Taking Matters into Our Own Hands:

Instructional Design with Research In Mind

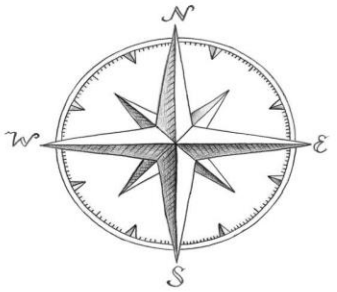
Jay K Sloan-Lynch, Sr. Learning Data Scientist
Melissa Johnson, Instructional Design Manager

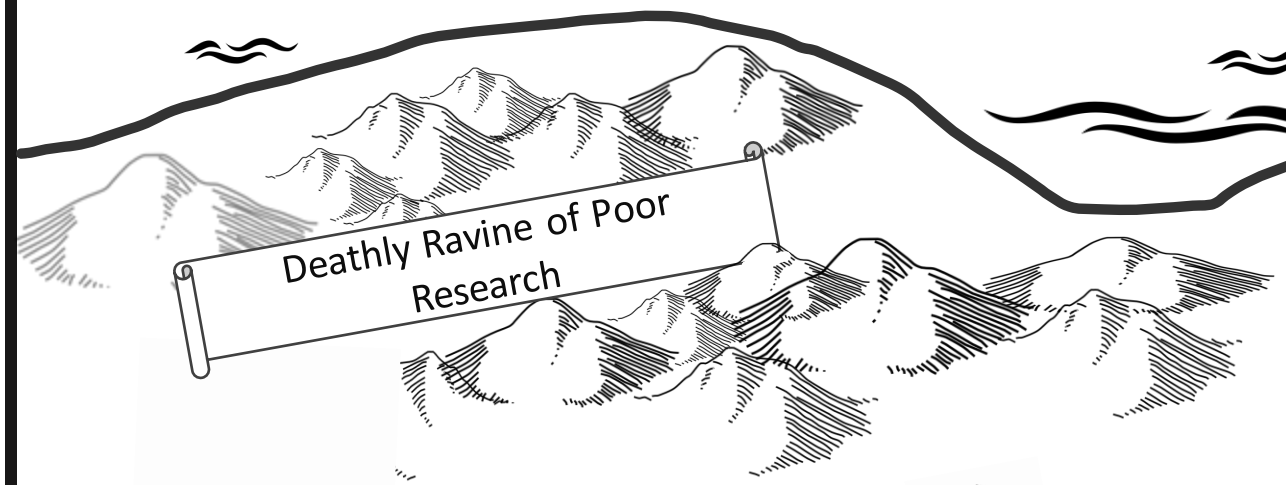
Instructional designers are faced with a daunting task: designing effective, efficient, enjoyable, and equitable learning experiences.

Our Hero

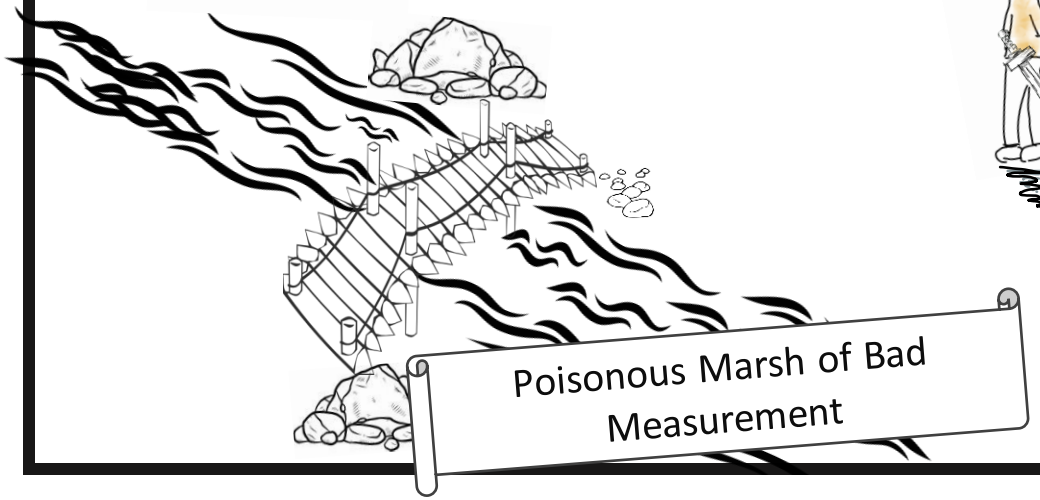
Some might even call it a “quest!”

