Professors’ Motivation, Challenges, and Wisdom of Practice in the Agricultural, Consumer and Environmental Sciences

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*Human & Community Development*
Acknowledgments

• Provost’s Initiative on Teaching Advancement Grant

• Research Assistants
  – Brandon Mitchell
  – Shanyn Siegel
Faculty Development

• Critical to the educational quality in higher education (Camblin & Steger, 2000)

• Measurement is important (Evans & Chauvin, 1993)
  – Goals
  – Perceptions of what works best

• Deficiencies (Weimer & Lenze, 1991)
  – Skill development through prescriptive training

• Complex
  – Need examine new ways (Eleser & Chauvin, 1998)
Wisdom of Practice

“Knowledge that is most widespread and most frequently influences how teachers function in the classrooms is knowledge that derives from experience” (Weimer, 2001)

Knowledge

• Intuitive & experiential
• Authentic & legitimate

Accessed through reflection

Informed by intrinsic motivation (Feldman & Paulsen, 1999)

• Expectancy value (Eccles & Wigfield, 2002)
• Self-determination (Ryan & Deci, 2000)
Related Studies

• Professors in agricultural disciplines (Whaley & Wickler, 1992)
  – Desired to improve their teaching
  – Majority did not have adequate knowledge of learning theory and practice

• Professional goals of faculty (Eleser & Chauvin, 1998)
  – Maintain in-depth knowledge of content in their field of specialization and general discipline
  – Improve skills as an effective teacher
  – Broaden their expertise in their general discipline
  – Increase their level of productivity in research
  – Improve their skills in research methods and techniques
Need for Study

• Faculty interests in faculty development
  – Effective strategies to motivate students
  – Characteristics of effective teaching (Eleser & Chauvin, 1998)
  – Not interested in workshops on
    • Content
    • Cultural diversity in the classroom
    • Course objectives (Eleser & Chauvin, 1998)

• Further research
  – How professors think about teaching and learning (Menges & Austin, 2001)
  – Methods that would allow professors to share multiple perspectives (Eleser & Chauvin, 1998)
Purpose

Describe teaching professors’ and academic professionals’ motivation, challenges, and wisdom of practice

Motivation of practice
1. Motivators (O)
2. Teaching Roles (C)

Challenges of practice
3. Challenges (O)
4. Professional Development Needs (C)

Wisdom of practice
5. Strengths (O)
6. Reflective Thoughts of Teaching (O)
7. Teaching Strategies and Approaches Used (C)
8. Rationale of Teaching Strategies (O)

Identify similarities and differences between closed and open-ended items
Methods

• Online Survey (Dillman, 2000)
  – Census ($N = 242$)
  – 45% ($N = 109$)

• Reflecting on Your Teaching Questionnaire
  – Developed based on review of literature and interviews of 26 expert professors
  – 3 closed-ended questions
    • Teaching roles
    • Professional development needs
    • Teaching strategies
  – 5 open-ended questions
    • Motivation
    • Greatest challenges
    • Assets or strengths
    • Meta-thinking
    • Rationale of methods
  – Demographic questions
  – Face and content validity
    • Field test
    • Expert input
Faculty & Professional Staff \((N = 109)\)

- **Participants**
  - 97 Faculty (89%)
  - 9 Academic Professionals/Other (8%)
  - 3 Visiting (3%)

- **36 students per year \((SD = 59)\)**

- **Instructional units**
  - Fall: 90 units \((SD = 125)\)
  - Spring: 89 units \((SD = 120)\)

- **8 contact hours per year \((SD = 7.4)\)**

- **10 years of teaching in ACES \((SD = 8.8)\)**

- **14 years of teaching in higher education \((SD = 9.7)\)**
  - 2.2 years as TA or post-doctoral instructor \((SD = 2.9)\)
  - 1.2 years of teaching outside of higher education \((SD = 3.79)\)
Data Analysis

• Quantitative
  – Descriptive data; SPSS

• Qualitative
  – Open-coding followed by axial coding (Creswell, 2005)
  – Peer debriefing to monitor biases
  – Procedures used to ensure transferability, dependability, and confirmability (Fraenkel & Wallen, 2003)
Motivation of Practice

Motivation & Roles
“What motivates you as a teacher?”

