

## Promoting Undergraduate Research

A development workshop

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## What is *research*?

Main Entry: **re·search\***

Pronunciation: rĭ-'s&rch, 'rĕ-'

Function: *noun*

Etymology: Middle French *recherche*, from *rechercher* to go about seeking, from Old French *recherchier*, from *re-* + *cerchier*, *sercher* to search –

1 : careful or diligent search

2 : **studious inquiry or examination;**

***especially* : investigation or experimentation aimed at the discovery and interpretation of facts, revision of accepted theories or laws in the light of new facts, or practical application of such new or revised theories or laws**

3 : the collecting of information about a particular subject

\*source: [www.merriamwebster.com](http://www.merriamwebster.com) on 2/19/2010

## What is *undergraduate research*?

An inquiry or investigation conducted by an undergraduate student that makes an original intellectual or creative contribution to the discipline\*.

This research can be faculty-driven, student-driven, or faculty-student collaboration

\*source: [www.cur.org/about.html](http://www.cur.org/about.html) on 2/19/2010

## Begin With the End in Mind...

- In 2009, Christopher Newport University established the CNU Office for Undergraduate Research.
- Lessons can be learned from how we got there....

## Step One: Find your Purpose

- In 2005, CNU proposed to participate in Project Kaleidoscope's Leadership Initiative (PKAL-LI).
- The purpose of our participation was to develop leadership skills in faculty change agents
- Our purpose was to develop faculty for leading an emerging selective liberal arts university into a role of prominence in undergraduate STEM education



## Project Kaleidoscope Leadership-Initiative Team

- Tarek Abdel-Fattah (Chemistry)
- Rob Atkinson (Biology)
- Bobbye Bartels (Assoc. Dean for Liberal Learning)
- Hongwei Chen (Mathematics)
- Nicole Guajardo (Psychology)
- Quentin Kidd (Government)
- Gihan Mandour (Computer Science)
- Kip Redick (Philosophy)
- Mark Reimer (Music)
- Lori Underwood (Philosophy)
- Andrew Velkey (Psychology)
- Ed Weiss (Biology)

## Step Two: Seek your vision...

- Three faculty from this team attended a PKAL Leadership Seminar at UMBC in October, 2005
- The group used this meeting to draft a vision & goals statement to bring back to the PKAL-LI team.
- In Nov. 2005, the PKAL-LI team refined the vision & Goals

Develop and nurture an institutional *culture* that invests in a research-rich learning environment by acknowledging, celebrating, resourcing, and expecting student-faculty research both within and across disciplines.

- Goal 1 - Increase the number of students and faculty currently involved in research by 15% by the end of the '06-'07 AY.
- Goal 2 – Increase the extent to which both faculty and administration reflects the vision by the end of the '07-'08 AY
- Goal 3 – Establish a university level office for a Director of Undergraduate Research by the end of the '09-'10 AY

## What are “research-rich learning environments”?

- Curricular and co-curricular settings where learning is:
  - Experiential
  - “Hands on”
  - Active
  - Collaborative
  - Intensely focused on reaching new levels of discovery and understanding

## Step Three : Fulfill your goals

- Developed “Research-Rich” recruitment materials for use in admissions events
- Began holding interest meetings for students
- Held a faculty-development workshop on “Building Research-Rich Learning Environments”

## Seek continued growth...

- Strategically, the initial and intermediate goals were being met by a variety of activities
- The longer-term goal would be fulfilled only when a means of sustained effort could be established
- Institutionalizing Undergraduate Research was the next step



## Council for Undergraduate Research Institutionalization Team

- Tarek Abdel-Fattah (Chemistry)
- Tracey Schwarze (Associate Provost)
- Andrew Velkey (Psychology)
- Lisa Webb (Biology)

## Step Four: refine your vision...

- At the CUR Workshop, the CNU-CUR team "tweaked" the vision:
- "In order to produce thoughtful and engaged citizens, Christopher Newport University will develop and nurture an institutional *culture* for Inquiry-Rich Learning and Discovery by celebrating, resourcing, fostering and facilitating student-faculty collaboration within and across all disciplines: arts, humanities, sciences, and business "
- These changes took place as the senior administration established "Civic Engagement & Social Responsibility" as a new focus for program development at CNU

## Adapting to a shifting landscape...

- "Go that way, really fast. When something gets in your way...turn."