Many obstacles stand in our hero's way. Research literature filled with poor quality studies conducted in inauthentic settings. Widespread acceptance of educational myths & fads. Reliance on bad measures of learning.



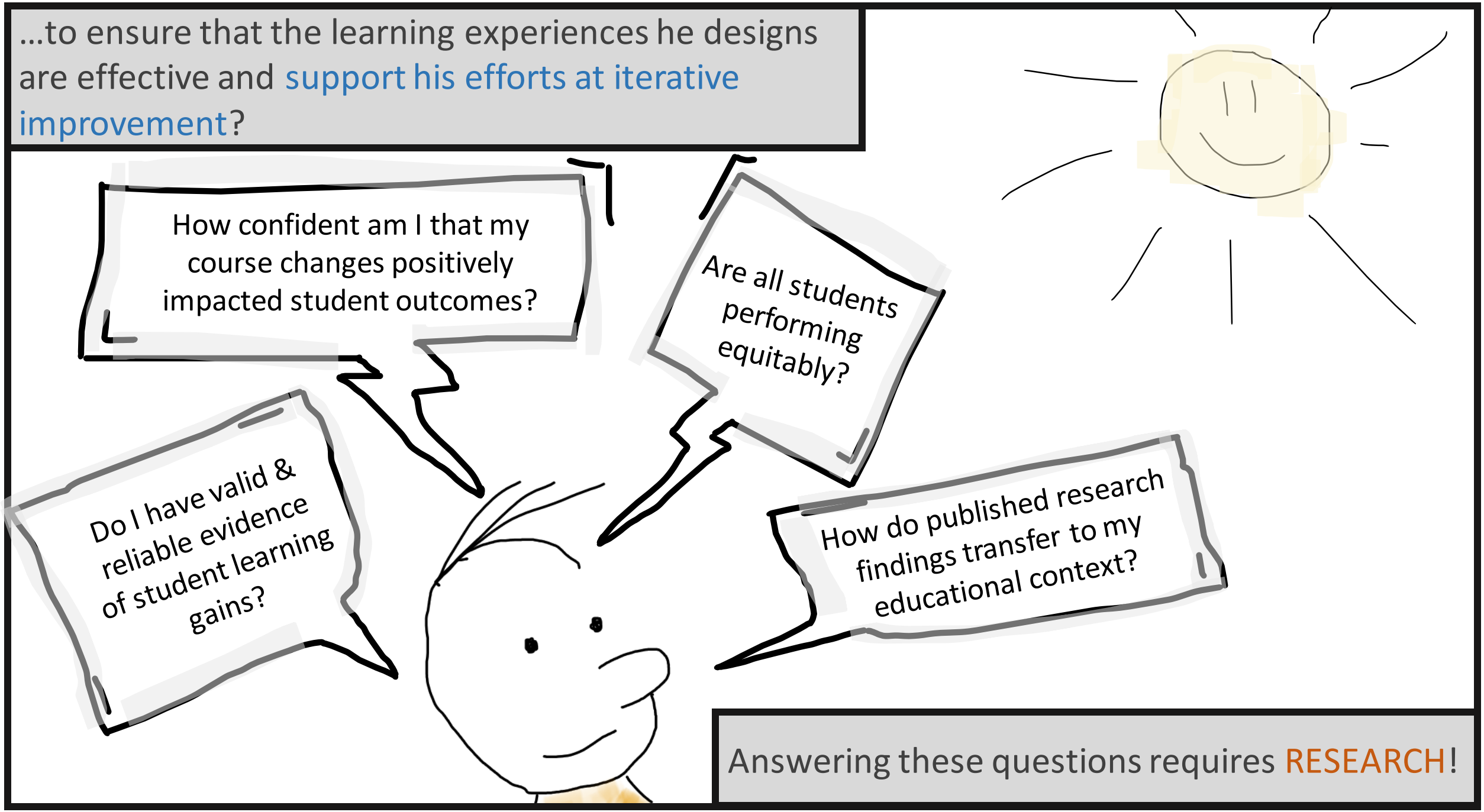


Learning Styles
Loch Ness Monster



So, what can our hero do…

…to ensure that the learning experiences he designs are effective and support his efforts at iterative improvement?



