Interactive Learning Assessment: Simulating Professional Practices

Elizabeth Yakes, PhD, RD
Andrea Cantarero
Tabitha McKay
Vanessa Svihla, PhD
Tim Castillo, MArch
Isaac Valdez
Justin Hertel

The authors would like to acknowledge funding from a UNM Teaching Allocation Grant (#734059) and from the USDA/NIFA Hispanic-Serving Institutions (HSI) Education Grants Program (#2012-38422-19836).
The Project

• Build online case studies that allow students to try the role of a registered dietitian (Nutrition Care Process)

• Build a case authoring system that can be used by STEM-H instructors at high schools, community colleges and universities

• Overarching goal: recruit and retain a diverse group of students who have the skills required to be excellent in a professional STEM-H career
Why have students try professional practice?

*Insights from previous research*

Students who don’t know what the professional practice is like tend to not persist (Stevens, O’Connor, Garrison, Jocuns, & Amos, 2008)

ILA allows students to learn content while making connections to their professional future selves (Svihla, Vye, Brown, Phillips, Gawel, & Bransford, 2009)

Students struggle to apply schoolish knowledge to real world practices (Detterman & Sternberg, 1996)

[The] approach prepares students to learn content and practices – *even those that may not yet exist* (Bransford & Schwartz, 1999)
Changing the way we do undergraduate instruction in nutrition

Recruitment and retention of a more diverse group of students into the profession
• Helping students to see the “human” side of the profession

Academy of Nutrition and Dietetics Visioning Report
• Creation of bachelor-level credential
• Need for authentic experiences at the undergraduate level

The rise of online learning
• How do we create meaningful experiences for students in online courses?
Instructional Advantages

• Allows students to work at their own pace
• Provides professional perspective (“supervisor”)
• More compelling than a “flat” case study because of interactive elements (passive → active learner)
• Introduces the idea of complexity in clinical practice in a structured (scaffolded) way
• Builds lifetime learning skills – how do I find the information I need?
Pilot ILA

“It was more interesting than a power point lecture…”

“I liked that the case study reassured us of our answers and made us feel like there were no right or wrong answers. This helped me to really think about the questions instead of focusing on whether or not I would get full credit for being right.”

“I liked that I had to think about my responses but then after I submitted my responses I got to see how the instructor interpreted the data (as she has more experience than I do in dietetics). There was a lot of information provided but it was a nice way to learn because I was actually interacting with the information instead of just hearing it.”
What I learned in this case will be important for my future occupational success.
Future Directions
Building an intuitive authoring system

Case Study Designer

Components
- HTML Notice
- Multiple Answer
- Multiple Choice
- Short Answer

Help
You can begin to build a case study by selecting the type of component that you would like to add. Drag and drop the component you want from the right menu onto a page in the workspace area.

You can rearrange the order of components within a case study by grabbing its title bar and dragging it to the desired position. Components on the page will move out of the way to let you know where it will be placed. You can even drag components from one page to another.

You can also remove a component from the case study by dragging it from the workspace and dropping it into the trash can at the bottom right corner of the program.

Delete Component
User-friendly interface design
Bells & whistles: video, audio, etc.
Richer output for instructor

• *How* did students go through the case study?

• Responses quickly compiled across students → use data to drive teaching
New audiences

• New STEM-H subject areas

• New venues
  Charter high schools
  High school health professions clubs
  Community colleges
  Freshman/sophomore undergraduates
  Continuing professional education
Parting thought: How could you use ILA?

- What role would the student take on?
- Who are the clients?
- What CONTENT would the student need to know/learn to complete the case?
- What RESOURCES would students have trouble finding?
- What PRACTICES could the student learn while completing the case?
Questions?

Interested in designing your own cases?

eyakes@unm.edu