Learning Styles across Three Course Delivery Modes

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NACTA 2017 Conference
• How are learning styles and sense of classroom community related
• Implications for course delivery modes in rural business leader development
Learning Styles

• **Independent** - learners prefer self-paced instruction and to work alone more than with other students on course projects.

• **Dependent** – look to teachers and peers for guidance and prefer an authority figure to tell them what to do.

• **Competitive** – learn in order to distinguish themselves by virtue of their performance and to receive recognition.

• **Collaborative** – acquire information by sharing and cooperating with teachers and peers. Small group discussion and group projects are enjoyed.

• **Avoidant** – not enthusiastic about attending class or acquiring content. Overwhelmed by class activities.

• **Participant** – interested in class activities, eager to do as much work as possible. Aware of and desire to meet teacher expectations.

• **Grasha scale**
Sense of classroom community

- **Spirit** – feeling of belonging to and acceptance of group identity
- **Trust** – group members will give feedback to each other
- **Interaction** – learners believe they will benefit by interacting with class members
- **Learning** – knowledge is constructed by the community discussing information
Sample

- Fourth year class; second year class
  - Two midwestern universities
  - One two-year college
  - Same topical content; assessments varied between 2- and 4-year students; same presentation
- Convenience sample of 66 students
  - 54 enrolled online (19 participated – 35%)
  - 15 enrolled in distance (15 participated – 100%)
  - 47 enrolled in classroom (32 participated – 68%)
- One semester; looking for more (6 successful completions in summer; 9 attempts; 22 enrolled; 41% participation)
## Observed Learning Styles

<table>
<thead>
<tr>
<th>Learning style</th>
<th>Classroom-based</th>
<th></th>
<th>Online</th>
<th></th>
<th>Distance</th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Std. Dev.</td>
<td>Mean</td>
<td>Std. Dev.</td>
<td>Mean</td>
<td>Std. Dev.</td>
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<tr>
<td>Competitive</td>
<td>2.42</td>
<td>0.46</td>
<td>2.72</td>
<td>0.26</td>
<td>2.23</td>
<td>0.56</td>
</tr>
<tr>
<td>Avoidant</td>
<td>2.86</td>
<td>0.62</td>
<td>2.57</td>
<td>0.42</td>
<td>2.68</td>
<td>0.53</td>
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<tr>
<td>Independent</td>
<td><strong>3.42</strong></td>
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<td><strong>3.41</strong></td>
<td>0.26</td>
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<tr>
<td>Collaborative</td>
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<td><strong>3.61</strong></td>
<td>0.55</td>
<td><strong>3.81</strong></td>
<td>0.48</td>
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<tr>
<td>Dependent</td>
<td>3.55</td>
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<td>3.62</td>
<td>0.31</td>
<td>3.57</td>
<td>0.40</td>
</tr>
<tr>
<td>Participant</td>
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<td>0.57</td>
<td>3.67</td>
<td>0.35</td>
<td>3.50</td>
<td>0.39</td>
</tr>
</tbody>
</table>
Delivery Mode and Learning Style Correlations

• Classroom:
  – Independent and participant (-0.33; p=0.08)
  – Avoidant and participant (0.78; p=0.01)
• Online:
  – Independent and participant
    • (0.70; p=0.03)
• Distance:
  – Independent and avoidant (0.52; p=0.06)
  – Dependent and avoidant (0.54; p=0.05)
• Delivery modes are different
# Observed Sense of Community

<table>
<thead>
<tr>
<th>Category</th>
<th>Classroom-based</th>
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<tr>
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<td>Mean</td>
<td>Std. Dev.</td>
<td>Mean</td>
<td>Std. Dev.</td>
</tr>
<tr>
<td>Trust</td>
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<td>4.81</td>
<td>29.09</td>
<td>3.81</td>
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<td>4.41</td>
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<td>Interaction</td>
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<td>37.86</td>
<td>4.26</td>
<td>38.47</td>
<td>5.68</td>
</tr>
</tbody>
</table>

All four community sense types are positively correlated (with statistical significance).
# Mean Learning Style and Community Sense

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<tr>
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<th>Spirit Mean</th>
<th>Spirit Std Dev</th>
<th>Trust Mean</th>
<th>Trust Std Dev</th>
<th>Interaction Mean</th>
<th>Interaction Std Dev</th>
<th>Learning Mean</th>
<th>Learning Std Dev</th>
</tr>
</thead>
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<tr>
<td>Independent</td>
<td>3.64</td>
<td>0.51</td>
<td>3.10</td>
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<td>3.37</td>
<td>0.33</td>
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<td>0.36</td>
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<td>2.67</td>
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<td>0.46</td>
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<td>Collaborative</td>
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<td><strong>3.59</strong></td>
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Similarities and Differences

- Classroom and Distance
  - Lowest learning style score was the same when students had direct interaction with instruction (competitive); lowest score is different for online, but not statistically different
  - Lowest community sense score is the same (trust); it is different for online (spirit)

- Greatest community sense score is the same for all three modes (learning)
Similarities and **Differences**

- Classroom and online had independent learning style correlated with participant learning style, but in opposite direction.
- Independent learning style is correlated with different learning style between classroom and distance (participant vs. avoidant).
- Spirit is the only community sense that is statistically different across delivery modes. It is greater in classroom than online.
Conclusions

• Naïve interpretation: classroom students usually comprised of “collaborative” learning style students who like to construct knowledge in the classroom
  – Collaborative means sharing and cooperating with teachers and peers

• Strongest style is **collaborative** learning style who **trusts** peers or others that give feedback
  – No one delivery mode meets learning activity preferences for this learning style than another
Implications

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  - Coaching, problem-based learning, self-discovery activity would fare well in the class. A role for business leaders in the classroom (case, Skype, panel)
  - If these results generalize, what instructional techniques useful to provoke this
    - Starting a business
    - Professional training
  - Is there a tradeoff between group size and learning style, since this is correlated with community?
    - Collaborative trusters (positive correlation)
    - Learning correlated with spirit, trust, interaction
    - Manage with small-group discussions