrid or online doctoral program is how to facilitate students' experience and engagement in a program that extends beyond particular courses and one's own doctoral committee. It has been a challenge and opportunity to consider how to design the student experience in this new hybrid doctoral program. This includes thinking about how to foster interaction between students, between students and faculty and between students and the larger MSU community.

It is expected (though how common it is far from clear) that face-to-face students have relatively frequent and convenient opportunities to have lunch with other students, to run into a faculty member in the hall or to encounter fellow scholars in a talk on campus. Remote students do not have as such easy access to these opportunities. Accordingly, other strategies need to be employed to ensure that this vital part of a doctoral education occurs.

Quick Cycles of Design and Refinement

Building the first hybrid doctoral program in educational technology has meant the faculty had to make a number of design decisions that were not guided by previous experience. As such, the faculty has been "building the airplane as we fly it" so to speak. This has required a commitment to quick cycles of program design and refinement. As program data and feedback comes available, we have to design, and even redesign, the program to make it work for both students and faculty.

One example of this commitment of design and redesign was our initial 4-year design of the program. Based upon faculty and student feedback that three courses during the summer were "just too much," the program was re-designed to a 5-year program (two courses each summer). This meant a realignment of all the coursework in every semester, as well as a realignment of all the program milestones. Nonetheless, it is quite clear that anything less than a full commitment and willingness to quick cycles of design could prove quite costly and perhaps fatal, to the program.

Faculty Participation

The design of the hybrid program requires faculty willing to teach during the summer. By the time students complete their program, they will have taken eight doctoral courses during the summer. Finding faculty willing to give up their summers to teach in a new format can be a staffing challenge.

During the fall and spring semesters, faculty members have to be willing to design their traditionally face-to-face courses to allow online participation. At MSU we began with a few faculty willing to do so. Now about half of the program faculty has taught a course in this mixed-format and hopefully this will continue to grow.

Finally, faculty members have to be willing to participate in online meetings with their advisees instead of the traditional sit-down meeting. Many of these meetings happen outside the traditional 9am-5pm timeslots since students in the hybrid program have full-time jobs. Some faculty, for example, have found it more challenging to stay connected to their hybrid advisees than their face-to-face advisees.

Strengthening our Face-to-Face Program with our Hybrid Program

The advent of the hybrid program has strengthened our face-to-face program. Like many face-to-face programs across the countries, applications and admissions to our face-to-face program have gradually declined since the late 1990s. Adding the hybrid program has brought a wealth of new students, invigorating the program.

These new students have allowed us to offer courses that were becoming difficult to offer because there wasn't enough enrollment to justify teaching low-enrollment courses. This even included core courses required for degree completion.

The hybrid program has also financially strengthened our face-to-face program. Whereas students in the face-to-face program are typi-

cally supported with a graduate assistantship that includes free tuition, students in the hybrid program pay for their course credits as they are financially secure in enough in their careers to do so. This has allowed the program to add students without additional program costs, while shoring up the face-to-face program.

Meeting Challenges and Opportunities

Two examples highlight our attempts to confront these challenges and opportunities head on in the following sections. An elaborated example, Dr. Roseth's design of a blended (mix of online and face-to-face) doctoral course about motivation, is featured elsewhere in this issue as its own article. We highly recommend that article as an in-depth example of how doctoral coursework can be re-designed to become hybrid and how a hybrid program can strengthen a face-to-face program.

Re-Designing the First Doctoral Courses

Two courses students in the face-to-face program take in their first semester are *Proseminar* and *Introduction to Inquiry*. In designing the hybrid doctoral program, we chose to also make these the first two courses students encounter in the program. Students begin these courses with two weeks of intensive face-to-face instruction, followed by six weeks online to finish the courses. During the two weeks face-to-face, students typically come to live on or near campus and attend class for 6-hours a day, five days a week. This model was adapted from our experiences in designing our summer curriculum in the masters program.

In re-designing these courses for a hybrid format, many key design challenges become front and fore. Academically, these courses have to develop disciplinary fluency, introduce students to research methodology and make visible the academic work that they will pursue over their remaining years in the program, among other

concerns. The courses also have to help enculturate students to a discipline, faculty, a program and a cohort of students. Within this framework, the challenge becomes how to best use face-to-face time and how to best use online time to accomplish these goals.

