Engaging Faculty in Conversations around Data and Academic Success

Presented by

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Panel Objectives

As a result of this panel discussion, participants will:

• Discuss a mixed-method approach of collecting data related to teaching and learning
• Discuss a framework for analyzing data with college stakeholders
• Engage in activities using data
Broward College

- Offers bachelor’s degrees, associate degrees and certificates
- 49,144 credit enrolled students
- 84% part-time students
- 16% full-time students
- 57.2% female students
- 41.8% male students
- 36.3% Black
- 34.6% Hispanic
- 21.1% White
- 3.7% Other

Based on 2013-2014 Broward College Data
Critical Thinking
Conceptual Framework

- Professional Development and Training
- Problem Solving
- Outcomes-Based Assessment
- Teaching and Learning Strategies
The Unfolding Matrix - A structured approach to qualitative research using guiding questions

<table>
<thead>
<tr>
<th>Promising Practices</th>
<th>% Students Impacted</th>
<th>Behaviors or Knowledge Required</th>
<th>Barriers to Effectiveness</th>
<th>Recommended Changes</th>
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Faculty Focus Groups: Methodology

**Brainstorming**

- See paper review w/CT Standards
- Role Play
- Define CT using standards as applied to text and writing
- Metacognition study skills
- CT Cameo's (BC Colleagues sharing CT experience)
- Strong invitation to "dwell in ambiguity"

- Focused questioning/socratic methods
- Guided discussions
- CT safe environment
- CT prompts for guiding interpretation
- Problem solving CT template
- Required time to think through answers
- Allowing time for students derive simple formulas
- Hands on Assignments/confirming theories
- Identifying implications and consequences of results
- Establishing connections between different problems
# Faculty Focus Groups: Methodology

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<th>% Impacted</th>
<th>Behavior or Knowledge Required</th>
<th>Changes</th>
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</table>
| Metacognition study skills | 60% | - Willingness to change  
- Ability to reflect  
- Challenge their assumptions  
- Self awareness  
- Having clear strategies | Earliest intro of technique & faculty and students  
- Reinforcement  
- Self evaluation by students  
- Working glossary of CT terms and key tools | Familiarity with Life  
- Job training during class time  
- Ignorance  
- Not seeing value  
- Fixed thinking/mindset  
- Biases |
| Focused question-guiding prompts | 60% | - Time for reflection  
- Kinesthetic movement/stretching  
- Willingness to interact  
- Becoming uninitiated  
- Seeing shades of gray  
- Using elements of thought and intellectual skills | Avoid von in classroom layout  
- Ensuring practicality  
- Increased structure of assignment  
- Encouraging interaction  
- Safe and welcoming environment  
- Group work  
- Cross-functional  
- Creativity enhanced - Tool | Change  
- Lack of engagement  
- Classroom layout  
- Reactivity  
- Resistance to change  
- Lack of depth  
- Greater comfort communicating with colleagues  
- Overthinking |
| Requiring time to think prior to answering | 70% | - Discipline  
- Patience  
- Listening skills  
- Analytical thought  
- Reinforcement by instructor  
- Identifying that some problem to be longer to solve/discriminating pattern between | Modeling/explaining benefits  
- Planning opportunities for those moments  
- Start simple  
- Flip classroom  
- Change to practice  
- Take advantage of real topics as they arise  
- Build in intentional silence  
- Require increased student effort | Lack of discipline  
- Distraction by phones  
- Amount of material to cover during semester  
- Lack of time  
- Lack of preparation  
- Cultural norms  
- Overthinking  
- Comfort level of instructors |

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[broward college](www.broward.edu)
Faculty Focus Groups: Findings

- **Top Promising Practices:** Questioning, Student Involvement, Metacognition Study Skills

- **Top Behaviors or Knowledge Required:** Creativity, open-mindedness, effective listening skills, willingness to actively participate, using elements of thought and intellectual standards (Paul & Elder, 2014)

- **Top Barriers:** personal life issues, preconceptions and biases, shyness, distraction by cell phones, lack of time, lack of preparation

- **Top Recommended Changes:** giving clear and explicit instructions up front, creating a safe and welcoming environment, providing frequent feedback, explaining relevance and outside application of concepts
Action Research

