Our Technology Enhanced Learning Cycle for the Learning, Practice, and Assessment, of Medical Communication Skills

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For the last decade at the Drexel University College of Medicine (DUCOM), we have been developing and refining the on-line tools "DocCom", "WebOSCE", and "WebCEX", for the blended learning[1], practice, and assessment of medical communication skills[2]. When we added automated individualized learning assignments, our "learning cycle" started to turn round – allowing us to start developing competency based curricula for certain clinical skills.

DocCom: The eLearning resource DocCom is a collection of 42 media-rich on-line modules for the teaching and learning of the knowledge aspects of medical communication skills, and was produced jointly by DUCOM and the American Academy on Communication in Healthcare AACH.

Since its inception in 2008, DocCom has been promoted by the AACH as their main teaching tool. In Spring 2013, almost 10,000 active subscribers at more than 70 educational institutions in the US and Australia were using DocCom. Besides, a translation into Japanese language was completed in 2011, and translations into German and Portuguese are under way. At DUCOM, we use DocCom in a blended learning setting, in which we assign specific modules in preparation for clinical skills courses throughout the curriculum, and in the medicine residency program. In the preclinical courses, students meet with a faculty member and a 4th year student facilitator in small groups in which they have discussions before and after bedside teaching sessions. During the bedside teaching sessions, the students get to practice the learned skills under observation. See http://webcampus.drexelmed.edu/doccom/[1]

WebOSCE: At DUCOM, the 3rd year students rotate through 6 clerkships at 25 affiliated sites. At the end of that year, the students must pass a Clinical Skills Assessment (CSA), that consists of a 10-station Objective, Structured, Clinical Exam (OSCE). In the past, this CSA required many students to travel long distances to our main campus, and lost time that could have been spent seeing patients.

We developed the first version of a video-conferencing system "WebOSCE" to allow students in Pittsburgh to encounter standardized patients on-line in Philadelphia for the CSA. In 2005 the Internet became fast enough to allow live video chat, and web-cams became standard in laptop computers, so we developed "WebOSCE" into a system that runs on commercially available computers.

The "new" computer-based WebOSCE features two way video that is fully recorded and stored for later playback.

QR Barcode For this Hand-out:

After an encounter, SPs can guide the learner through a structured list with effective communication skills that ought to have been employed, and engage the student in a short discussion and validation of each point. As an important enhancement of the feedback, the SP can instantly play back relevant parts of the recording of the encounter to show the testees what they really did, and/or play back prepared video vignettes to illustrate best practices to the learner. Last but not least, we use the assessment data to auto generate learning assignments and send them to the testee when the encounter is over.

In 2011, WebOSCE encounters became a mandatory learning experience for all our clerkship students at all our clinical sites! See http://webosce.net[2]

WebCEX: In collaboration with Anthony Donato from the Reading Hospital in West Reading, PA, we developed an online tool that features a checklist for the objective assessment of interns and residents through observation.

Dr. Donato's proposed linking each checklist item to an online learning resource. This allowed us to program the tool in a way that it produced not only an assessment report, but also auto create ssignments to study online learning resources targeted to remediate the deficiencies that were found[3]. When we included this feature into "WebOSCE", we began work on building a system for the certification of clinical competencies.
See http://webcampus.drexelmed.edu/WebCEX/description.htm

Literature references
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3. Donato AA. et al. (2008) Evaluation of a novel assessment form for observing medical residents: a randomized, controlled trial. Medical Education Vol. 42 Issue 12, pp. 1234 – 1242