Technology and Pedagogy: Where the Twain Shall Meet?

Date: Monday, October 17, 2016

Time: 1:45 – 4:00

Location: Rotunda, Joseph Martin Conference Center

Faculty: Neil Mehta, M.D.

Session Abstract: Several factors impact what and how an educator designs a lesson or a course. Some of these are:

- What the learner already knows about a topic.
- What part of the lesson/course consists of facts that learner needs be able to recall on many occasions and what part is conceptual knowledge that the learner needs to develop so they can build upon in future. Are the learners aware of this?
- Is the content in appropriate form already available (in books, online) to students (from a single or multiple sources) or do you need to create the content from scratch?
- Is the content area being constantly updated (genomics) vs. relatively static (musculo-skeletal anatomy)?
- Is it possible to have a hybrid (flipped classroom) model, how flexible are the seating arrangements in the classroom?

Based on answers to these questions, an educator has a choice of pedagogic techniques and technologies that can help enhance the learning process and/or make it more efficient.

Using examples and hands-on group exercises, we will develop a framework of strategies for designing learning with appropriate use of technology. We will then review some tools that one can use to implement this framework.

Preparation: Please think about the above questions as they apply to your project

- How would you design the lesson plan to ensure students can memorize critical facts that will be essential for future learning and practice?
- How would you design a lesson plan that helps students construct conceptual frameworks which they will build up and evolve?
- Consider an example of a lesson on hypertension management with medications. Do this exercise on Office Mix https://mix.office.com/watch/10gkbgcqfyksg (please view on a desktop or laptop. A mobile device will not allow you to use all the features).This was created using a pre-existing YoutTube Video https://www.youtube.com/watch?v=1uV1VhWP4QE (do not need to view this video if you do the OfficeMix exercise). We will discuss this exercise during the session.

Required Reading:

- Educational Origami (on WikiSpaces) http://edorigami.wikispaces.com/Bloom%27s+Digital+Taxonomy
  - A simple review of Bloom's Taxonomy and the 2001 Revision.
  - An attempt to align digital technology to the taxonomy
  - Quick Sheet of the Digital Taxonomy tools - http://edorigami.wikispaces.com/file/view/Bloom%27s%20quicksheets.pdf/296456574/Bloom%27s%20quicksheets.pdf

- H.L. Roediger III, M.A. Pyc / Journal of Applied Research in Memory and Cognition 1 (2012) 242–248 available at https://blogs.denison.edu/facultynewsletter/files/2012/11/Roediger-Pyc-2012-Inexpensive-techniques-to-improve-education-Applying-cognitive-psychology-to-enhance-educational-practice.pdf (just the first 1.5 pages)

Reference

- Gagne, R.M., Wager, W.W., Golas, K.G. & Keller, J.M. (2005). Principles of instructional design. Toronto, ON: Thomson Wadsworth