Agenda

• Moving from “Sit and Get” to “Learning by Doing”
• Origins: ComGen & Authentic Research Experiences
• Taking It Campus-Wide: Launching the RISE Learning Institute
• Current and Future Initiatives
• Bringing It to Your Campus
Outcomes

• Understand the steps taken to build the RISE Learning Institute at Bellevue College

• Identify institutional priorities for promoting experiential learning

• Create a short plan for immediate steps that can be taken to further experiential education on your campus
Who Are We?
• Mission: increase student success by connecting all BC students to transformational learning opportunities

• Strategies: build connections within the college and with the wider community to:
  1) fuel the growth of highly interactive experiential approaches
  2) increase access to high-impact learning for underserved populations
Why are young athletes willing to work hard on basics?
Now suppose we taught basketball the way that we teach science.

When do we get to play the game?

This quarter:
- Dribbling
- Running
- Hook Shots

When you join the NBA!
Science students
How do we change this?

Let them play the game first!
At the Forefront of a National Movement

Vision and Change:

“Introduce research experiences as an integral component of biology education for all students”

Engage to Excel:

“Provide support for replacing standard laboratory courses with discovery-based research courses”
Undergraduate Research:
Social Justice & Closing the Gaps
Undergraduate Research:
Aligning Science Education with How Science Is Done
Authentic Research Experiences (ARE)

ARE offer students three major benefits:

• a sense of *ownership*

• *membership* in a larger project involving real data and actual scientists

• *pride* in contributing to solving a real-life issue
“I never thought frustration could be fun.”

“I felt so proud of myself for having read two scientific articles and doing lab write-ups for the first time in my life. This has really boosted my self-confidence, and I gained so much.”

“I just started thinking about [molecules] from a much more questioning, scientific way.”

“I couldn’t see myself... in a research role, and being in a class like this, it’s a little more comfortable for me.”
Local and National Recognition of the Concept

Other ideas in this issue:
- Bill & Melinda Gates Foundation
- Expedia
- Costco
Obtain and Leverage Resources

- First ComGen Grant: $500,000
- ComGen C-ARE Grant: $600,000
- $58,000 for DNA sequencer
- ~$1.0M in equipment funding from state
- Undergraduate Research Lab & Dean of Research

Atomic Force Microscope

Ion Torrent PGM

Tescan SEM

Affiliation with Fred Hutch
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The Impact of Spaces

Increasing level of student engagement

Classroom

Collaboratory

Undergraduate Research Lab
RISE’s New Undergraduate Research Lab
Experiential Education on the RISE

- George Kuh and others on “high-impact practices” and student engagement
- Alignment with employer needs
  - “Soft skills” are not soft
- Priority initiatives in our strategic plans
- The value proposition of higher education in the digital era
Harnessing Synergies: Creating a Single Unit

Center for Career Connections/Women’s Center:

• Student Success Programs
  o STEM to Stern
  o Women’s Career Connections Program
  o Project Succeed Veterans Program

• Experiential Learning Partnerships
  o Internships
  o Informal Projects
  o Networking
  o Mentoring
Service-Learning

- Yearlong Faculty Learning Community for Service-Learning
- ~75 Partners Visited in Summer 2017
- 12 Courses Launch in Fall 2017
Students as “Makers of Knowledge”

@ Makers & Scholars: Video (and car!) courtesy of Wikispeed

BC students use a CNC machine @ the Makers & Scholars Summer Experience

Fulbright Scholar-in Residence James Riggall speaks at a TEDx Event
“Life Is Projects”

- The impact of PBL
- Building capacity among faculty
- Growing your own professional development

16 BC faculty attended the AAC&U’s Institute on Project-Based Learning at Worcester Polytech Inst. in MA

Excerpt from an action plan created by those faculty
Building a Campus Culture of Connected Learning
Lessons Learned

• Start wherever you can and then build
• It takes time!! 10 years
• Provide what each stakeholder needs
  • College: Student retention and success (closing the opportunity gap)
  • Employers: Skilled workforce, first pick at talent
  • Faculty: capacity building, professional development,
  • Students: skills they can use in any context
  • Funders: disseminated and sustainable projects

Everybody wins!!
Do what you can, with what you have, where you are

Teddy Roosevelt
What is the transformation you would like to achieve on your campus?
What are your strengths?
What is the culture of your institution?
What local and national resources can you use?
Three steps you are going to take when you get back to your institution
References


Bangera, Gita and Sara E Brownell (2014). Course-based undergraduate research experiences can make scientific research more inclusive. *CBE Journal of Life Sciences Education* 16, 602–06.


It Takes a Village …

The RISE Learning Institute Team
• Michael Reese
• Christina Sciabarra
• Sapan Parekh
• The Center for Career Connections Team

Bellevue College Faculty

Bellevue College Faculty
Faculty from the 18 colleges in WA state that are part of ComGen

The ComGen Team
• Kim Harrington
• Jason Fuller
• Irene Shaver

The amazing students of RISE and ComGen

Bellevue College
• Presidents
• Board of Trustees
• Foundation

PULSE & all the PULSE Fellows

NSF
• Celeste Carter
• Linea Fletcher
• Terry Woodin
• Jeanne Small

Apologies to anybody who should be on this list but has been left out

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