

University of Michigan Provost's Teaching Innovation Prize

2013 WINNER



Michael Hortsch
Associate Professor
Cell and Developmental Biology
Medical School
hortsch@umich.edu

Dr. Hortsch appreciates the collaboration with and technical contribution by Laurence Kirchmeier, Office of Enabling Technologies.

Sponsors:

Office of the Provost

Center for Research on Learning and Teaching (CRLT)

University Libraries



SecondLook (or if Socrates taught with an iPad): Helping Students Evaluate Their Learning

Innovation Description

SecondLook is a study aid that lets learners self-test their ability to recognize visual structures and interpret their significance. Originally developed in PowerPoint and disseminated via a Medical School website, the resource became available through the iTunes Store in November 2012. Over the first three months it was downloaded 1,438 times across 74 different countries.

This teaching innovation is particularly relevant to any discipline that introduces students to daunting amounts of visual material. For example, studying the microscopic structure of tissues constitutes an entirely new visual terrain for many first-year medical and dentistry students. Several features of the SecondLook iPad app make the resource an especially useful guide for navigating this unfamiliar landscape.

The instructor organizes a vast sea of new visual information and makes it more manageable by restricting the slide deck for each anatomical system to 12-30 images. There is no extraneous material to distract students.

Arrows and other markings direct learners' attention to key features. This kind of scaffolding and modeling cultivates their vision so that they begin to see what a histologist sees.

The ease of access afforded by highly portable tablets means that users can conveniently spread their practice over multiple shorter sessions. This approach tends to result in better retention than massing practice in a single, longer session.

Student Comments

"In a class [where] many students have little to no prior experience, SecondLook allowed us the practice needed to master the difficult material."

"We could quiz ourselves by clicking through the slides... We had to think of the answer (recall)," but actual exam questions were multiple choice (recognition). "So when I mastered the SecondLook slides, I knew I would succeed on the exams."

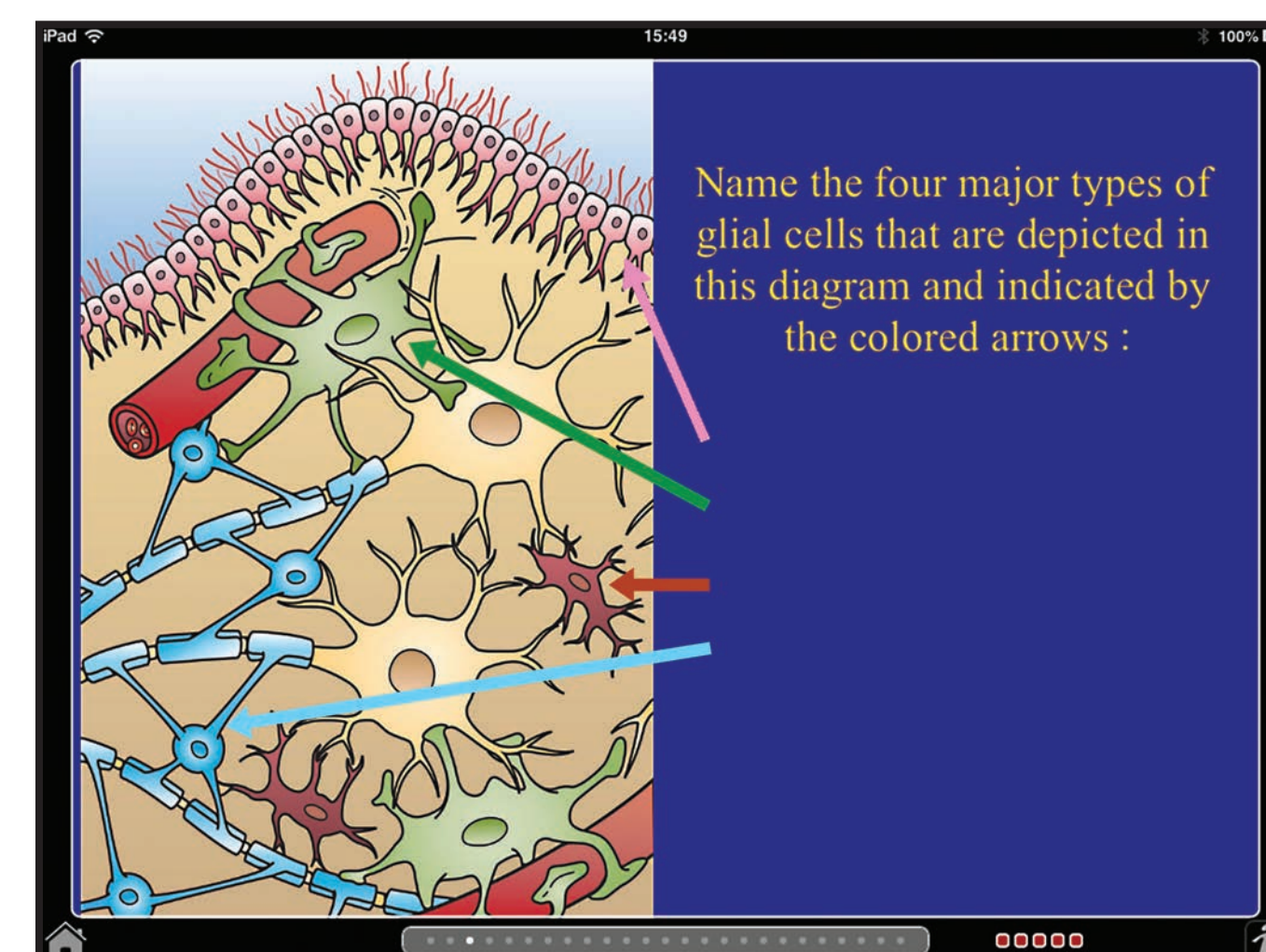
"SecondLook is one of the most valuable teaching tools that I have encountered in medical school. I have not encountered a single classmate who does not use this resource before taking the exam."