<table>
<thead>
<tr>
<th>Major Themes (responses &gt;5%)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student learning (during course)</td>
<td>55</td>
</tr>
<tr>
<td>Student growth, development, &amp; success (beyond the course)</td>
<td>34</td>
</tr>
<tr>
<td>Passion for the content</td>
<td>14</td>
</tr>
<tr>
<td>Interacting with students</td>
<td>14</td>
</tr>
<tr>
<td>Professional responsibility</td>
<td>14</td>
</tr>
<tr>
<td>Creating student interest and motivating them to learn</td>
<td>13</td>
</tr>
<tr>
<td>Sharing knowledge</td>
<td>10</td>
</tr>
<tr>
<td>Enjoy teaching/process of teaching</td>
<td>9</td>
</tr>
<tr>
<td>Interested students</td>
<td>9</td>
</tr>
<tr>
<td>Student appreciation/feedback</td>
<td>7</td>
</tr>
</tbody>
</table>

*N = 108*
Student Learning

- Student engagement with and understanding the content: 52%
- Developing students as thinkers: 24%
- Student application of knowledge: 14%
- Other: 10%
Student Growth, Development & Success

- Student growth and development: 14%
- Student success (future): 41%
- Impacting students' lives: 45%
Teaching Roles

- Ranked 1st (Most Important Role)
  - Develop Thinking (1)
  - Teach Knowledge (2)
  - Personal Growth (3)
  - Basic Learning Skills (4)
  - Career Prep (5)
  - Role Model (6)

Percent of Faculty
Challenges of Practice

Challenges & Needs
“What are the greatest challenges you have about teaching”?

<table>
<thead>
<tr>
<th>Major Themes</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student motivation (see next slide for breakdown)</td>
<td>39</td>
</tr>
<tr>
<td>Time (not enough, difficult to balance with research and other responsibilities)</td>
<td>30</td>
</tr>
<tr>
<td>Student diversity (learning styles, educational prep, background, etc.)</td>
<td>14</td>
</tr>
<tr>
<td>Keeping course content current/updated</td>
<td>10</td>
</tr>
<tr>
<td>Communicating content (efficiency, effectiveness)</td>
<td>9</td>
</tr>
<tr>
<td>Extending students’ thinking</td>
<td>8</td>
</tr>
<tr>
<td>Lack of university support</td>
<td>7</td>
</tr>
<tr>
<td>Reaching and inspiring students for life-long learning</td>
<td>7</td>
</tr>
<tr>
<td>Poor teaching facilities</td>
<td>6</td>
</tr>
</tbody>
</table>

*N = 106*
Student Motivation
(as a challenge of teaching)

- Motivating students to learn
- Dealing with students' lack of motivation
- Maintaining student interest
- "Make it interesting" to students
Professional Development Needs

- Teaching for Thinking
- Motivating Students
- Variety of Teaching Strategies
- Instr. Technology
- Tests & Assessments
- Student Differences
- Student Problems & Class Mgt
- Syllabus & Course Design

Frequently & Most Needed (%)
Other Needs \((N = 18)\)

- University emphasis on teaching
- Peer-based evaluation systems
- Recognition for outreach and adult education
- Strategies for active learning
Wisdom of Practice

Strengths
Reflective Thoughts
Teaching Strategies
& Rationale
“What do you do well as a teacher?”

<table>
<thead>
<tr>
<th>Major Themes</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make learning relevant and/or authentic</td>
<td>28</td>
</tr>
<tr>
<td>Am well prepared and/or organized / Well-organized lectures and present lectures clearly</td>
<td>24</td>
</tr>
<tr>
<td>Facilitate interaction/participation/active learning</td>
<td>20</td>
</tr>
<tr>
<td>Able to organize and explain complex content</td>
<td>16</td>
</tr>
<tr>
<td>Foster/develop students' thinking abilities</td>
<td>15</td>
</tr>
<tr>
<td>Am enthusiastic about the subject and/or teaching / Instill enthusiasm</td>
<td>15</td>
</tr>
<tr>
<td>Connect with students</td>
<td>15</td>
</tr>
<tr>
<td>Use multiple teaching strategies / Address diverse learning styles</td>
<td>13</td>
</tr>
<tr>
<td>Care about students and student learning</td>
<td>11</td>
</tr>
<tr>
<td>Develop well-planned and integrated courses</td>
<td>10</td>
</tr>
<tr>
<td>Know material well</td>
<td>10</td>
</tr>
<tr>
<td>Engage during lecture / Engage students in topic</td>
<td>10</td>
</tr>
</tbody>
</table>

N = 109
“What do you do well as a teacher”?

