TECHNOLOGY CLOSES *the* DISTANCE

GLOBAL SOLUTIONS SHOW THE VARIETY, EQUITY, AND ACCESSIBILITY OF DISTANCE LEARNING OPTIONS

By Mary Burns

The number of U.S. teachers participating in some form of distance education is on the rise, yet compared to many nations, distance-based professional learning is fairly new in the U.S. What are common elements of effective global distance education for teachers, and what lessons do they hold for those who design similar programs in the U.S.? Over the course of two years, Education Development Center researched distance-based teacher professional learning in nearly 100 countries. Here are five key elements and the larger lessons they hold for the U.S.

1. DIVERSE TECHNOLOGIES

In the U.S., distance education essentially means online learning. But internationally, distance education is a much broader term that encompasses a variety of technology-based models. (For examples, see chart on p. 30.)

Many Asian, African and Latin American teachers can observe other technology-based pedagogical models, not just online ones. Many teachers

across the globe can participate in more technologically differentiated learning programs than their American counterparts. And, depending on the model, many teachers participate in established and research-based forms of distance learning.

One example of a commonly used distance education technology is television. Television, especially instructional television — a highly structured version that blends visual information with narration, freeze frames, and discussion via two-way communication — has been a major form of teacher professional development in Brazil, Mexico, and China. China, which has the largest educational television network in the world, still uses broadcast and instructional television to engage millions of teachers in professional learning.

Why, in this Internet age, do nations like China still favor television for teacher learning? Television and other visual models of professional learning, such as video, are familiar and engaging media. They do not require technology training to use. They are versatile (programs can be broadcast live or prerecorded). They present conceptual information visually. They allow teachers to observe other teachers as they apply new practices and model the very behaviors teachers are supposed to implement. TV and video may not be new technologies, but they are proven technologies with a body of demonstrated effectiveness in teacher education that online learning still lacks (Wang, 2000).

2. PERSONALIZED LEARNING

Though web-based learning is supposed to be personalized and individualized, many teachers still end up in one-size-fits-all online courses. One effort to personalize teacher learning comes from Korea, where teachers can access Internet protocol TV, a blend of high-definition Internet TV, video or multimedia, mobile devices, and social media.

Teachers use smartphones to order playlists of professional learning content, which can be delivered to their TVs, gaming consoles, tablets, or smartphones. As part of this approach, teachers create personalized playlists of professional learning and education-related programming, view these at their own convenience, and engage in online, facilitated post-program discussions via their computers or cell phones.

3. CLASSROOM-BASED DELIVERY

In many poor and remote locations of the globe, where access to expertise and support is often lacking, technology provides teachers with just-in-time learning. Education Development Center projects in Indonesia have used two-way video to allow experienced teachers in one location to co-teach with a novice teacher in a remote location and to facilitate open classrooms — a professional learning model common in many parts of Asia in which novice teachers learn about teaching by observing a master teacher's classroom.

The most successful in-class distance learning model is an old

technology. Interactive audio instruction and its broadcast equivalent, interactive radio instruction, were developed at Stanford University in the 1970s. Interactive audio instruction has been used for decades in the Caribbean, Latin America, Asia, and Africa to provide in-class instruction to students and teachers via radio or CDs.

With interactive audio instruction, the audio teacher orally directs the classroom teacher through a progression of curriculum-based learning episodes based on measurable learning objectives. Instruction is directed primarily at students and secondarily at teachers.

This dual audience approach has proven to be highly effective in helping teachers implement learner-centered instruction or employ new innovations (for example, science kits) (Evans & Pier, 2008). Because this professional learning occurs during classroom instruction, it directly confronts the implementation gap that so often accompanies professional learning outside the classroom.

4. MOBILITY

In parts of the Middle East, Asia, and Africa, many teachers grapple with issues of geographic isolation, conflict, a lack of teaching materials, and a shortage of formal learning opportunities. To address such issues, a number of learning initiatives have capitalized on cell phones — a technology teachers own and know how to use — as a versatile conduit for resources, support, and instruction.

For instance, cell phones have been used to instruct teachers in Niger in the national language, French, via text messaging. In Indonesia, instructional coaches use cell phones in combination with video to provide live coaching and support to teachers in mountainous and remote locations.

In Mali and South Africa, teachers without access to teaching materials or curriculum have received both, along with instruction on their use, via cell phones. South African and Indonesian teachers can capitalize on high rates of cell phone ownership, nationwide cellular coverage, and the mobile phone platform Moodle Mobile to participate in online courses — an otherwise unavailable learning opportunity given uneven access to computers and the Internet. And new teachers in rural Zambia participate in weekly cell phone peer-support discussions with their colleagues and with their mentor.

