Trickle-Down Engagement: Maximizing Teacher and Student Engagement in First-Year Courses

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2015-2016 Coffman Chair for University Distinguished Teaching Scholars

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  • Haley Mills and Parker Heinze

• All of our student, staff, and faculty participants
Why do we teach and why do we learn?

• Because it’s awesome!
First-Year Students on Their First Day

• What they are

• What they are not

• What we can do for them
The Importance of Engagement
Engagement

• Cognitive, affective, physiological, and behavioral involvement in a task
  • e.g., Rupayana (2010); Sinatra, Heddy, & Lombardi (2015); Skinner & Belmot (1993); Steele & Fullagar (2009)

• Engaged students and teachers:
  • Are enthusiastic, interested, and psychologically invested in the material
  • Enjoy learning and/or teaching the material
The Focus on Student Engagement

• The experiences and engagement of students in the classroom have been common topics in the scholarship of teaching and learning
  • e.g., Schaufeli et al. (2002); Steele & Fullagar (2009)
The Importance of Student Engagement

- Student engagement is related to:
  - Their interest in the class
  - The value they see in the class
  - How much they look forward to classes AND exams
  - How much they see exams as opportunities to demonstrate learning
  - How positively they feel about the learning environment
  - Their *intrinsic motivation to learn*
Three Components of Teaching and Learning
When I Engaged and Learned Best as a Student
Three Components of Teaching and Learning

- Teachers
- Content
- Students
• “Good teaching cannot be reduced to technique; good teaching comes from the identity and integrity of the teacher.”
  • Parker J. Palmer, *The Courage to Teach*
The Trickle-Down Engagement Model
The Trickle-Down Engagement Model

- Teacher Engagement
- Student Engagement
- Student Learning
Trickle-Down Engagement

• Theoretical and empirical foundations
  • Positive psychology
    • e.g., Fredrickson (2001); Sheldon & King (2001)
  • Self-determination theory
    • e.g., Deci & Ryan (1985); Eisenberger & Cameron (1996)
  • Research on intrinsic/extrinsic motivation
    • e.g., Deci, Koestner, & Ryan (1999); Ryan & Deci (2000)
  • Emotional contagion
    • e.g., Hatfield, Cacioppo, & Rapson (1994)
Our Research Program

• To investigate the under-appreciated impact of faculty’s engagement in teaching on students’ engagement in learning

• Sources of data:
  • General Psychology students
  • K-State First students
  • K-State First faculty
  • Kansas State Book Network (KSBN)
  • Teaching faculty at K-State
  • Faculty who won recent teaching awards at K-State
Student Perceptions of Trickle-Down Engagement
What do students want in their teachers?

N = 355 General Psychology students
Do students believe in trickle-down engagement?

When my instructor is more engaged in the class material, I am more engaged in the class material.

When my instructor is more engaged in the class material, I learn the class material better.

N = 110 General Psychology students
Support for the Trickle-Down Engagement Model
Perceptions of Instructor and Student Engagement (1st sample)

• $N = 195$ General Psychology students (sampled weekly)

• Correlations between perceptions of instructor and student engagement:
  
  • Student reports: $r = .32^{**}$
  
  • Instructor reports: $r = .60^{**}$
Students’ Perceptions of Engagement (2\textsuperscript{nd} sample)

<table>
<thead>
<tr>
<th>Student’s Perceptions</th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
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<tbody>
<tr>
<td>1. Instructor Engagement</td>
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<td></td>
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<td></td>
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<tr>
<td>2. Student Engagement</td>
<td>.49**</td>
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<tr>
<td>3. Study Engagement</td>
<td>.29**</td>
<td>.50**</td>
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<td></td>
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<tr>
<td>4. Final Grade</td>
<td>.14*</td>
<td>.29**</td>
<td>.15*</td>
<td></td>
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</tbody>
</table>

\[ N = 210 \text{ General Psychology students (sampled at each exam)} \]

* \( p < .05 \), ** \( p < .01 \)
Students’ Perceptions of Engagement (2nd sample)

$N = 210$ General Psychology students (sampled at each exam)
Students’ Perceptions of Engagement (2nd sample)

- Student Engagement
  - c = .18* (c’ = .003)
  - Indirect Effect = .18 [0.09, 0.30]

N = 210 General Psychology students (sampled at each exam)
## Students’ Perceptions of Engagement (KSBN sample)

<table>
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<tbody>
<tr>
<td>1. Teacher Engagement</td>
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<td></td>
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<tr>
<td>2. Student Classroom Engagement</td>
<td>.65**</td>
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<tr>
<td>3. Student Book Engagement</td>
<td>.65**</td>
<td>.77**</td>
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<tr>
<td>4. Quiz Score</td>
<td>.36**</td>
<td>.57**</td>
<td>.46**</td>
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<tr>
<td>5. Community Around Book</td>
<td>.77**</td>
<td>.72**</td>
<td>.58**</td>
<td>.38**</td>
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</tbody>
</table>

*N = 193 General Psychology students (regarding their experiences with KSBN)

**p < .01
N = 193 General Psychology students (KSBN)
N = 193 General Psychology students (KSBN)
Teachers’ Perceptions of Trickle-Down Engagement
Teacher Engagement and Its Importance

• 1,117 active K-State teachers invited
• 316 responses (28%)
• 221 fully completed surveys (20%)
  • 57% male, 42% female
  • Instructor level to full professor
  • All levels of undergraduate courses and formats (61.6% lecture format)
Teachers’ intrinsic motivation to teach?