Other Responses
(5-10% of participants, listed descending in order)

- Communicate latest ideas/research
- Teach in laboratory, small group, or one-on-one situations
- Communicate expectations
- Motivate students
- Challenge students / Hold high expectations
- Flexible and accommodating to students' needs
- Use technology and visual aids
- Receptive/responsive to questions
“When you find yourself thinking about teaching, what do you think about?”

- Motivation
- Content/Material
- Student Learning
- Instructor-focused Approaches
- Improvement
- Student-focused Approaches
- Reflection
- Time
- Instructors' Personal Feelings

- Participants
- Comments
Reflective Thoughts on Teaching-
Major Themes and Sub-Themes

**Motivation (42)**
- "Make it Interesting" (17)
- Engaging Students/Promoting interest in class or topic (13)
- Motivating Students (7)
- Intrinsic Motivation (3)

**Student Learning (25)**
- Foster Critical Thinking (8)
- Helping Students Learn (5)
- Reflecting on Student Learning “Are they getting it”? (5)

**Material/Content (33)**
- Keeping content current/Based on latest research (9)
- Content Selection/Organization (9)
- Relevancy of content/Making content useful (7)
- Key Concepts (4)

**Instructor-focused Approaches (23)**
- Delivery (13)
  (How to deliver?... Best ways to deliver…)
- Using new methods/strategies (5)
# Reflective Thoughts on Teaching

## Major Themes and Sub-Themes

<table>
<thead>
<tr>
<th>Instructor/Class Improvement (21)</th>
<th>Student-focused Approaches (20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• How to improve teaching skills (7)</td>
<td>• Fostering interaction/</td>
</tr>
<tr>
<td>• How to improve class (7)</td>
<td>Encouraging group-work (7)</td>
</tr>
<tr>
<td>• How to improve effectiveness (4)</td>
<td>• Developing new activities/</td>
</tr>
<tr>
<td></td>
<td>Using active learning (5)</td>
</tr>
<tr>
<td></td>
<td>• Open discussions (4)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reflection (20)</th>
<th>Time-efficiency/Time concerns (19)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• General Reflection/</td>
<td>• Overall/Personal (11)</td>
</tr>
<tr>
<td>Thoughts of improvement (10)</td>
<td>• In-class time (3)</td>
</tr>
<tr>
<td></td>
<td>• Balance with research/grant-writing (3)</td>
</tr>
</tbody>
</table>
Teaching Strategies Used

- Lecture
- Discussion
- Lab-Based
- Cases & PBL
- Individual Projects
- Cooperative Learning
- Student Presentations
- Web-based & CDs
- Simulations & Games
- Service-Learning

Percent of Faculty

Frequent & Very Frequent Use
“Why do you use the teaching strategies or approaches you use in your instruction?”

<table>
<thead>
<tr>
<th>Major Theme</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effectiveness (see sub-themes)</td>
<td>41</td>
</tr>
<tr>
<td>Motivational</td>
<td>24</td>
</tr>
<tr>
<td>Ease of Use (see sub-themes)</td>
<td>18</td>
</tr>
<tr>
<td>Accommodate diverse learning styles</td>
<td>6</td>
</tr>
<tr>
<td>Impart skills needed for future/career success</td>
<td>6</td>
</tr>
<tr>
<td>Time constraints</td>
<td>6</td>
</tr>
<tr>
<td>Develop critical thinking skills</td>
<td>6</td>
</tr>
<tr>
<td>Increased accessibility to content</td>
<td>6</td>
</tr>
<tr>
<td>Based on learning objectives</td>
<td>6</td>
</tr>
<tr>
<td>“Learning by Doing”</td>
<td>6</td>
</tr>
<tr>
<td>Based on class size</td>
<td>5</td>
</tr>
<tr>
<td>Enable students to apply knowledge/theory</td>
<td>5</td>
</tr>
<tr>
<td>Develop communication/speaking skills</td>
<td>5</td>
</tr>
</tbody>
</table>
Rationale of Teaching Strategies
Sub-Themes

