

Foreword

by *Punya Mishra*

As a Professor of Educational Technology and one who teaches and conducts research on online learning environments, I am often asked, “Can online learning be as good as face to face learning?” The assumption here, of course, is that face to face learning is the “gold standard” against which we must measure every technologically mediated pedagogical innovation. For instance, an article in the *New York Times* about the rise of online learning due to higher gas prices included a series of quotes from students that implied that they perceived learning online as being inferior to the “real thing.” One student said, “I don’t feel I get as much out of an online class as a campus course... but I couldn’t afford any other decision.” I also remember a higher-education delegation from Pakistan I met a few months ago – where the inferiority of online learning was just taken as a matter of fact.

There are multiple responses to the question of whether online learning is as good as face to face. My quick response is that the data we have seem to indicate that there is indeed not much difference between student performance in online and face to face contexts. I could argue that we, as a species, are averse to change – and often feel threatened when we are asked to do things in new or different ways. I could also argue that some online learning is mediocre but so are many face to face classes (a special case of science-fiction writer Theodore Sturgeon’s eponymous law: Ninety percent of everything is crap). With experience and time, however, I have come up with a response that I feel might be productive i.e. moves the conversation away from simple comparisons of face to face vs. online towards a more thoughtful discussion of the strengths and weaknesses (what as an academic one would call the “affordances and constraints”) of each.

I, therefore, respond to a question such as “can online learning be as good as face to face learning?” by flipping it around and asking “can face to face learning be as good as online learning?” I then follow that up with examples of sound, effective, creative pedagogical moves one can make in online contexts that would be difficult or maybe even impossible in face to face contexts. For example, consider how technology can afford new forms of pedagogy in the case of Moodle’s (courseware) method of structuring online conversations. One option, called a “Q and A forum” requires students to post before they can see any other postings. Using this type of discussion, different pedagogies are afforded than are traditionally unavailable. Of course, this can help instructors avoid the “me too” phenomena or the various forms of the “I agree” posting. The authors have used it to have students share their ideas of how a computer does a “magic” trick – in this activity, it is important for students to think about (and post) their ideas, and not simply provide answers by reading other students’ posts. Ideally, pedagogy could be advanced in any instance in which teachers want to ensure that students share their own unique perspectives, free from the influence of prior responses. For example, brainstorming sessions require ideas to flow freely, instead of following the first few (or most vocal) ideas. Additionally, some activities require conversations wherein different interpretations of an event or material are important.

The point here is that pedagogical decisions do not exist in a vacuum. They are intimately constrained by the content to be covered and the technology being used (once again face to face classrooms with their use of whiteboards and over-head-projectors and papers and pencil are hardly devoid to technology). I have written (mostly with my colleague Matthew J. Koehler) about the TPACK framework. The Technological Pedagogical Content Knowledge (TPACK) framework attempts to identify the nature of knowledge required by teachers for instructional technology integration, while addressing the complex, multifaceted, and situated nature of teacher knowledge. At the heart of the TPACK framework is the complex interplay of three primary forms of knowledge: Content, Pedagogy, and Technology. The intelligent use of technology in teaching content requires understanding and negotiating the relationships between these three components of knowledge. A teacher capable of negotiating these relationships represents a form of expertise different from and greater than the knowledge of a disciplinary expert (say a mathematician or a historian), a technology expert (a computer scientist), and a pedagogical expert (an experienced educator). Effective technology integration for pedagogy around specific subject matter requires developing sensitivity to the dynamic (transactional) relationship among all three components.

The TPACK framework argues that the key issue of technology use is not whether one technology or the other is better per se but rather whether the technology is used appropriately for a given content and pedagogical style. There is a significant amount of research showing that teachers do not develop TPACK by themselves – but rather it has to be developed through carefully crafted curricula and professional development experiences. Thus the key to effective use of technology for teaching (whether face to face or online) is teacher development and teacher education. Research shows that moving to an online context requires more than merely shifting course materials online. It often requires completely over-hauling the content and pedagogical approaches to best fit this new medium. This is because, as I never tire of saying, good teaching lies at the intersection of content, technology, and pedagogy – and there is no one solution that would work for all contexts. Changing any one of the three forces would impact the remaining forces and consequently affect the right balance in attaining effective pedagogy.

This book *Virtual Mentoring for Teachers: Online Professional Development Practices* seeks to showcase a variety of research-based online professional development programs and best practice models that enhance effective teaching and learning. In my perspective, this book is a valuable addition to the literature on teacher professional development and mentorship, and will enhance our understanding of how new models of pedagogy need to be developed (along with re-visioned content) to best meet the potential of emerging ubiquitous and powerful technological tools.

Punya Mishra is Professor of Educational Technology at Michigan State University where he directs the Master of Arts in Educational Technology program. He has worked extensively in the area of technology integration in teacher education which led to the development (in collaboration with Dr. M. J. Koehler) of the Technological Pedagogical Content Knowledge (TPACK) framework, described as being “the most significant advancement in the area of technology integration in the past 25 years.” Dr. Mishra has received over \$4 million in grants, and published over 45 articles and book chapters, and edited two books. He is also an accomplished visual artist and poet.