"In dental school, I have found that flashcards and study guides are crucial to retain knowledge, yet we often lack the time to create these resources. SecondLook gave us the required material in an effective, ready-to-use format."

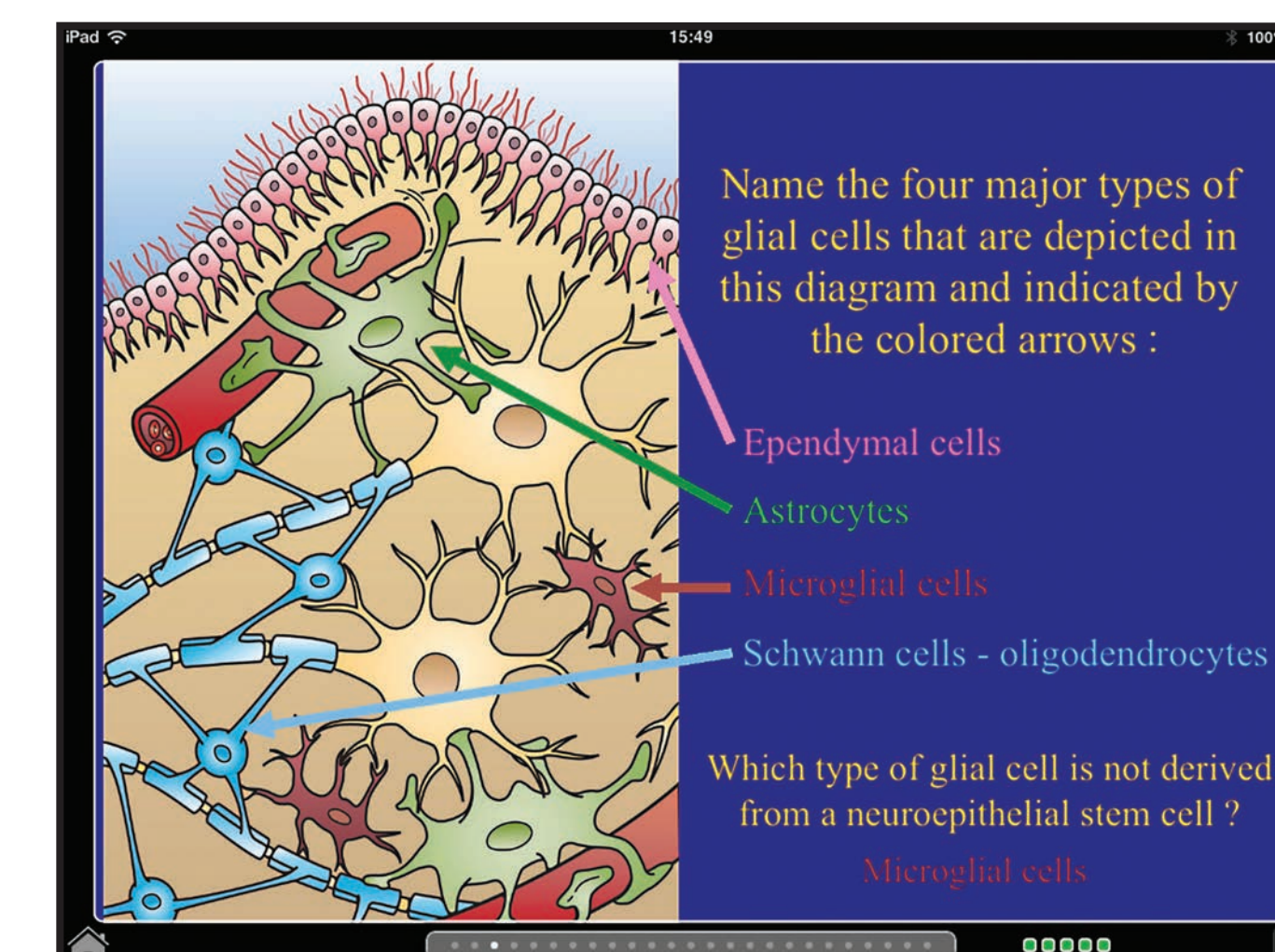
"I wish every class had SecondLook."

