Facilitating Faculty Development to Promote Self-Directed Learning

2018 Sunshine State Teaching & Learning Conference

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Our Challenge

• 44% of college faculty report their students are “ill prepared for the demands of higher education” (Sanoff, 2006).

• 45% of 3000 students showed no significant learning gains over 2 years and 36% showed little change over 4 years in critical thinking, analytical reasoning, problem solving, and writing (Arum and Roksa, 2011).

• Teachers’ intend to enhance academic and cognitive development.

• Many students study as if academic success depends on the reproduction of taught material.
NSSE 2017 Snapshot

**Lowest Performing Relative to Public Carnegie**

- Worked with other students on course projects or assignment\(^b\) (CL)
- Connected your learning to societal problems or issues\(^b\) (RI)
- Asked another student to help you understand course material\(^b\) (CL)
- Explained course material to one or more students\(^b\) (CL)
- Spent more than 15 hours per week preparing for class

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Percentage Point Difference with Public Carnegie
Our Rationale

• The development of metacognitive skills and the application of learning strategies are directly related to student learning outcomes and success in higher education.

• When faculty emphasize learning strategies, students increase their usage of them. Dumford, *et al* (2016)
Framework: Student Approaches to Learning

- Surface
- Deep
- Strategic

Surface Factors

- Lack of Purpose
- Unrelated Memorizing
- Syllabus Boundedness
- Fear of Failure
Deep Factors

- Seeking Meaning
- Relating Ideas
- Use of Evidence
- Interest in Ideas
Strategic Factors

- Organized Study
- Time Management
- Achieving
- Alertness to Demands
- Monitoring
Our Model

An Integrated Model of Students’ Approaches to Studying (Richardson 2005)
Demographic Characteristics

• Intellectual abilities
• Cognitive style
• Personality (openness, conscientiousness, neuroticism)
• Academic motivation
• Goal orientation
• Attributions of academic success

• Self-efficacy
• Effort
• Epistemological and intelligence beliefs
• Prior performance
• Prior knowledge
• Age
• Gender
Conceptions of Learning

1. Learning as the increase of knowledge
2. Learning as memorizing
3. Learning as the acquisition of facts or procedures
4. Learning as the abstraction of meaning
5. Learning as an interpretative process aimed at the understanding of reality.
6. Learning is a constructive and purposeful process
Contextual Factors

- Formative and summative assessment plan
- Allocation of work and feedback
- Course structure, organization and management
- Instructor
- Class size
- Class modality
- Day/time
Perceptions of Academic Context

- Good Teaching
- Clear Goals and Standards
- Appropriate Workload
- Appropriate Assessment
- Emphasis on Independence
- Confidence with Modality
An Integrated Model of Teachers’ Approaches to Teaching, Conceptions of Teaching, and Perceptions of the Teaching Environment
What We Did
Our Program:

- One-Semester Course Redesign Project
- Grant: $500
- Deliverable: course revision that specifically addresses student learning approaches

Engineering          Digital Media
Public Administration Humanities
Integrated Business  Writing and Rhetoric
Philosophy           Economics
Psychology
Faculty Projects Included

• Coding Project Series
• Goal Contract
• Scaffolding Bloom’s Taxonomy
• Statistics Videos
• Study Skills Inventories and Modules
Our Measures

• Demographics

• Approaches and Study Skills Inventory for Students (ASSIST; Entwistle, 2000)

• Experiences of Teaching & Learning Questionnaire (ESRC, 2009)
What We Know So Far
## Demographic Predictors of Approaches

<table>
<thead>
<tr>
<th></th>
<th>Surface</th>
<th>Deep</th>
<th>Strategic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td>![Down Arrow]</td>
<td>![Up Arrow]</td>
<td>![Up Arrow]</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
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<td>![Up Arrow]</td>
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<tr>
<td><strong>Full Time Student</strong></td>
<td>![Up Arrow]</td>
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<tr>
<td><strong>Course Load</strong></td>
<td>![Up Arrow]</td>
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<tr>
<td><strong>Source of Tuition</strong></td>
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<tr>
<td><strong>Employment</strong></td>
<td>![Down Arrow]</td>
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<td><strong>First Generation</strong></td>
<td>![Up Arrow]</td>
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## Motivation Predictors of Approaches

<table>
<thead>
<tr>
<th></th>
<th>Surface</th>
<th>Deep</th>
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</thead>
<tbody>
<tr>
<td>Professor</td>
<td>5</td>
<td>1</td>
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<tr>
<td>Grade Forgiveness</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Interest in Subject</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Pre-requisite</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Worked With Schedule</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
## Experience of Teaching & Learning

### Predictors of Approaches

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<th>Strategic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Congruence/Coherence</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
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<tr>
<td>Teaching for Understanding</td>
<td>![Image]</td>
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<tr>
<td>Instructor Enthusiasm &amp; Support</td>
<td>![Image]</td>
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<td>Constructive Feedback</td>
<td>![Image]</td>
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<tr>
<td>Support from Classmates</td>
<td>![Image]</td>
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<tr>
<td>Interest &amp; Enjoyment</td>
<td>![Image]</td>
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<tr>
<td>Demands</td>
<td>![Image]</td>
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<tr>
<td>Perceived Learning</td>
<td>![Image]</td>
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Next Steps