CNU  
SENCER  
TEAM



- Rob Atkinson (Biology)
- Bobbye Bartels (Assoc. Dean of Univ. Programs)
- Mihaela Dobrescu (Mathematics)
- Michael Meyers (Biology)
- Raouf Selim (Physics)
- Andrew Velkey (Psychology)
- Lisa Webb (Biology)

## The CNU-SENCER team mutates the original vision...

- Christopher Newport University will foster an institutional *culture* that infuses civic-engagement throughout a research-rich learning environment for students and faculty across all disciplines: arts, humanities, sciences, and business

## CNU's Office for Undergraduate Research & The Undergraduate/Graduate Research Council

- Tarek Abdel-Fattah (Chemistry)
- Bobbye Bartels (Assoc. Dean for Univ. Programs)
- Miheale Dorbrescu (Mathematics)
- Carolyn Ericson (Sociology/Social Work)
- John Hyland (History)
- Michael Lewis (Sociology/Social Work)
- Sheri Shuck-Hall (History)
- Peter Snow (English)
- John Thompson (Philosophy)
- Andrew Velkey (Director – Office for Undergraduate Research)



## Why invest in this vision?

- Faculty Development
  - Scholarly Productivity
  - Informed Pedagogy
  - Facilitate a meaningful academic life

## Benefits of fulfilling this purpose include-

- Greater achievement by involved students
- Increase students' competitiveness for post-baccalaureate opportunities
- Increase the level of cooperation and collaboration
- Faculty and student recruitment
- Faculty and student retention
- Enhanced institutional reputation

## Where are we now?

- What departments are involved?
- What faculty are involved?
- How are students involved?

## Overarching questions to keep in mind

- What institutional/departmental characteristics nurture undergraduate research?
- What resources are required to develop and maintain the infrastructure for research?
- How are limited resources best put towards engaging faculty?
- What sort of limitations on research should we expect?
- How does research enhance the mission of the institution?
- What curricular designs can provide opportunities for faculty-student research?
- How do we assess a research-rich learning environment?

## Breakout Session One

- In academic communities, what is needed to establish/expand/enhance an undergraduate research program?
- Discuss this question and brainstorm at your table
- Compile a summary of group's discussion and report out

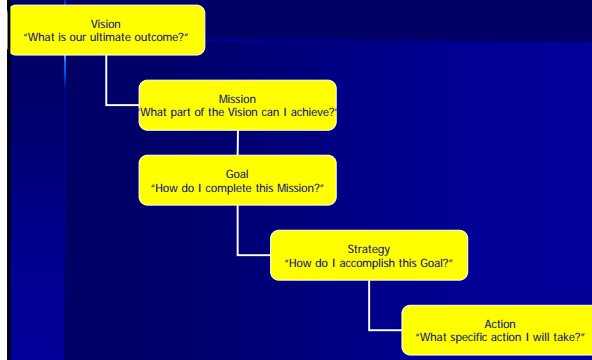
## Reporting Out

- Best Ideas
- Unique Ideas

## Establishing/expanding/enhancing undergraduate research programs

- Use P<sup>3</sup> (the PKAL Planning Process)
  - Develop Goals
  - Identify Strategies
  - Specify Actions

## The P<sup>3</sup> approach to enhancing the research-rich learning environment at CNU



## Breakout Session Two

- Develop your specific action plan using the P<sup>3</sup> template.
- Discuss ideas at your table
- During the reporting out, identify the three most compelling\* ideas from the group
  - \* Innovative, unusual, creative, bizarre, etc

## Wrapping Up

- Monday Task
- Workshop follow-up