In a sense, the challenge of building the new student experience begins on day one. As designers, we decided that the face-to-face time would be invaluable for beginning the process of community building and developing the habits of doctoral student life that would serve them well in the years to come. The online weeks would be better spent focusing on academic concerns (disciplinary knowledge) and reinforcing already established community norms.

One example assignment highlights how we both re-designed parts of the curriculum as well as designed the student experience for the hybrid format. A standard assignment in our *Proseminar* course has been the research article critique. Students learn to read, analyze and critique research articles (a new genre for most new students). This is often a process of establishing the ability to understand conceptual frameworks, theoretical entailments, research design, research methodology, as well as developing discipline-specific language, nuances of discipline-specific communication and discipline-specific rules of evidence—all at the same time.

In the hybrid approach to these article critiques, we used our face-to-face time to write three article critiques of increasing complexity. The first article critique asked students to work together to view past article critiques in order to understand what makes for good (and less-good) article critiques. By working together students learned not only how to work cooperatively on a shared task, but to understand the great variation in opinion that comes from such a task. The second article critique asked students to work in pairs, over the course of several days, to write their first review (1500 word limit). This allowed them to share and develop

expertise needed to review the article without yet needing to do it alone. The third article critique required students to critique an article individually (1500 word limit) while they were still in the face-to-face segment of the course. This afforded them the opportunity to receive plenty of immediate and synchronous feedback from instructors and fellow students about their critiques before returning home and to the online portion of the class.

Later versions of the assignment were conducted asynchronously and individually. The fourth article critique had an 1800 word limit and the fifth article critique had a 2400 word limit. The purpose of these increasing limits was to gently scaffold students into the process of writing full-length reviews, as they developed their knowledge and expertise. Students, however, typically wanted much more space to complete their reviews.

What differentiates this approach in the hybrid program from that experienced by face-to-face students approach is the number of critiques (5 instead of 2), the scaffolding from group to individual and the increasing word count. Most importantly, these changes were designed to make use of the face-to-face time to develop students' ability to work within a community of scholars, on authentic tasks, with the goal of internalizing these skills so that students could do them individually later in the summer.

Attending Virtual Talks

One of the great values of a strong doctoral program is for students to be active participants in a local community of scholars. Developing scholars need to be engaged in ongoing interactions with other faculty and students during their studies, being exposed to and a part of rich conversations in a variety of contexts about a variety of topics.

In finding ways to engage hybrid students in these rich conversations, we have sought to make talks and round tables in the College of Education, as well as elsewhere at Michigan State University, available online,

both live and archived. This resource is available at http://edtalks.educ.msu.edu. We have collaborated with others in our college and our university to capture talks that would be of interest and then to make them available through this site.

When possible and appropriate, we are also enabling dialogue through the edtalks.educ.msu.edu site. For some of our live broadcasts, we have provided a back-channel chat or live audio and video to allow remote participants to ask questions or make comments during the session. And in the archived talks, we now allow for comments and questions on the page of the talk.

We are still in the process of determining who is making use of these resources, how often they are used and what the benefits are for those who use them. An ancillary benefit of these resources is their use by face to face students and others in the community who are unable to be present physically for these talks or who want access to them at a later time.

We are continuing to experiment with different ways to employ this resource as well as how to use new technologies as tools both for local and remote participants. It is our hope and expectation that we will discover ways to enrich the face-to-face community of scholars so that the necessity of helping remote students results in significant benefit for everyone.

Conclusion

In 2010, Michigan State University began offering the first hybrid Ph.D. in educational technology in order to attract high-quality experienced educational professionals to doctoral study. By all measures to date, the program has been an overwhelming success. Among our successes we count that we have received a high number of applications; we have admitted two cohorts of highly qualified students; we have experienced high retention rates; and we have successfully engaged students into the world of research.

Behind this success has been a deliberate process and deliberations about how technology, pedagogy and content (Mishra and Koehler, 2006) could be thoughtfully combined to create a hybrid doctoral program. In the hybrid program, what we teach, how we teach and where we teach all become again important design considerations. With these considerations in mind we have attempted to be conscious about we integrate technology across multiple modes of delivery. We very seriously consider not only how to use technology in innovative ways, but also how this iterative design process could be treated as scholarship in order to continuously improve what we do and how we do it.

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