Answering these questions requires RESEARCH!

Some may argue that answering these questions is not the role of an instructional designer.

But if not our hero, then who?

Faculty?

Too busy

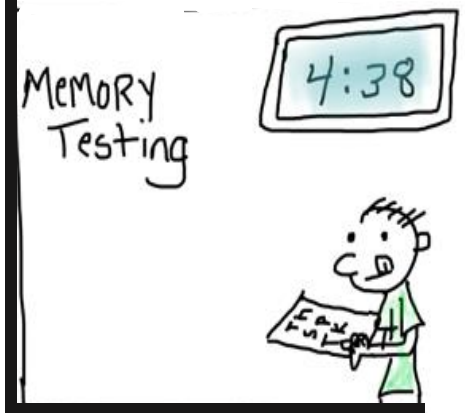
Lack the skills & expertise

Not trained in learning theory

Think too broadly

Work too slow

Ask different questions



Education Researchers?

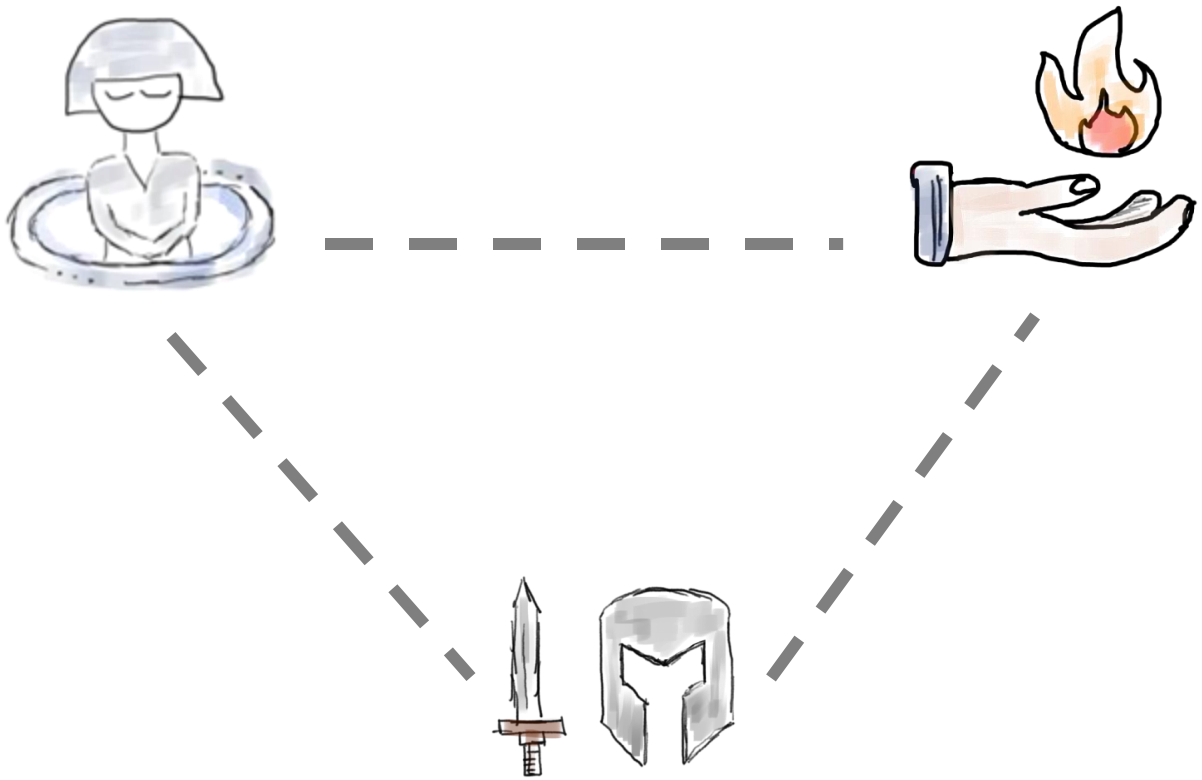
Data Scientists?