- It Works: 43%
- Works for Me: 12%
- Most Appropriate: 21%
- Best/Most Effective: 24%

Effectiveness
Frequency=42 \( (N=104) \)

Ease of Use
Frequency=18 \( (N=104) \)

- Convenience: 34%
- Habit: 22%
- Tradition: 22%

Effectiveness and Ease of Use are both important considerations for teaching strategies.
Conclusion

- Professors saw their role as developing thinking and teaching content
  - Motivated to teach
    - 27% student engagement with and understanding of content
    - 14% passion for content
    - 10% sharing knowledge
  - Strengths
    - 24% well-organized lectures
    - 15% developing thinking
    - 15% explaining complex content
  - Thinking about teaching
    - 32% thought about content
    - 25% thought about content delivery
  - Teaching strategies
    - 85% used lecture frequently or very frequently
  - Faculty want to maintain in-depth knowledge of content in their field of specialization and general discipline, and improve their skills as an effective teacher (Eleser & Chauvin, 1998)
  - Faculty were not interested workshops on content (Eleser & Chauvin, 1998)
Conclusion²

• Student motivation and differences are at the forefront of teaching challenges and thinking
  – Motivation: 39% challenge, 35% need, 28% strength, 38% thought about, 24% rationale
    • Faculty were interested in sessions on effective strategies to motivate students (Eleser & Chauvin, 1998)
  – Differences: 14% challenge, 12% need, 13% strength, 17% thought about, 6% rationale
    • Faculty were not interested in sessions on incorporating cultural diversity into the classroom (Eleser & Chauvin, 1998)
Conclusion

- Professors were motivated by students and considered student learning
  - Motivated by student: learning (55%), success, development, impact (34%), interaction (14%), who became interested (13%), who were interested (9%), and appreciation (7%)
  - 1/3 used active learning approaches
  - 28% need a variety of teaching strategies
  - 20% reported facilitating learning as a strength
  - 23% thought about student learning
  - 17% thought about student-centered approaches
Conclusion

• Reflection-oriented approach provided themes from professors’ perspectives
  – Open-ended items created an array of responses, but were more insightful
  – Only 3 of the 8 needs were mentioned by 5% or more of faculty as challenges
  – Major discrepancies with conventional needs assessment
    • Developing students’ thinking: Closed-ended (41%) and open-ended (8%)
    • Variety of teaching strategies: Closed-ended (28%) and open-ended (2%)
    • Technology: Closed-ended (24%) and open-ended (<1%)
    • Assessments: Closed-ended (12%) and open-ended (<1%)
  – Motivation – top response in five questions
  – Supported literature
    • How professors think about teaching and learning (Menges & Austin, 2001)
    • Methods that would allow professors to share multiple perspectives (Eleser & Chauvin, 1998)
Faculty Development Model

Reflection-Based Approach

**Energized by Motivation of Practice**
- Intrinsic Motivation
- Roles

**Growth through Problems of Practice**
- Challenges
- Needs

**Rooted in Wisdom of Practice**
- Strengths
- Reflection
- Strategies
- Rationale
Implications

• Build on strengths and roles
  – Organize content for student (thinking) engagement
    • Concepts
    • Contexts

• Focus on student motivation
  – Create interest
  – Make relevant
  – Building confidence
  – Show applications

• Make learning active
  – Transitions in teaching
  – Add visual and social
More to ponder…

• Develop closed-ended questionnaire based on open-ended responses
• Time is a major consideration
  – Organizational & administrative factors
  – Time management workshop for faculty
• Develop list of strengths into a teaching evaluation
• What does “effective” mean to faculty?
• Faculty development until “ease of use”
  – Help develop faculty confidence and comfort in using active learning approaches
• Student assessment (little mentioned, but major role)
• Why a limited use of technology?
• 1/6th of faculty mentioned reflection – a concern?
• Student-run faculty development programs
Thank You

http://lct.aces.uiuc.edu/sotl.html