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

@GSBScareer
@UMassMedical
#MicroSim

http://BEST.umassmed.edu

University of Massachusetts Medical School

CENTER FOR Biomedical Career Development
GRADUATE SCHOOL OF BIOMEDICAL SCIENCES

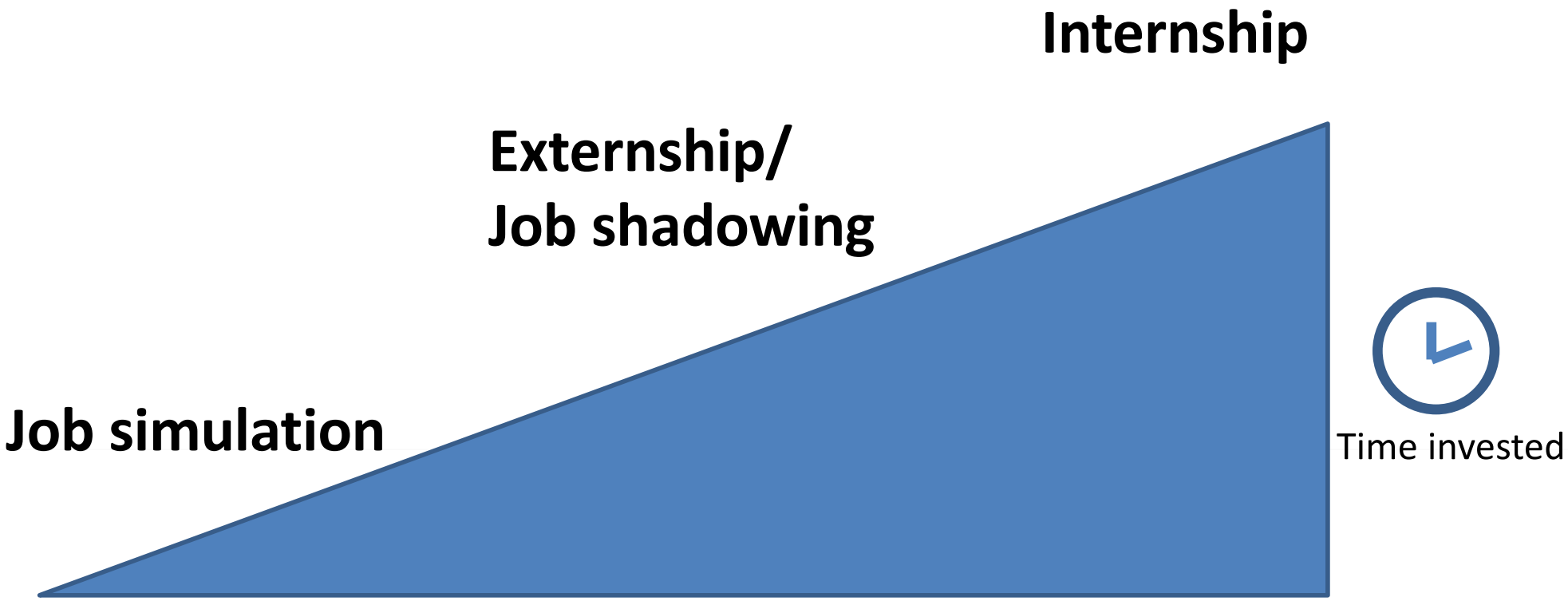
Project funded by
NIH grant DP7OD018421

University of Massachusetts Medical School (in Worcester, MA)

University of Massachusetts Medical School

~320 PhD students, biomedical sciences

Spectrum of Experiential Learning



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

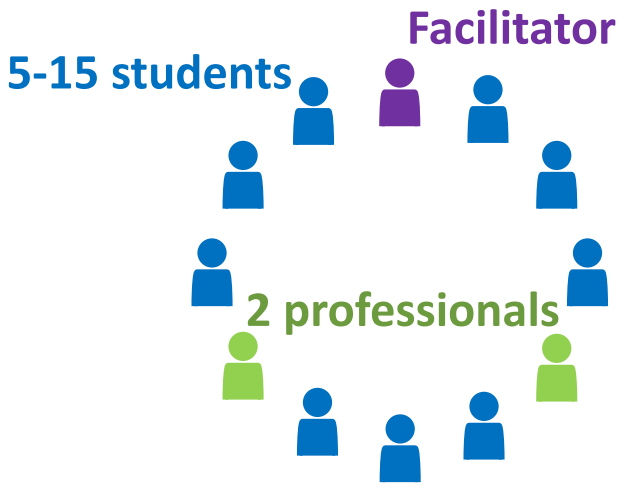
#MicroSim Job Simulations
(1-2 hours)
UMass Medical School
https://BEST.umassmed.edu

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

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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

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Funding from National Institutes of Health
NIH

#MicroSim Example 1:
Business & Commercial Development

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.

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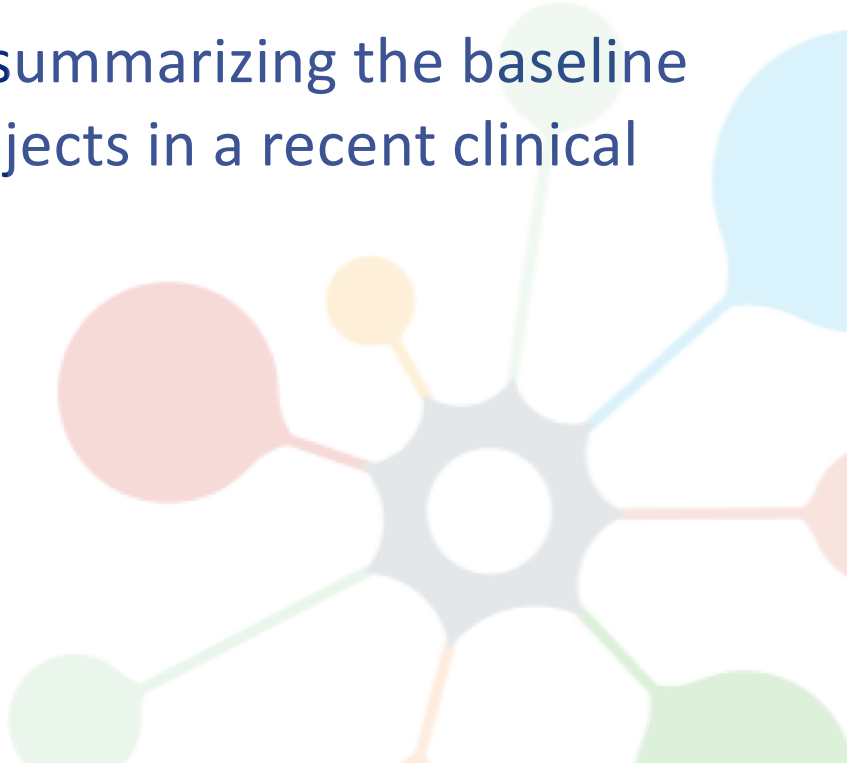
#MicroSim Example 2: Medical Writing

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).



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#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

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* 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

Student Perspectives

*"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."*

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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)

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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

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Perspective of #MicroSim Author

Heather Yonutas, PhD
Postdoctoral Fellow
UMass Medical School

Authored first 4 MicroSims used in Career Pathways Communities at UMassMed

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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?*

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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

@GSBScareer
#MicroSim

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

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