

MYTHS AND DISTANCE EDUCATION

What the Research Says (And Does Not Say)

A myth is an invented story, and does not always begin with "Once upon a time." In any field, including distance education, there quickly emerge ideas and approaches that seem to gain a life of their own, even though there is little if any factual support for them. The myth of the media effect has been discussed for decades, making the rounds every time a new instructional technology is introduced. It implies that merely using media for instruction somehow has an impact on learning. This myth has been widely discussed and soundly rebuked (Clark, 1983). Three more myths about distance education deserve the same fate.

MYTH 1: FOR VIDEO-BASED DISTANCE EDUCATION, THE HIGHER THE FRAMES PER SECOND (FPS) THE BETTER

Let's call this one the "30 fps vs. the 10 fps myth" It is an easy guess where this myth originates—from hardware companies, mostly the sales staff. At the heart of this myth is the belief that full motion video which shows 30 images or frames per second (fps) is always the best. Television produces an image that the brain perceives as motion because 30 separate screens are displayed each second (actually

there are 60 half frames which when combined produce 30 complete images). Because of the phenomenon of persistence of vision, the eye cannot distinguish between images received at that speed so they blend together and the brain perceives motion.

This is where the 30 fps myth originates; emulating broadcast television is thought somehow to be good. It is easy to debunk this myth. First, the 30 fps rate is for NTSC video, the "American" standard. In Europe and most of the rest of the world where 50-cycle alternating current is the norm, the standard for full motion video is 25 fps. Second, the eye can only distinguish up to about 15 or 20 fps, so the 30 (or 25 fps) fps rate is more than what is needed. Finally, unless there is considerable change in the image being transmitted there is no need to display high frame rates. Fully 90% of teleconferences and video-based distance education involves transmission of still or nearly nonmoving images such as instructors' faces, still pictures, or PowerPoint slides, so a rate as low as 15 fps or even 10 fps is quite adequate.

The literature is quite clear; a video image broadcast rate of 15 fps is adequate 90% of the time. Specifically, compressed video systems that have a normal maximum rate of 15 fps cost much less than top-of-the-line systems with high speed connections (at 30 fps). Eco-

nominically, if the more expensive systems provide unneeded quality, they are not worth it. And, from a learning standpoint, the higher fps rates and more costly systems are not needed. Effective instruction and necessary learning have little if anything to do with the rate at which images are transmitted between instructional sites.

MYTH 2: THE MORE INTERACTION THERE IS IN A DISTANCE EDUCATION CLASS, THE BETTER

This myth could be referred to as the “Let’s make the students feel good about themselves and the course” myth. Interaction has become the clarion call for distance education designers everywhere.

This myth is also easy to trace to its roots. Early research on distance education demonstrated clearly that the *provision* for interaction was critical. In other words, some early forms of distance education were one-way, or had interaction that was so delayed that students had little if any feeling of involvement with their instructors. There is a need for students to be able to interact with their teacher, at least to ask questions.

It is at this point that the message about interaction became garbled. Instead of interaction being *needed and available*, many advocated that interaction was the “end all and be all” of learning. There was, and still is, a strong cohort of instructional designers that advocate interaction for the sake of interaction, at the expense of instruction. This is not supported by the literature. It is only necessary to look at a few research studies, such as Fulford and Zhang (1995) to discover that interaction is not a magic potion that miraculously improves distance learning. Interaction is important, and the potential for all involved in teaching and training to be able to confer is essential. However, the forcing of interaction can be as strong a detriment to effective learning and is its absence.

MYTH 3: INSTRUCTOR TRAINING IS REQUIRED FOR ANYONE PLANNING TO TEACH AT A DISTANCE

This myth probably comes from consultants and colleges of education. Naturally, the more training a person has, the more likely it is that they will learn, assuming education works. However, training in how to teach distant learners is only one of a collection of interrelated competencies needed by an effective teacher.

By far the most important competency of any teacher is content knowledge. Understanding of a subject and the ability to break the topic down into meaningful and manageable concepts is fundamental for any effective teacher. In some distance education systems, the course delivery specialist may not need to know much about content, notably the industrialized systems of Europe where an assembly-line approach and division of labor are typical, and where different people prepare courses and course content. In U.S. institutions, there frequently is only one person, the teacher, who is responsible for the entire process, from course design and course delivery, to course evaluation, and everything in between. Here, knowledge of content is essential.

The point here is not to belittle the importance of training for new teachers of distant learners. Rather, it is to refocus the argument. Every teacher needs training, and the skills needed to be effective in a distance education environment are more similar to than different from those needed by any teacher in a traditional setting.

These myths are not supported by the literature, have little if any empirical evidence to uphold them, and can lead to the wasting of resources and the impairment of learning. Well-intended trainers and designers who are attempting to improve the field, but who are not conducting or reviewing the research that guides practice often advocate these and other myths. The distinguishing characteristic of a

profession and a professional, according to Smith et al. (1951) is "that the skills involved are founded upon a body of intellectual theory and research" (p. 557). Campbell and Stanley (1963), in their landmark monograph said:

The experiment . . . is the only means for settling disputes regarding educational practice . . . is the only way of verifying educational improvements . . . is the only way of establishing a cumulative tradition in which improvements can be introduced without the danger of a faddish disregard of old wisdom in favor of inferior novelties. (p. 2)

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