"Helps students to understand the importance of active studying and self-testing to make broader connections and to recognize patterns within the material—a skill which carries over into all disciplines."

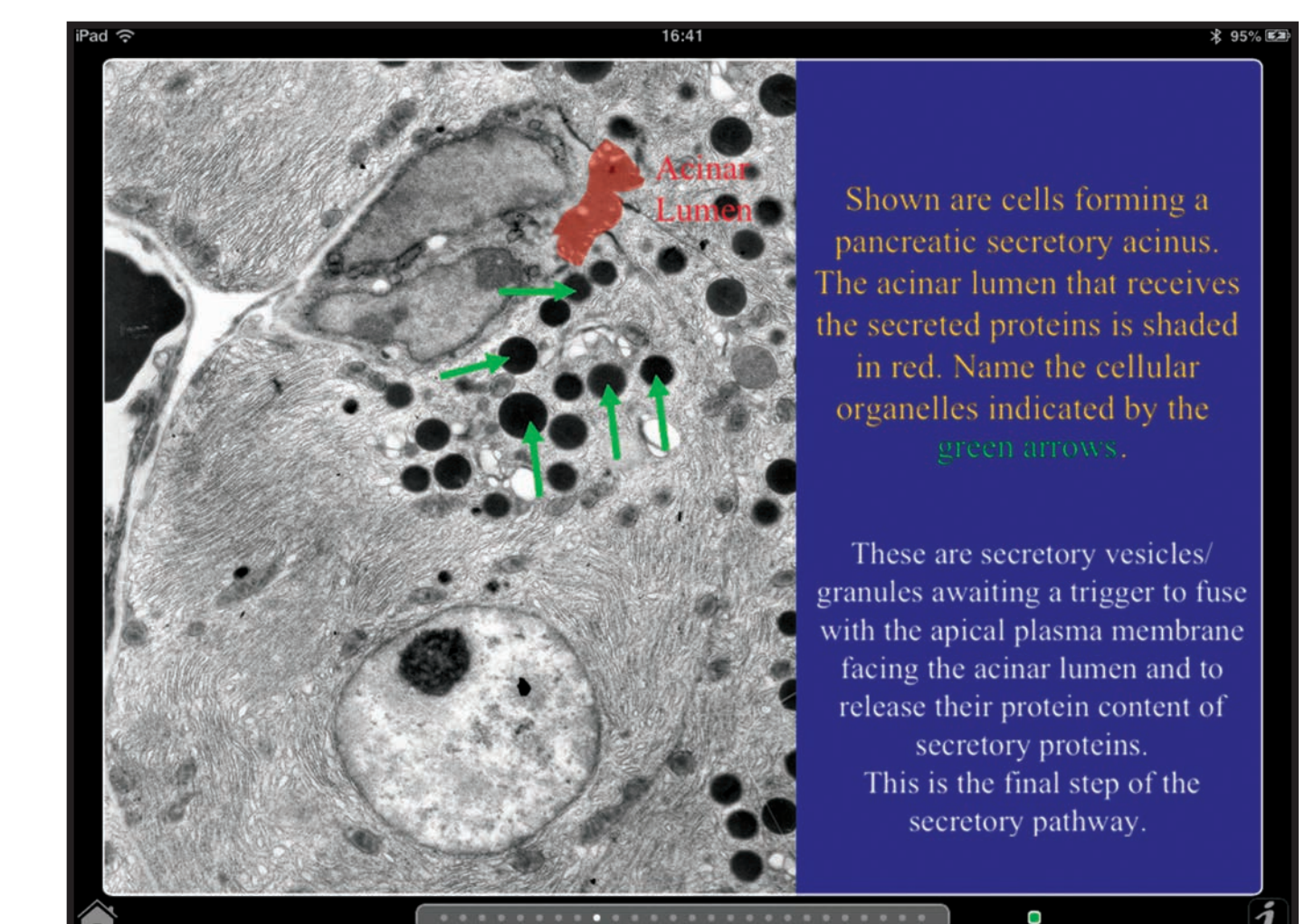
Examples of Teaching Innovation



High-resolution images and detailed medical illustrations test important histological concepts by posing questions that require higher order thinking about function and organization.



An animation effect reveals answers and additional questions; control over the interval gives users time to practice retrieving answers. Repeated retrieval enhances long-term retention.



The slides in the eHistology SecondLook application include high quality images from the University of Michigan Medical School's Histology and Virtual Microscopy collection.