• Implementation and data collection in progress
• Compare across contexts
• Offer recommendations for best practices.
• Stay tuned
Thank You!
Questions?
## Academic Majors and Approaches

<table>
<thead>
<tr>
<th>Strategic Approach</th>
<th>Deep Approach</th>
<th>Surface Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Sciences, Math, Engineering (M=4.18, SD=.83)</td>
<td>Physical Sciences, Math, Engineering (M=4.05, SD=.30)</td>
<td>Pre-Professional (M=3.15, SD=.38)</td>
</tr>
<tr>
<td>Pre-Professional (M=4.14, SD=.50)</td>
<td>Pre-Professional (M=3.98, SD=.30)</td>
<td>Life Sciences (M=3.02, SD=.59)</td>
</tr>
<tr>
<td>Life Sciences (M=4.03, SD=.40)</td>
<td>Social &amp; Behavioral Sciences (M=3.83, SD=.50)</td>
<td>Arts &amp; Humanities (M=3.02, SD=.65)</td>
</tr>
<tr>
<td>Social &amp; Behavioral Sciences (M=3.99, SD=.54)</td>
<td>Life Sciences (M=3.70, SD=.49)</td>
<td>Physical Sciences, Math, Engineering (M=2.91, SD=.95)</td>
</tr>
<tr>
<td>Arts &amp; Humanities (M=3.51, SD=.59)</td>
<td>Arts &amp; Humanities (M=3.41, SD=.76)</td>
<td>Social &amp; Behavioral Sciences (M=2.89, SD=.52)</td>
</tr>
</tbody>
</table>
Predictors of Surface Approaches - Demographics

- Age ($\beta=-.26$, SE=.00)
- Reason for taking the course ($\beta=-.19$, SE=.02)
  - Pre-requisite or Requirement ($M=3.03$, $SD=.56$)
  - Grade Forgiveness ($M=2.92$, $SD=.41$)
  - Worked with Schedule ($M=2.88$, $SD=.39$)
  - Interest in Subject ($M=2.83$, $SD=.51$)
  - Professor ($M=2.59$, $SD=.54$)
- First Generation ($\beta=.09$, SE=.03)
- Full-Time Status ($\beta=.12$, SE=.08)
- Class Load ($\beta=.13$, SE=.04)
- Employment ($\beta=-.14$, SE=.04)
- Source of Tuition ($\beta=-.11$, SE=.02)
  - Other-Funded ($M=2.98$, $SD=.55$)
  - Self-Funded ($M=2.93$, $SD=.54$)
Predictors of Deep Approaches - Demographics

• Age ($\beta=.13$, $SE=.00$)

• Reason for taking the course ($\beta=.18$, $SE=.02$)
  • Professor ($M=4.11$, $SD=.45$)
  • Grade Forgiveness ($M=3.94$, $SD=.27$)
  • Interest in Subject ($M=3.86$, $SD=.48$)
  • Worked with Schedule ($M=3.75$, $SD=.40$)
  • Pre-requisite or Requirement ($M=3.71$, $SD=.45$)

• Source of Tuition ($\beta=.09$, $SE=.02$)
  • Other-funded ($M=3.74$, $SD=.44$)
  • Self-funded ($M=3.79$, $SD=.49$)
Predictors of Strategic Approaches - Demographics

- Gender ($\beta=0.15$, SE=0.05)
- Age ($\beta=0.11$, SE=0.00)
- First Generation ($\beta=-0.16$, SE=0.02)
Predictors of Surface Approaches – Experiences of Teaching & Learning

• Congruence and Coherence (β=-.30, SE=.07)
• Teaching for Understanding (β=-.21, SE=.06)
• Instructor Enthusiasm and Support (β=-.14, SE=.07)
• Interest/Enjoyment Generated from Course (β=-.23, SE=.06)
• Demands (β=.28, SE=.07)
• Perceived Learning (β=-.16, SE=.06)
Predictors of Deep Approaches – Experiences of Teaching & Learning

- Congruence and Coherence ($\beta=.45, SE=.06$)
- Teaching for Understanding ($\beta=.44, SE=.05$)
- Instructor Enthusiasm and Support ($\beta=.31, SE=.07$)
- Constructive Feedback ($\beta=.20, SE=.05$)
- Support from Classmates ($\beta=.26, SE=.04$)
- Interest/Enjoyment Generated from Course ($\beta=.43, SE=.05$)
- Demands ($\beta=-.33, SE=.07$)
- Perceived Learning ($\beta=.44, SE=.06$)
Predictors of Strategic Approaches – Experiences of Teaching & Learning

- Congruence and Coherence ($\beta=.39, \text{SE}=.07$)
- Teaching for Understanding ($\beta=.29, \text{SE}=.06$)
- Instructor Enthusiasm and Support ($\beta=.24, \text{SE}=.08$)
- Constructive Feedback ($\beta=.31, \text{SE}=.05$)
- Support from Classmates ($\beta=.22, \text{SE}=.05$)
- Interest/Enjoyment Generated from Course ($\beta=.36, \text{SE}=.06$)
- Demands ($\beta=-.32, \text{SE}=.07$)
- Perceived Learning ($\beta=.38, \text{SE}=.06$)