Development of a Survey Instrument to Measure Students’ Resistance to Active Learning

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Introduction

• Adoption of active learning has been slow
• Student resistance can be a major barrier to adoption (Cutler & Borrego, 2014)

Expectation Violation Theory suggests link between student resistance and a mismatch of students’ expectations (Gaffney et al., 2010)

Elements of Our Protocol

Section 1

• Construct of productive engagement (Chasteen, 2014)
• Participation – Active engagement vs. student resistance (alpha=0.71) (Weimer, 2013)
• Value of investment (alpha=0.74)
• Emotional engagement (alpha=0.84)

Section 2

• Approaches to reducing student resistance (alpha=0.76) (Bacon et al., 1999; Van Barneveld & Strobel, 2011; Yadav et al., 2011)
• Global course/instructor satisfaction (alpha=0.85)

Section 3

• Pedagogical Expectancy Violation Assessment (PEVA) - Students’ expectancies about course experiences (Gaffney et al., 2010)
• Interactive or dialoguing, Constructive or generating, Active or selecting, and Passive or receiving (ICAP) Model Framework (Chi, 2009)
• Measures both actual and ideal course experiences (alphas>0.71)

Validation of Protocol

• Reliability and Validity
• Cognitive interviewing with approximately 15 students at 4 institutions
• Piloted protocol with over 200 students at 3 institutions
• Additional validation through expert review and confirmatory factor analysis

Initial Results

• Initial results from students’ responses to our four piloted courses
• Two active learning and two traditional (lecture-based) courses

Table 2: Mean Scores of Constructs by Instructional Style

<table>
<thead>
<tr>
<th>Active Learning</th>
<th>Traditional Instruction</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passive Resistance</td>
<td>2.309</td>
<td>2.218</td>
</tr>
<tr>
<td>Partial Compliance</td>
<td>2.585</td>
<td>2.857</td>
</tr>
<tr>
<td>Open Resistance</td>
<td>1.538</td>
<td>1.667</td>
</tr>
<tr>
<td>Active Participation</td>
<td>3.930</td>
<td>3.813</td>
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<tr>
<td>Value Construct</td>
<td>3.809</td>
<td>3.476</td>
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<tr>
<td>Emotional Construct</td>
<td>3.008</td>
<td>2.635</td>
</tr>
<tr>
<td>Global Course Satisfaction</td>
<td>4.156</td>
<td>3.518</td>
</tr>
</tbody>
</table>

Future Directions

• Five courses in our research study for the current term
• National, 20-course study, supplemented by faculty surveys and faculty interviews

References


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