Missing pedagogical context

Don't know learning science

Lack meaningful data

No. It’s up to our hero to lead this quest (with the help of others).



To succeed, our hero will need not only the help of his companions, but also new KNOWLEDGE, TOOLS, and SKILLS!

What are these, you ask? Here’s how we are preparing our instructional designers to meet this challenge…

KNOWLEDGE

Data & Visualization Tools

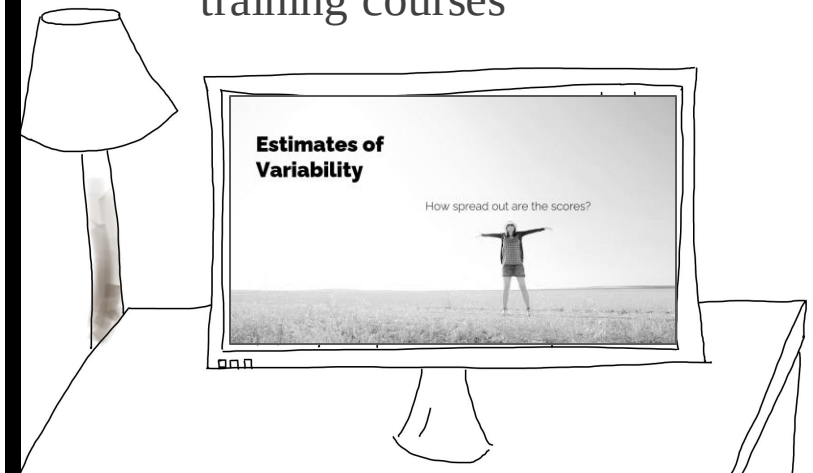
tableau

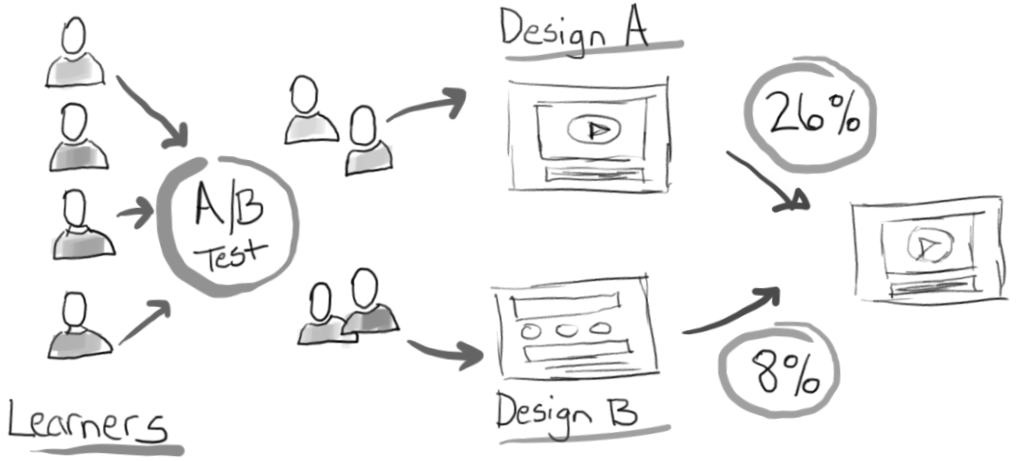
Looker

PC

Data Literacy

