Enhancing Teaching Effectiveness and Student Learning: The Teaching Resource Center’s Course Design Institute

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Course Design Institute

During the Institute, participants...

- design or redesign a course built on learner-centered design principles
- develop a final or near-final syllabus
- learn how to apply research-based teaching and learning principles to design other courses.
Annual participation

N=215
Participant profile

N=215

- Humanities, 45
- Social Sciences, 25
- Medicine, 19
- Nursing, 11
- Engineering, 24
- Sciences & Math, 31
- Other, 22
- Architecture, 3
- Business/Commerce, 7
- Education, 22
- Educational Developers, 5
Participants’ perceptions & satisfaction

Overwhelmingly positive participant feedback:

- Overall, 215 participants rated the 2008-2014 Institutes 4.76/5.00.
- 100% of participants said they would recommend CDI to a colleague.

Representative comments:

- This is by far the best teaching workshop I have ever attended. The content was interesting and the instructors really practiced what they preached with respect to learning techniques.

- The institute gave me life! And it totally changed my approach to course design and teaching.

- In two words: [the CDI experience was] life-altering. This may seem overblown, but it is 100% true. I came in thinking I had a handle on my course, but realized very soon I needed to go back to the drawing board. The result is exponentially improved.
Participants’ practices

Rubric quantitatively scores syllabi using criteria typical of learning-centered environments:

1. learning goals and objectives
2. assessment activities
3. learning activities
4. schedule
5. overall learning environment
Pre-CDI

learning-focused: 2 (6.1%)

transitional: 7 (21.2%)

content-focused: 24 (72.7%)

* 2nd CDI
Post-CDI

- learning-focused: 21 (63.6%)
- transitional: 10 (30.3%)
- content-focused: 2 (6.1%)
average gain = 60.0

- high-gain: 13 (39.4%)
- moderate-gain: 14 (42.4%)
- low-gain: 5 (15.2%)
- no-gain: 1 (3.0%)

% Gain = (post - pre)/(46) * 100

% Pre-CDI Score = (pre/46) * 100
### Statistics

<table>
<thead>
<tr>
<th>Criterion</th>
<th>$t(32)$</th>
<th>$p$</th>
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<tbody>
<tr>
<td>Overall</td>
<td>10.41</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Learning Goals &amp; Objectives</td>
<td>7.53</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Assessment Activities</td>
<td>8.05</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Schedule</td>
<td>2.65</td>
<td>.006</td>
</tr>
<tr>
<td>Overall Learning Environment</td>
<td>10.62</td>
<td>&lt; .001</td>
</tr>
</tbody>
</table>

$H_0$: post-CDI syllabi scores are not greater than pre-CDI syllabi scores
Adapting and scaling CDI

- Demographic-specific CDIs (e.g. Nucleus, Hybrid Challenge)
- Condensed-format CDIs
- Online CDI: c³Design
**c³Design**

### User-controlled interaction
- Computer-controlled interaction
- Computer-generated, user-modifiable output
- Integration map processing and analysis
- Database storage, retrieval
- Syllabus component

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**Determine scope (e.g. class, course, or curriculum) & delivery mode (e.g. self-guided, blended, social media)**

**Learning Goals**

1. **Assessment of Learning**
   - Situational Factors
   - Tutorials, resources, worksheets, templates

2. **Learning Goals**
   - Knowledge check
   - Convert to learning objectives
   - Develop learning objectives

3. **Learning Activities**
   - Knowledge check
   - Develop macro assessments
   - Develop learning activities

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**Syllabus component**

- Tutorials, resources, worksheets, templates
- Store data; identify similar courses from database
- Create description
- Create objectives
- Create activity plan
- Schedule
- Post-assessment; syllabus analysis

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**Integration map**
- Add to integration map; analyze
- Create macro assessments
- Create objectives
- Create activity plan
- Schedule
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