



Teaching with Technology

By Stein Brunvand

Teacher preparation institutions have an obligation to develop teachers who, among other things, are competent in their respective subject matter, capable of creating a safe and productive learning environment and proficient in the effective integration of technology across a broad range of instructional settings. In particular, the preparation of teachers to effectively integrate technology is the primary focus of this article.

Before delving too deeply into this topic, it is important to understand the difference between “teaching technology” and “teaching *with* technology”. Teaching technology simply means helping someone learn how to use a particular piece of software or hardware. Admittedly, this can involve a high degree of complexity or be quite simplistic depending on the technology being taught. Teaching *with* technology, however, involves helping people

develop the pedagogical knowledge required to make informed decisions about what technology to use, and how to use it, based on variables such as the content being taught, the learning needs of the students and the overall objectives of the lesson being planned. It is in this realm of teaching *with* technology that teacher preparation institutions need to devote more time and attention in order to develop teachers that are competent in technology integration.

A common approach to preparing teachers to integrate technology involves requiring a stand-alone technology class. The content of these courses may vary, but they usually involve introducing students to a wide range of relevant technologies, instructional design concepts and theories as well as technology integration strategies. Unfortunately, the use of technology and integration strategies often does not extend beyond these stand-alone tech classes so students have a very limited scope of opportunities to observe faculty effectively teaching *with* technology. If the effective use of technology was modeled by instructors throughout the entirety of a teacher preparation program students would gain exposure to the relevant use of technology across a wide range of content areas and learning experiences. They would no longer be confined to simply being taught technology in a single tech class. Instead, they would have regular opportunities to experience first hand authentic and purposeful teaching *with* technology in each of their classes.

Of course, this all assumes that faculty within teacher preparation programs are knowledgeable and competent with regards to instructional design and the meaningful integration of technology in their teaching. Therefore, the first step these institutions need to take with regards to educating their students actually starts with educating their faculty. All instructors, whether part-time adjuncts or full-time faculty, need access to ongoing training and resources so they can learn about the different technologies available to use in their classes and develop the pedagogical proficiency to utilize those technologies in ways that enhance the learning experiences for their students. As instructors model authentic and effective technology integration in their classes, they can also engage students in discourse about the instructional design of a given lesson. This would allow students access to the process each instructor went through when making decisions about what technology to use and how to use it. This in turn would help them develop a deeper understanding of the different variables that need to be considered when making instructional decisions.

Modeling high-quality instructional practices is one of the most effective ways teacher preparation institutions can prepare pre-service teachers to be digital educators. There needs to be a unified approach whereby faculty lead by example in teaching *with* technology across the curriculum. Otherwise, technology will continue to be something students only associate with the “tech” class.

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