Data and statistical literacy training courses



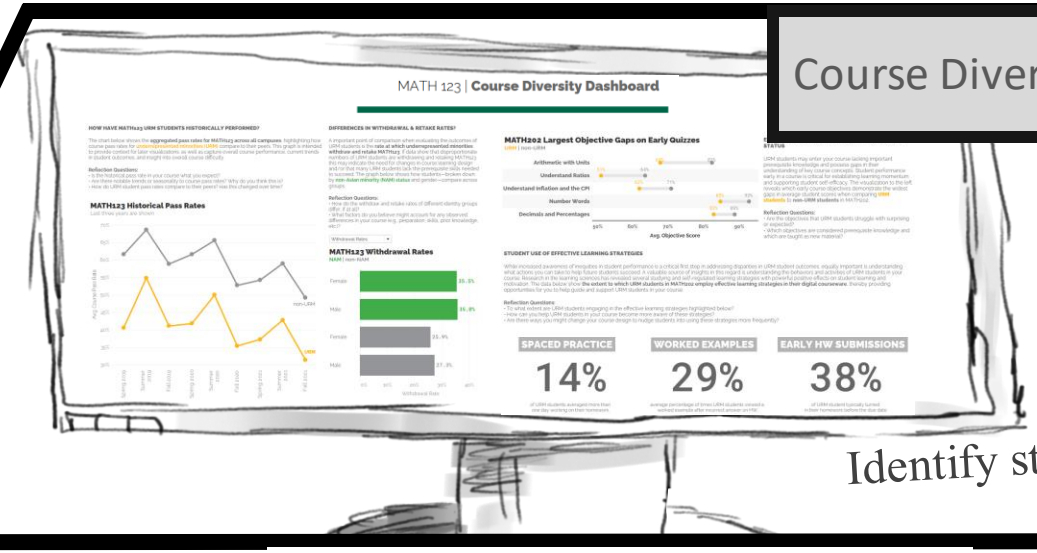


- Sampling
- Noise/Signal
- Pre-Post Tests
- Survey Design

Basic Research Design

TOOLS

Course Diversity Dashboards



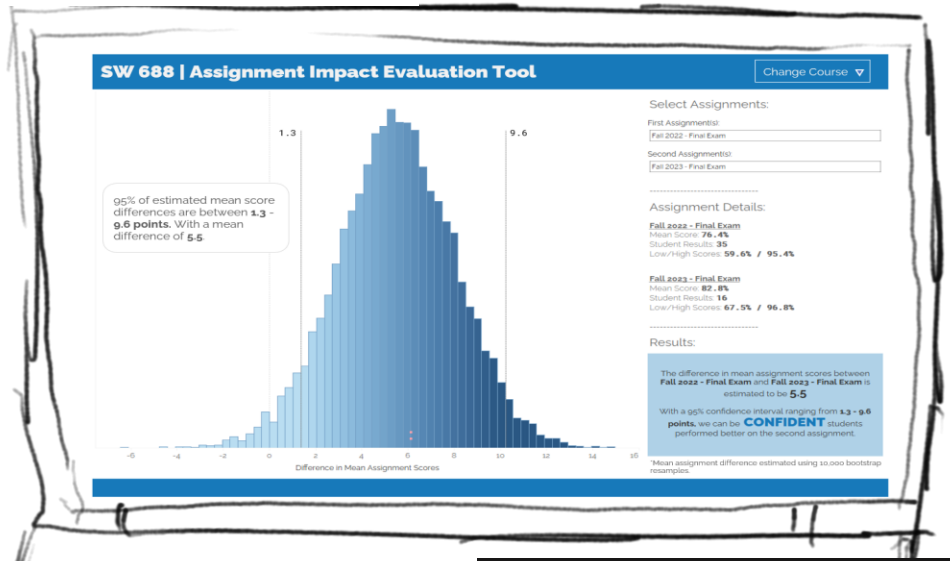
Probe courses for inequities

Identify struggling student subgroups

Course Revision Dashboards

Data-informed course revisions & outcome monitoring

Evaluate the impact of course changes and program interventions



Impact Evaluation Tools

SKILLS