5. SOCIAL MEDIA NETWORKS

Social networking now represents the dominant global pattern of Internet use, with one of every seven minutes online spent on Facebook (comScore, 2011). Use of social media continues to increase everywhere (including the U.S., which ranks 10th globally in social media use) (Media Measurement, 2012). In every region of the globe, women — who form the majority of the U.S. teaching force (NCES, 2011) — outstrip men in the use of social media (Abraham, Mörn, & Vollman, 2010).

Distance education models and examples

MODEL	EXAMPLES
Audio-based	• Interactive radio instruction (broadcasts). • Interactive radio instruction (narrowcasts). • Audio conferencing. • Two-way radio. • Broadcast radio. • Podcasting.
Televisual	• Broadcast TV (educational and instructional TV). • Video. • Videoconferencing.
Multimedia	• Interactive video (disk and tape). • CD-ROM. • DVD. • Interactive multimedia. • Computer-aided instruction. • Games.
Web-based	• Computer-mediated communication. • Online courses. • Virtual classes. • Webinars. • Webcasts. • Simulations.
Mobile	• Smartphones. • Cell phones. • Tablets. • MP3 players.

Source: Burns, 2011.

These social media trends have spurred a variety of responses. Singapore and Korea have responded by directly integrating social networking into their professional learning. For example, Singaporean teachers participate in online learning through the social networking site EdModo.

In Indonesia, Education Development Center shifted much online learning to social media applications such as VoiceThread, resulting in more sustained teacher participation. Though it is difficult to quantify, the real promise of so much social media use by teachers appears to be its organic and teacher-driven aspect, with teachers from the Philippines to Brazil seeking out and forming their own networks for tailored, convenient, collaborative, and free instruction and support.

Professional learning networks facilitated by social media offer valuable supports for professional learning. They complement and enhance face-to-face relationships, deepening existing relationships or "bonding ties" (Gittell & Vidal, 1998). Bonding ties often form the basis of communities of practice,

which in turn are instrumental in helping schools and teachers institutionalize new ideas and practice.

In addition, social networking allows teachers to benefit from "the strength of weak ties" (Granovetter, 1983). Novel or new information flows to individuals through weak, versus strong, ties. Since we move in the same circles as our peers, we tend to know the same information. But by interacting with new and more experienced peers, teachers can acquire new knowledge and skills from people with whom they would not normally come in contact.

LESSONS FOR THE U.S.

The real lessons for the U.S. speak less about technology and more about organizational beliefs and values regarding teacher learning and professional development.

These approaches demonstrate how technology can begin to build on and deliver the types of learning teachers say they want. Despite the diversity of our educational systems, teachers in a number of countries cite common weaknesses with the professional learning they receive: its lack of frequency and duration; a mismatch between the most common format (workshops/trainings) and the models teachers consider most effective (professional learning networks); a dearth of school-based professional learning; and participation by teachers with higher, versus lower, qualifications (OECD, 2008).

Without technology, addressing these weaknesses might be impossible for many districts because of the demands placed on existing professional learning staff. With technology, as these global examples show, teachers can participate in a greater variety of learning opportunities. Professional learning can be made more equitable, efficient, and targeted — for example, by leveraging expertise and coaching to help novice and at-risk teachers practice and hone their skills in classroom settings.

These global approaches also demonstrate a shift to teacher-centered professional learning, with activities that focus on teachers as learners. The technology approaches described here target learning that accommodates teachers' individual learning needs, styles, and professional realities. They use technology to furnish models of the practices and behaviors teachers are supposed to implement. They connect teachers, especially in isolated areas, to a community of professionals with whom they can collaborate and learn. They provide differentiated and personalized learning, and, above all, they bring the support of caring and skilled mentors and coaches directly to a teacher's classroom.

These approaches expand the possibilities of online learning, moving beyond what we often see in online programs: the talking-head webcast or the traditional text-based online course involving the teacher as a solo learner. Rather, these global approaches demonstrate that online learning can be multifaceted, involving theory, guided practice, interaction, and reflection, and provide learning that really is anytime, anyplace — even in the teacher's classroom, if desired.

These examples are a reminder that the most successful distance learning programs for teachers are defined, not by the technologies they use, but by the values they exemplify and the practices they embody. The best distance learning for teachers is content-focused, designed and evaluated based on a set of standards, and mirrors the same best practices used in face-to-face professional learning (Burns, 2011).

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