QUESTION
EVERY
POSSIBILITY

Think Critically
Student Artifact Results

Comparison of Student Artifacts Average Scores by Outcome

Enhanced n=73 and Non-enhanced n=64

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Enhanced</th>
<th>Non-Enhanced</th>
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<tr>
<td>Explain</td>
<td>2.81</td>
<td>2.55</td>
</tr>
<tr>
<td>Analyze &amp; Interpret</td>
<td>2.85</td>
<td>2.29</td>
</tr>
<tr>
<td>Evaluate</td>
<td>2.75</td>
<td>2.53</td>
</tr>
<tr>
<td>Generate</td>
<td>2.53</td>
<td>2.25</td>
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Success Rates
Enhanced versus Non-enhanced Courses

- Enhanced: 71.13%
- Non-Enhanced: 67.00%
GPA
Enhanced versus Non-enhanced Courses

Enhanced: 2.46
Non-Enhanced: 2.3
Perceptions of Critical Thinking in Instruction for Students in Enhanced and Non-enhanced Courses

Overall: 4.29 (Enhanced) 3.94 (Non-Enhanced)
Explain What is CT: 4.53 (Enhanced) 3.93 (Non-Enhanced)
Encourage CT: 4.74 (Enhanced) 3.93 (Non-Enhanced)
Identify Assumptions: 4.32 (Enhanced) 3.86 (Non-Enhanced)
Distinguish What you Know: 4.37 (Enhanced) 3.83 (Non-Enhanced)
**Assignments Completed**

- Enhanced: 6.71
- Non-Enhanced: 5.74

**Assignment Scores**

- Enhanced: 15.42
- Non-Enhanced: 12.23

**Completed Final Assignment**

- Enhanced: 88%
- Non-Enhanced: 55%

**Studied More than 3 Hours per Week**

- Enhanced: 20%
- Non-Enhanced: 6%
CCSSE & CCFSSE Results

How much has your coursework at this college emphasized the following mental activities?

- Winter 2011 BC Students
- Winter 2014 BC Students
- Winter 2011 BC Faculty
- Winter 2014 BC Faculty

1. Analyzing the basic elements of an idea, experience, or theory:
   - Winter 2011 BC Students: 73%
   - Winter 2014 BC Students: 82%
   - Winter 2011 BC Faculty: 86%
   - Winter 2014 BC Faculty: 73%

2. Synthesizing and organizing ideas, information, or experiences in new ways:
   - Winter 2011 BC Students: 64%
   - Winter 2014 BC Students: 59%
   - Winter 2011 BC Faculty: 80%
   - Winter 2014 BC Faculty: 71%

3. Making judgments about the value or soundness of information, arguments, or methods:
   - Winter 2011 BC Students: 56%
   - Winter 2014 BC Students: 71%
   - Winter 2011 BC Faculty: 73%
   - Winter 2014 BC Faculty: 73%

4. Applying theories or concepts to practical problems or in new situations:
   - Winter 2011 BC Students: 60%
   - Winter 2014 BC Students: 64%
   - Winter 2011 BC Faculty: 75%
   - Winter 2014 BC Faculty: 75%

5. Having students use information they have read or heard to perform a new skill:
   - Winter 2011 BC Students: 65%
   - Winter 2014 BC Students: 69%
   - Winter 2011 BC Faculty: 72%
   - Winter 2014 BC Faculty: 72%
The more data points, tools, angles, methods, theories, and observers used, the greater the credibility of the assessment.
Guiding Questions

Direct Measures

1. What are the major conclusions you would draw about the students’ ability to master each of the learning outcomes?
2. Do the results indicate any strengths; if so, what are the strengths?
3. What concerns, if any, are raised by the results?
4. What are some recommendations for using these results to improve learning?
Guiding Questions
Indirect Measures

1. What are the major conclusions you would draw about student perception and/or faculty perception about [insert discussion topic]?

2. Do the results indicate any strengths; if so, what are the strengths?

3. What concerns, if any, are raised by the results?

4. What are some recommendations for using these results to improve learning?
Data Conversations

QUESTION EVERY POSSIBILITY
Think Critically
Report Out

QUESTION

EVERY

POSSIBILITY

Think Critically
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