To participants of the 2018 STEM Summit:

Based on interest during the discussion at the Summit, **we will be hosting follow-up teleconference discussions for educators interested in brainstorming how to adapt #MicroSims for specific student populations (high school, community college, undergraduate, masters, etc.).**

Please fill out the form on our #MicroSim Library page to indicate interest in joining one of these discussions. We will follow up in January 2019 to schedule the calls.

https://www.umassmed.edu/gsbs/career/educators/microsim-library/
(or go to the Educators’ Portal at http://BEST.umassmed.edu)
Or contact: spencer.fenn@umassmed.edu
Job Simulations: An Exercise Connecting Students and Employers in a Meaningful, Time-efficient Way

Cynthia Fuhrmann, PhD
Spencer Fenn, PhD
Heather Yonutas, PhD
Jennifer Griffin, PhD
Meghan Spears

http://BEST.umassmed.edu

@GSBScareer
@UMassMedical
#MicroSim

Project funded by NIH grant DP70D018421
University of Massachusetts Medical School
(in Worcester, MA)

~320 PhD students, biomedical sciences
The “job simulation” is a new approach for time-efficient experiential learning that is emerging in the biomedical sciences for PhD-level trainees’ career exploration.
This session
Massachusetts STEM Summit, November 14, 2018

• What is a job simulation?
• #MicroSims: a miniature version (3 examples)
• Contexts in which to use job simulations
• How to develop a #MicroSim
• Perspectives & brief panel discussion
  – Student: Meghan Spears
  – Professional: Jennifer Griffin, PhD
  – #MicroSim author: Heather Yonutas, PhD
• Discussion: How might this idea be adapted for your own population and needs?
Job Simulation

Exercise that mimics a task typical of work in a given profession

What is it?
• Task completed as homework
• Student shares their deliverable with an employer in an informational interview or small group discussion setting

Benefits
• Brief exposure to a “real life” task
• Deepens the experience of an informational interview
  • Prompts more complex questions from student
  • Demonstrates students’ skills to the professional
• Helps student assess fit of the role
Job Simulation

Exercise that mimics a task typical of work in a given profession

2 Job Simulation models:

Both designed for biomedical PhD students

#MicroSim Job Simulations
(1-2 hours)
UMass Medical School
https://BEST.umassmed.edu

InterSECT Job Simulations
(4-8 hours)
UCSF/Washington Univ. St. Louis
https://intersectjobsims.com
We use #MicroSims as an exercise within our core PhD curriculum at UMass Medical School

In career-themed learning communities:

- Each of 3 meetings has structured exercises & time for unstructured discussion.
- At end of MEETING 2: Professionals introduce 2-3 #MicroSim options
- As HOMEWORK, students complete one #MicroSim of their choice (1-2 hours)
- In MEETING 3: 1 hour SMALL-GROUP DISCUSSION of the job simulation with a professional

Other potential use:
Student brings job simulation deliverable to informational interview with professional
Our growing #MicroSim Library

25 #MicroSim job simulations (designed for PhD-level trainees)

Career categories

- Academic administration
- Research administration
- Business development
- Intellectual property
- Science policy
- Regulatory affairs
- Teaching at a university

- Teaching in a museum
- Teaching K-12
- Professor with research focus
- Researcher at biopharma
- Medical writer
- Editor at a science journal

Educators’ Portal at BEST.umassmed.edu

Funding from National Institutes of Health
Implications of a Business Deal: Novartis’ Acquisition of AveXis

- **Role:** Market Analyst
- **Task:** Perform market research to assess the implications of Novartis’s $8.7B purchase of Avexis, a gene therapy company.
- **Deliverable:** A written report detailing what this purchase indicates about the technology and broader gene-therapy industry, and how this purchase might influence competing biotechnology companies.
#MicroSim Example 2: Medical Writing

Drafting a Clinical Demographics Summary

• Role: **Medical Writer**

• Task: **Draft a demographics summary** for a Clinical Study Report (CSR)

• Deliverable: **A written paragraph** summarizing the baseline demographic characteristics of subjects in a recent clinical study (study data provided).
#MicroSim Example 3: Regulatory Affairs

Preparing for a Pre-IND Meeting with the FDA

- **Role:** Manager of Regulatory Affairs at a Biotech

- **Task:** Prepare for a Pre-IND* meeting with the FDA

- **Deliverable:** An outline of your Pre-IND Meeting Package

* Investigational New Drug
How to develop a #MicroSim

University staff working with 1-2 Employers/Professionals:

• Staff leading a 1-hour phone conversation with professional(s):
  • Define your demographic: Who is the target audience? How much do they already know about the given career path or field?
  • Brainstorm potential tasks for the simulation
  • Summarize and define the tasks you see as most suitable to become a simulation. Things to consider:
    • Does the task, standing alone, exemplify the role?
    • Is it interesting and engaging?
    • Is it feasible in 1-2 hours?
  • For any task that seems like a good fit, probe the employer for further details
  • Define the deliverable product: What will the students create?
  • Will an example or template be necessary to clarify expectations?
  • Once students complete the deliverable, how might discussion be structured? (some professionals provide feedback; others discuss; others do a role play)

• Staff drafts simulation instructions. For #MicroSims, we aim for 1 page
• Professional(s) reviews & edits instructions
"I found it **valuable to discuss a realistic document that I could actually be a part of working on in the future. It opened up some great discussions about what a career in industry is like.**"

"**The job simulation was a great way to get an idea of what individuals in this profession do.**"

"**It provided a [view] of what the job... is like and made me reflect on my strength and weaknesses pertaining to what the job demands.**"
Student Perspective

Meghan Spears
4th-year PhD Student
UMass Medical School

Student in Career Pathways Communities:
Research in Industry (Spring 2018)
Research in Academia & Government (Fall 2018)
Employer Perspective

Jennifer Griffin, PhD
VP, Industry Programs & Relations
Massachusetts Life Sciences Center

Guest Professional for the
Business & Commercial Development
Career Pathways Community, Spring of 2018
Perspective of #MicroSim Author

Heather Yonutas, PhD
Postdoctoral Fellow
UMass Medical School

Authored first 4 MicroSims used in Career Pathways Communities at UMassMed
Group Discussion

In groups of 3-5:

• What are potential benefits and challenges of using job simulations with your population?

• In what context would you want to use it?

• What further adaptations or resources might be needed to make this a usable model?
Questions or interested in collaborating?

Please reach out to discuss:

• Strategies for development, adaptation, or implementation of #MicroSim job simulations in your context
• Developing a #MicroSim to add to the #MicroSim library

Cynthia.Fuhrmann@umassmed.edu
Spencer.Fenn@umassmed.edu

Access the library via our Educators’ Portal at http://BEST.umassmed.edu