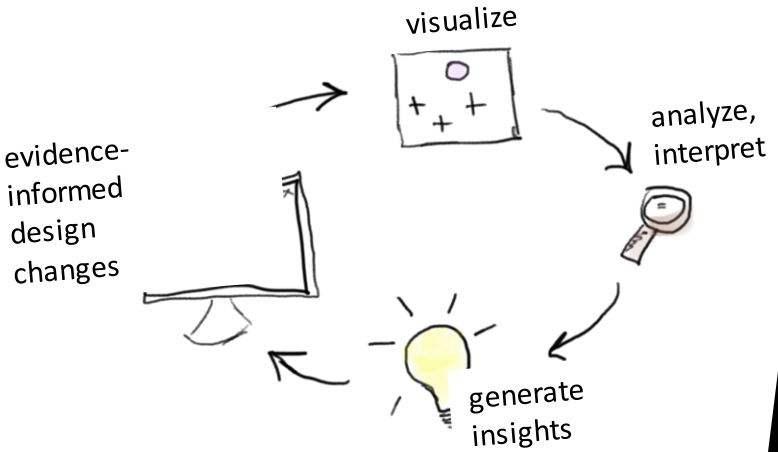
New Ways of Working

Engage with different faculty data personas

Collaborate with researchers, data analysts, and computer scientists

Analytic Sensemaking

Translate data into learning theory-informed changes

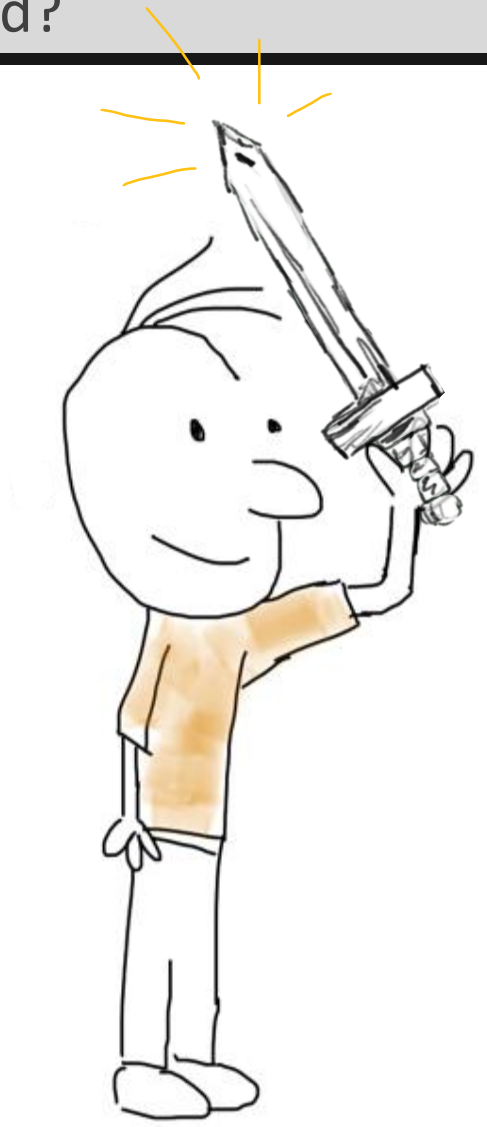


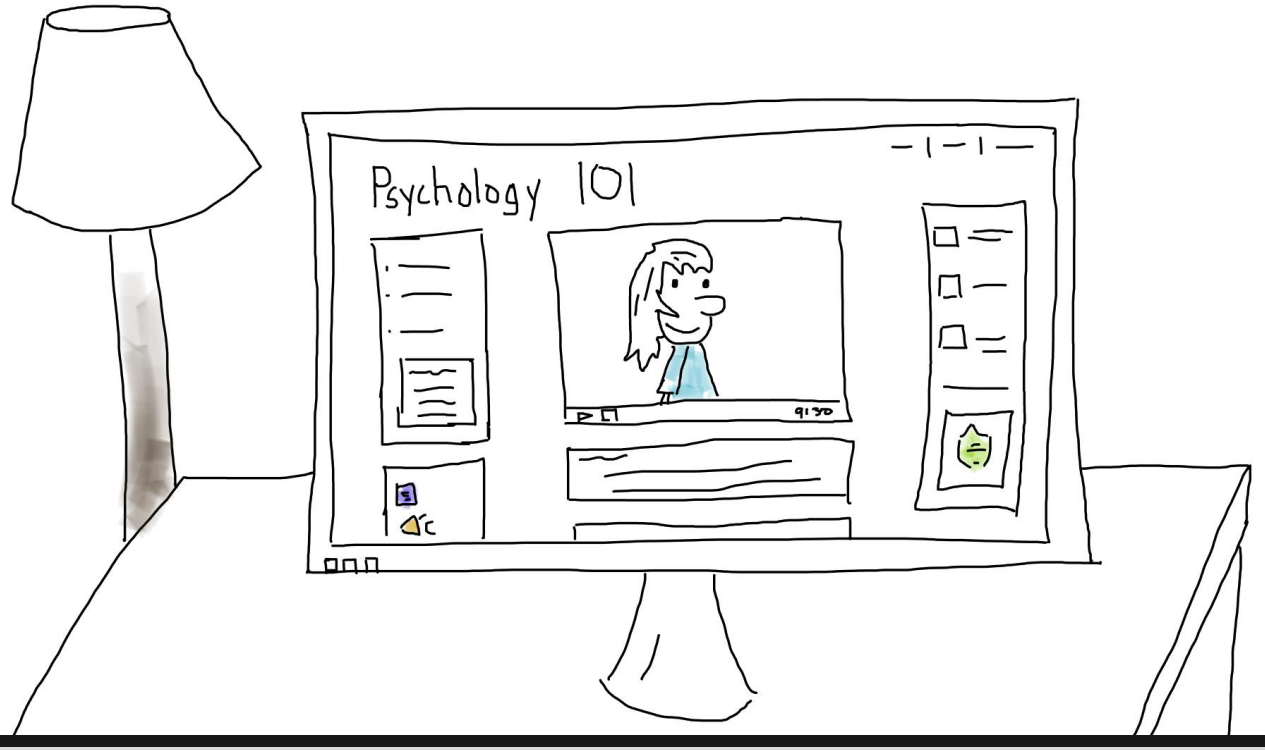
Learning Design With Data In Mind

Intentionally design courses to collect meaningful learning data

- Student Activity & Behavior
- Student Responses & Choices
- Student Feedback & Perceptions