I teach because I want to.
$M = 7.80$, $SD = 1.59$

I teach because I have to.
$M = 3.53$, $SD = 2.62$
Do teachers believe in trickle-down engagement?

- Trickle-down engagement measure
  - 5 item measure; $\alpha = .82$
  - E.g., Students are more engaged in the classroom when teachers display their passion about the material

- $M = 7.45$, $SD = 1.15$
Do teachers believe in their ability to engage?

- Engagement Self-Efficacy
  - 6 item measure; $\alpha = .87$
  - E.g., I am able to get my students engaged in the classroom.
  - $M = 6.59, SD = 1.28$
Teachers’ Experiences with Trickle-Down Engagement
Is teacher engagement important?

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<tr>
<td>1. Trickle-Down Engagement</td>
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<tr>
<td>2. Engagement Self-Efficacy</td>
<td>-.48**</td>
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<tr>
<td>3. Positive Experiences</td>
<td>.44**</td>
<td>.48**</td>
<td></td>
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<tr>
<td>4. Negative Self-Directed Experiences</td>
<td>-.15*</td>
<td>-.35**</td>
<td>-.35**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Negative Other-Directed Experiences</td>
<td>-.32**</td>
<td>-.37**</td>
<td>-.39**</td>
<td>.57**</td>
<td></td>
</tr>
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* p < .05, ** p < .01
The Importance of Teachers’ Own Engagement
Is teacher engagement central to their self-concepts?

• Contacted 103 award-winning teachers
• 63 participated (61%)

• Descriptions of themselves as teachers
  • Please list five words that describe you as a teacher.

• 288 descriptors identified and coded for 11 emergent traits by two independent coders
  • kappa = .78
## Teacher Personas

<table>
<thead>
<tr>
<th>Trait</th>
<th>Percent of All Traits Listed</th>
<th>Percent of Teachers Listing the Trait</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engaging</td>
<td>24.0</td>
<td>79.3</td>
</tr>
<tr>
<td>Warm</td>
<td>19.8</td>
<td>67.2</td>
</tr>
<tr>
<td>Competent</td>
<td>24.3</td>
<td>81.0</td>
</tr>
<tr>
<td>Challenging</td>
<td>5.6</td>
<td></td>
</tr>
<tr>
<td>Dedicated</td>
<td>7.6</td>
<td></td>
</tr>
<tr>
<td>Funny</td>
<td>1.7</td>
<td></td>
</tr>
<tr>
<td>Fair</td>
<td>4.2</td>
<td></td>
</tr>
<tr>
<td>Creative</td>
<td>4.5</td>
<td></td>
</tr>
<tr>
<td>Goal-Directed</td>
<td>1.7</td>
<td></td>
</tr>
<tr>
<td>Clear</td>
<td>2.8</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>3.8</td>
<td></td>
</tr>
</tbody>
</table>
 Traits Reported

- Warm
- Competent
- Engaging
How to Increase Engagement
How do teachers engage (preparing for class)?

• Prepare active learning strategies
  • Plan activities, questions for discussion, visuals/videos/tech

• Contextualize the content
  • Consider the audience; use relevant examples, current events, up to date research; focus on course objectives, connections, transitions
How do teachers engage (preparing for class)?

• Anticipate and prepare for interactions with students
  • Learn names, anticipate pre-class small talk, prepare (strong) opening remarks, prepare to listen

• Prepare oneself to teach
  • Be alert, rested, presentable, happy (“dance”, “coffee”); practice, familiarize self with content
How do teachers engage (during class)?

• Use active learning strategies
  • Activities, questions for discussion, visuals/videos/tech, case studies, group work

• Manage the flow of information
  • Brisk/varied pace, breaks/pauses/quiet, pay attention to the energy, switch it up, stay on target
How do teachers engage (during class)?

• Collaborate with the students
  • Find out about students, solicit examples, hold students accountable, assess/evaluate learning, reinforce student engagement

• Manage emotions and behavior
  • Display/manage emotions; show passion, enthusiasm, confidence, energy; be in the moment
  • Smile, make eye contact, use students’ names, walk around, use humor, model engagement
A Simple Method for Increasing Engagement

• $N = 178$ General Psychology students watched different versions of a mock lecture:
  • Engaged cue statements
    • e.g., *This finding is really interesting*...
  • Disengaged cue statements
    • e.g., *This finding isn’t really all that surprising*...
  • Control condition
    • e.g., no cue statements

• We assessed perceptions of the lecturer’s engagement, student engagement, and students’ performances on a quiz
Indirect Effect = \(0.85 \pm 1.66\)

\[c = -0.57 \quad (c' = -0.57)\]

** \(p < 0.01\)
In Conclusion
Summary of Our Results

• We have empirical support for our trickle-down engagement model

• Teacher and student engagement are positively correlated
  • And predict student performance

• Teacher engagement is important for their self-concepts and experiences
  • And teachers report engaging their students by displaying their own engagement

• Teacher and student engagement can be collectively enhanced
Implications for Teaching First-Year Students

• By enhancing the experience and expression of our own engagement in teaching, we can model students’ engagement in their learning

• We have the opportunity to set the norms for their educations

• More than just teaching them content, we can teach them to love to learn

• Thank you!
Questions for Discussion

• How will you engage yourself and your students?
  • What will you do to prepare your class overall?
  • What will you do to prepare for your first class meeting?
  • What will you do in your first class meeting?
  • What will you do in your classes daily?

• Questions?
  • Email Don Saucier at saucier@ksu.edu for further questions and/or a copy of this presentation.