How Does it Measure Up?

Assessing Student Learning in Online Versus Face-to-Face Instruction

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Research Question
Does synchronous online instruction through web conferencing result in similar student learning outcomes as traditional face-to-face (F2F) instruction?

Literature Review
There is no library literature comparing student learning between one shot F2F and synchronous online instruction. Other themes include:
- Asynchronous Online Instruction and F2F Instruction result in equivalent student learning
  - Anderson and May, 2010
  - Shaffer, 2011
  - Zhang et al., 2007
  - Silk et al., 2015

Implementation of Synchronous Online Instruction, no measurement of student learning
- Carlson, 2011
- Kontos and Henkel, 2008
- Nicholson and Eva, 2011
- Smith and O’Hagan, 2014

Full reference list available at tinyurl.com/lantzyala

Timeline
- Spring 2015: Literature Review
- Fall 2015: Study Design
- Spring 2016: Data Collection
- Summer 2016: Poster Development

Timeline:
- Assessment in Action Application
- IRB Application
- Creation of Assessment Tools
- Instruction
- Data Collection
- Data Analysis
- Data Visualization
- Poster Development
- Poster Peer-review

Study Design
- Two hybrid (in-person and online) sections of Kinesiology 306: Exercise Fitness & Health
- 75-minute library instruction session either F2F or through web conferencing
- 32 students per section, 64 total
- Groups received identical pre-tests at the beginning of class and identical post-tests at the end of class
- Tools measured the ability to distinguish between different source types of online health information: popular, authoritative, & scholarly

Pre- and Post-test Results

<table>
<thead>
<tr>
<th>Instruction Method</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>F2F</td>
<td>60.5</td>
<td>94.4</td>
</tr>
<tr>
<td>SOI</td>
<td>68.3</td>
<td>94.0</td>
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</tbody>
</table>

Survey Results
Weighted survey responses (scale 1-5) reflect a positive learning experience in both groups.

<table>
<thead>
<tr>
<th></th>
<th>Clarity of Instruction</th>
<th>Instructor Responsiveness</th>
<th>Confidence after Instruction</th>
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</thead>
<tbody>
<tr>
<td>F2F</td>
<td>4.77</td>
<td>4.80</td>
<td>4.70</td>
</tr>
<tr>
<td>SOI</td>
<td>4.74</td>
<td>4.85</td>
<td>4.59</td>
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</tbody>
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Conclusions and Practical Implications
This assessment project demonstrates that regardless of whether one shot library instruction is delivered face-to-face or through web conferencing, information literacy instruction led by a librarian leads to significant student learning. This is an important finding for librarians who want to provide online instruction to distance students that is on par with traditional, F2F instruction.

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