

# Introduction to the Spotlight Issue: The Educational Technology Program at Michigan State University

By Punya Mishra, Laura Terry and Danah Henriksen, Michigan State University

**T**his Spotlight Issue focuses on the courses and programs currently offered in the nationally ranked Educational Psychology and Educational Technology (EPET) program at Michigan State University. Over the years the faculty at Michigan State have developed an innovative, forward-looking program that connects theory to practice and research to design, to develop the next generation of educational technology leaders as practitioners and researchers. The EPET program offers undergraduate courses for pre-service teachers, a Master's degree for practicing teachers, as well as a doctoral degree for those seeking to become researchers in the field. These programs are a direct response to the growing demand for educators who understand how technology is transforming the world of education, through their work in K12 schools, higher education institutions and research organizations. In brief, the Master's degree programs integrates technology, pedagogy and content through innovative assignments, projects and courses that are offered across multiple modes – including, online, face-to-face hybrid, and campus cohorts. In addition, around three years ago, the EPET program began to offer a hybrid Ph.D. degree (in addition to its preexisting regular Ph.D) aimed at individuals who seek to earn a research degree while continuing in their current positions. The goal, through all of this is to develop the next generation of practitioners and scholars, who understand the need to create, implement and sustain innovation both in practice and research.

These courses and programs are, by design, deeply grounded in the TPACK framework (AACTE, 2008; Mishra & Koehler, 2006) with the expectation that graduates of the programs will develop and demonstrate knowledge that is meaningful, complex, fluid and flexible, so as to meet the demands of current and future learning contexts. The program design is aimed at coherence and intellectual rigor at multiple levels, through multiple modes of delivery (face to face, online and hybrid). At one level, the programs are a set of individual courses, but at another they are a playground for instantiating Dewey's idea of an educative experience (Wong, Pugh, & The Dewey Ideas Group, 2001) and a model of knowledge that is deeply embedded in practice and design (Schon, 1983; Perkins, 1986; 1992). There is a sense of conceptual unity, and forward movement of ideas, anticipation and drama (Dewey, 1934).

## Organization of the Spotlight Issue

This issue is organized into six subsequent chapters. The first chapter (by Shaltry, Henriksen, Wu, & Dickson) describes the pre-service foundation we build, to emphasize learning new technologies as an essential perspective for teaching, particularly in view of the rapid and accelerating pace of technological change. The next three chapters focus on the Master's program—noting a progressive development of skills and thinking essential for innovative technology integration. The first of those chapters (by Hagerman, Keller and Spicer) highlights

the introductory set of courses in the Master's degree program, which balance tool-focused "how-to" learning with creative explorations of technology integration. The next chapter (by Terry, Mishra, Henriksen, Wolf, and Kereluik) details the second set of courses in the Master's program, which integrate learning and developmental theories through skillful technology use. The next chapter (by DeSchryver, Leahy, Koehler and Wolf) discusses the final set of courses in the Master's degree program, which emphasize the development of creativity, innovation and leadership. The final two chapters focus on the recently instituted hybrid doctoral program. The chapter (by Koehler, Zellner, Roseth, Dickson and Dickson) provides the context and design of this hybrid program, while the concluding chapter (by Roseth, Akcaoglu and Zellner) offers a research study of how computer supported collaborative learning occurs in a blended doctoral seminar.

It is important here is to note the manner in which these individual pieces work together to build a broader strategy and approach towards developing the next generation of education leaders, whether they are pre-service teachers, practicing teachers or educational researchers. This coherence can be seen in key themes that cut across all the chapters and the entire program.

## Key Themes

We identify four key themes that cut across our programs

### 1. *Learning by design:*

The best way to learn about educational technology, design, research and scholarship is by actually engaging in educational technology design, research, and scholarship (Papert and Harel, 1991). For our program, this means real-world engagement with tools, pedagogies and their relationship to content/domains. In our program, learning often happens through purposeful play. We do this by an approach we call "deep-play" (Koehler et. al., 2011). It is a creative process, seeking to construct new ways of see-

ing the world, and new approaches to using technology for innovative pedagogical solutions (see chapters in this issue by Terry, Mishra, Henriksen, Wolf, and Kereluik; and DeSchryver, Leahy, Koehler, and Wolf). As the chapters demonstrate, students across all three aspects of the program engage in discourse about their practice, and have opportunities to experiment and play with ideas, tools and subject matter—reflecting on their own learning. Students design a wide variety of media—from websites and movies to podcasts or graphic designs/visual displays. They create and implement lesson plans, and conduct action research—working individually and in groups under the guidance of faculty. Students in the hybrid Ph.D. program engage in research within their real-world work contexts such as: developing and testing whether middle school students in an technology rich innovative program actually develop better self-regulation skills (Mishra, Fahnoe, Henriksen, & The Deep-Play Research Group, 2013); or examining how different theoretical frameworks can lead to different analyses of online discussions in a high school language arts class.

