Interactive Learning Assessment: Simulating Professional Practices

Elizabeth Yakes, PhD, RD

Andrea Cantarero

Tabitha McKay

Vanessa Svihla, PhD

Tim Castillo, MArch

Isaac Valdez

Justin Hertel

UNM COLLEGE *of* EDUCATION

USDA United States Department of Agriculture — National Institute of Food and Agriculture

AR LAB TS — Art Research Technology Science

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 $\rightarrow$ active learner)

- Introduces the idea of complexity in clinical practice in a structured (scaffolded) way

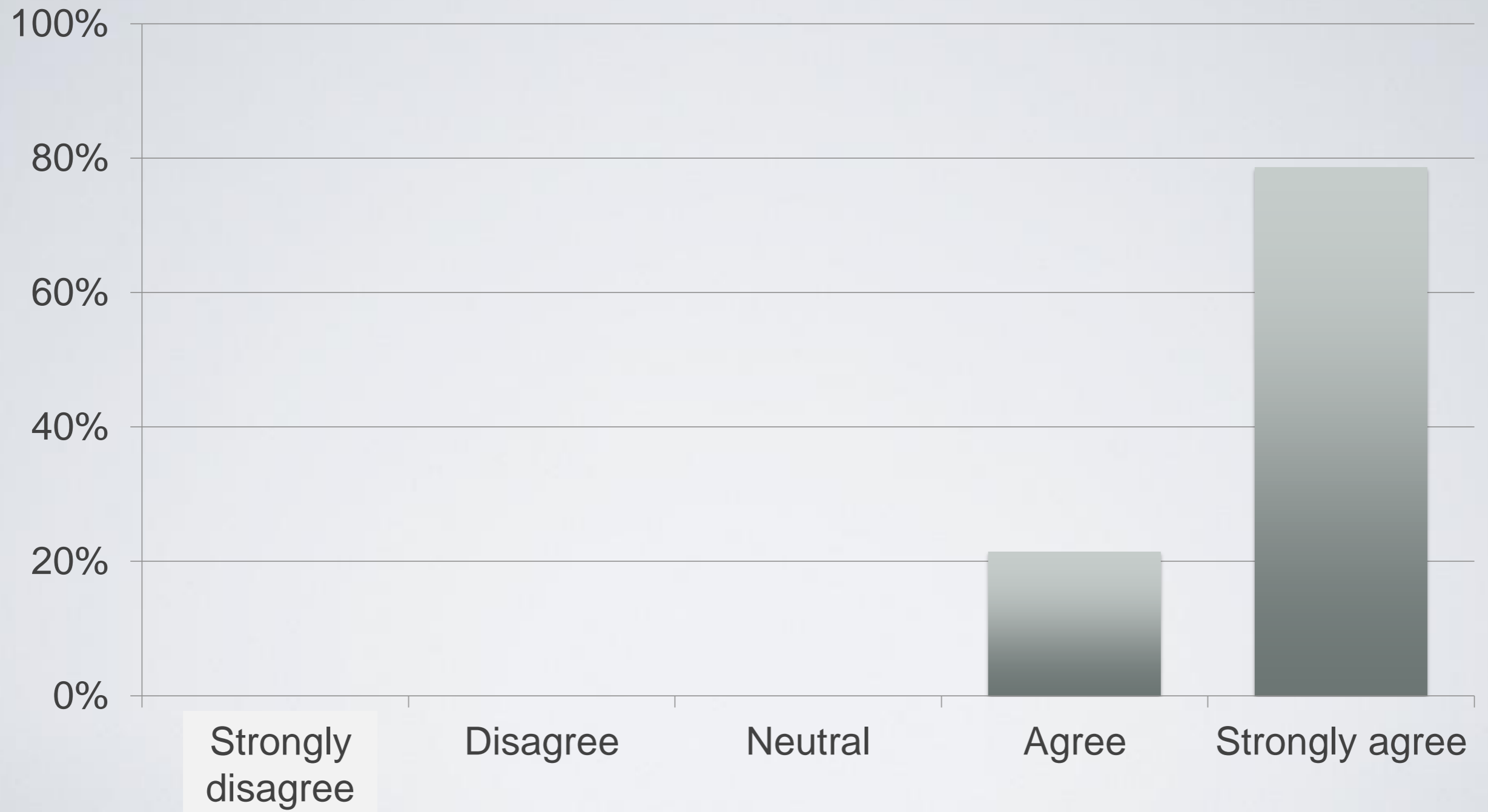- Builds lifetime learning skills – how do I find the information I need?