Is expanding the Role of Instructional designers to Include Learning Research the right Approach? What Other KNOWLEDGE, TOOLS, or SKILLS do Instructional Designers Need?





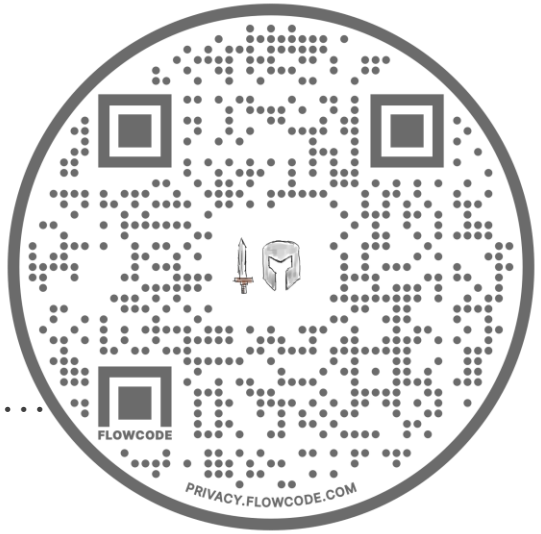
And what future challenges await our hero fighting for learners everywhere? We'd Love to Hear your Thoughts & Ideas!

Learning Design Solutions: Instructional Design with Research in Mind

Jay K Sloan-Lynch

Melissa Johnson

Select or scan for contact information and to learn more…



Good luck on your quest!