### 2. *Multiple levels of conceptual integration across multiple modes of delivery*

Our programs are offered in multiple contexts and using multiple modalities. For example, our Master's program can be completed online, in a hybrid format (some time on campus in summer with other online experiences), or completely face-to-face (over summers in an off-campus international location). Despite these differences in modality, we have worked hard to ensure that all students receive the same course content (at the level of readings, assignments, and assessments). This is why none of the chapters that follow focus on any specific mode of delivery, but rather speak to how courses, assignments etc. are integrated across different delivery mechanisms. Of course there is an understanding that different media have different affordances—and

good instructional design requires sensitivity to the context of use. An example is the chapter by Roseth, Akcaoglu and Zellner on a course taught in the doctoral program that had students both face to face and online working together.

Conceptual integration also happens through thinking of the program as a progression—from the course aimed at pre-service students to the Master's courses and the hybrid Ph.D. Clearly students at each of these points have different backgrounds, skills and requirements and the program needs to be adaptive to these contextual factors. This can be best seen in the design of the MAET program, which is designed to build upon itself in a meaningful manner as students advance through it. The chapters that focus on our Master's courses (from Hagerman, Keller, and Spicer; Terry, Mishra, Henriksen, Wolf, and Kereluik; and finally DeSchryver, Leahy, Koehler and Wolf) provide detail and examples of this development of knowledge and skill-building, through the sequential logic of the Master's coursework, projects and innovative learning experiences.

### 3. *Innovative use of technology*

The EPET programs incorporate innovative uses of technology. That said, we are eclectic with the technologies we use—our goal is pragmatic rather than high-tech for the sake of being high-tech. Some faculty use the standard university-supported LMS (Angel) while others choose to develop their own course-websites using everything from GoogleSites to Wordpress. Increasingly our sites are being more mobile/tablet friendly as more and more of our students access course-content through these devices. We have incorporated a range of social media for community building in our teaching and outreach. These include the use of private Facebook groups (such as with the example given in the Shaltry, Henriksen, Wu, and Dickson chapter, for undergraduate students), and public groups for keeping connected with Master's alumni. The very idea of innovation – through creativity and repurposing, lies at the

heart of our Master's courses, as will be evident from the chapters. Several of our courses have won university wide competitions for excellence in technology integration (The MSU-AT&T Awards which recognize and encourage best practices in the use of technology for teaching and learning)

#### 4. *Scholarship for continual improvement*

We continually conduct research and evaluation of our programs—so that we can improve them over time. Though we strongly believe in our approach, we see all that we do as being a work in progress. We have some evidence of some relative success in our approach. For instance, a recent survey of all the Master's programs in the College of Education found that over 96% agreed that the program content was valuable to them; over 96% agreed or strongly agreed with the fact that there was no significant difference between the online and face to face courses in terms of quality; and over 85% stated that the program advanced them professionally. That said, the ever-changing landscape of technology, the evolving needs of our students, and turnover in faculty and graduate students means that we have to continually seek to test and evaluate whether or not our programs are working as intended. We do this by encouraging and supporting research on the scholarship of teaching by our faculty and graduate students. Thus, our programs are also sites for research that we present at conferences and seek to publish in journals to advance knowledge of the field. Some examples include: a Ph.D. dissertation that conducted a survey of our students and graduates of our Master's program (Wolf, 2011); a study of the development of TPACK of our Master's students (Kereluik, Mishra, & Koehler, 2010); a symposium at the SITE conference in 2012 on our Master's program (Mishra, Kereluik, & Terry, 2012); a book chapter on thematic considerations on integrating TPACK in a graduate program (Mishra, Koehler, Zellner, & Kereluik, 2012); a journal article on the deep-

play approach to curriculum development (Koehler, et. al., 2011); and the last chapter by Roseth, Akcaoglu and Zellner in this issue.

## Conclusion

In summation, we hope that this Spotlight Issue will be the basis of further conversation and reflective thought by practitioners in the field of educational technology. We do not claim that what we are doing is perfect but we do believe that we have some ideas that can be useful to others at they think about the role of technology in teaching and the preparation of teachers and researchers for the future.

*Punya Mishra is professor of Educational Psychology and Educational Technology at the College of Education at Michigan State University, where he also co-directs the Master's Program in Educational Technology. His scholarly interests include technology integration in teaching and learning, creativity and design. He can be found at <http://punyamishra.com>*

*Laura Terry is a doctoral candidate in the Educational Psychology and Educational Technology Program at the College of Education at Michigan State University. Her research interests include issues of academic motivation for student-athletes as well as factors affecting urban classroom teachers' integration of technology. She can be found at <http://laurajterry.com>.*

*Danah Henriksen is a visiting assistant professor in the Master's of Educational Technology Program in the College of Education at Michigan State University. She teaches on varied topics in the areas of educational psychology and technology, and her research interests include creative thinking across disciplines, creativity among exceptional teachers, and new media for learning.*

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