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

User-friendly interface design
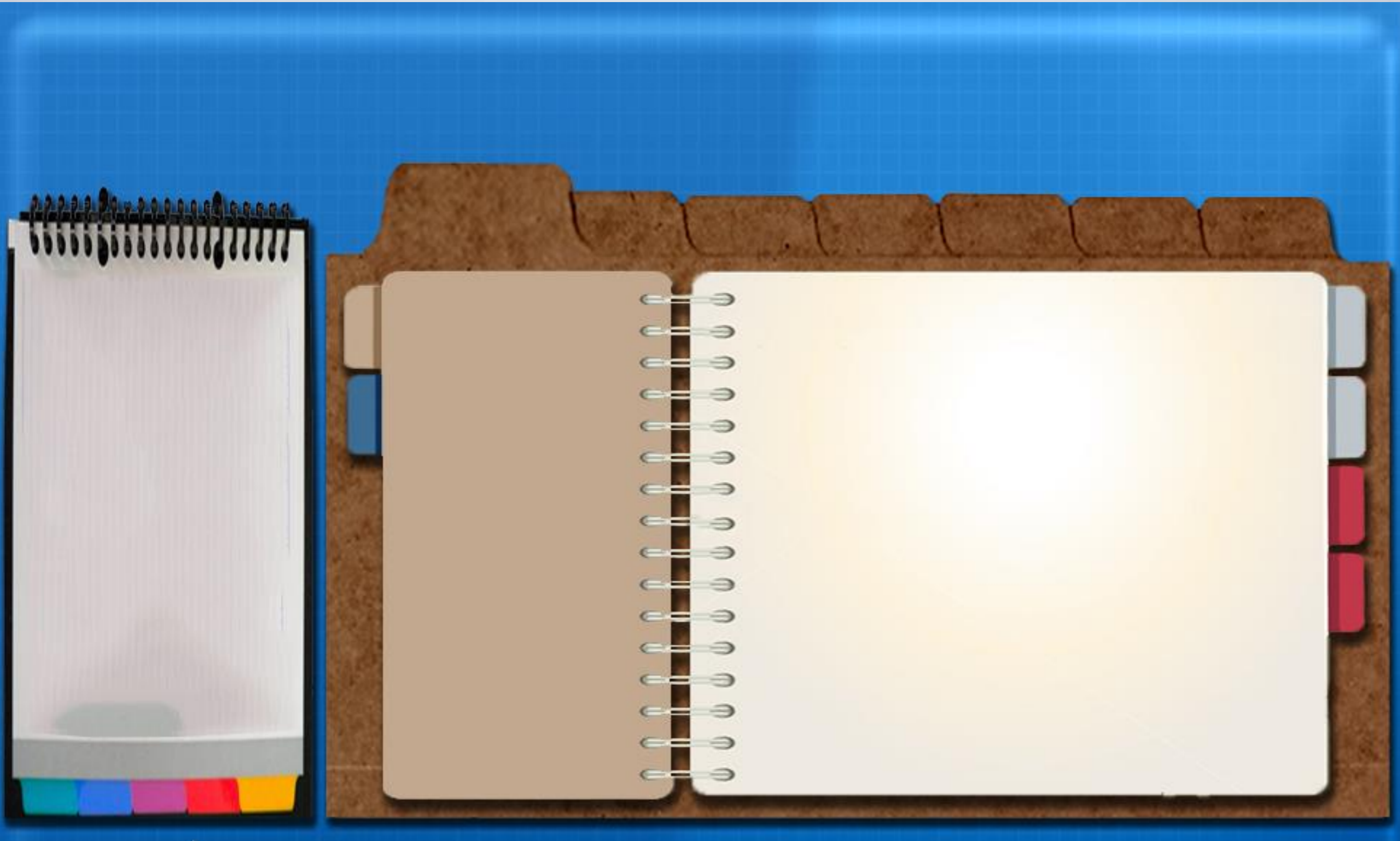
Bells & whistles: video, audio, etc.

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