Instructional Design Resources

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The Dick, Carey and Carey Model

The Dick, Carey and Carey model is a guide for sound instructional design.

1. **Assess needs to identify goals:**
   Conduct a needs assessment and determine what you want learners to be able to do when they have completed the instruction.

2. **Conduct instructional analysis:**
   Determine each instructional step and sub-step that will be used to assist the learner reach the predetermined goal.

3. **Analyze learners and context:**
   Analyze learners' skills, preferences/attitudes, characteristics of the instructional setting and the setting in which the skills will eventually be used.

4. **Write performance objectives:**
   Write specific statements about what learners will be able to do when they complete the instruction. This should be done at the course level, module level and topic level.

5. **Develop assessment instruments:**
   Develop assessment to measure learner's ability to perform what is described in the objectives.

6. **Develop instructional strategy:**
   Strategy could include preinstructional activities, presentation of information, practice and feedback, testing and follow-through activities. The choice of strategy is dependent on current knowledge of learning research, learning process, content and learners.

7. **Develop and select instructional materials:**
   Choose existing materials or develop new materials, which typically include a textbook, instructional materials, tests and instructor's guide.

8. **Design and conduct formative evaluation:**
   Find out what your students thought of your course. In addition to the UT Dallas student survey completed at the end of the semester, solicit informal feedback.
9. **Revise instruction:**
Determine and eliminate barriers students may have had achieving the learning objectives. Refine instructional materials and techniques.

10. **Conduct summative evaluation:**
Instructional designers review the course materials, student critiques and instructor feedback on the course. Recommendations are made for course improvement.

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**Top 10 Course Design Considerations**

1. **Design, develop or choose an existing interface.**
The course interface should be user-friendly and intuitive for the learner.

2. **Chunk content.**
Present your content in smaller chunks. Try 10 to 15 minute lectures and then vary the strategy (have students do an exercise and respond to a discussion question on the bulletin board).

3. **Organize content visually.**
Use intuitive icons, readable text formatted for computer display, color, pictures, animations and charts.

4. **Use interactive teaching and learning strategies.**
Include interaction with instructor, other students, the content and media. Use panel discussions, role-play, small group brainstorming and reporting, student presentations and virtual teams.

5. **Get some technology training.**
Before teaching online, give students an orientation to the online tools or provide an online tutorial for using the online tools.

6. **Include communication tools such as bulletin boards, chat rooms and white boards.**
The instructor's role should include being a facilitator. Assign students to teams, pick group leaders to coordinate exercises and guide discussions.

7. **Consider student-centered approaches and self-directed learning strategies.**
Identify the students' level of self-directed autonomy (dependence, interest, involvement and self-direction), serve as a motivator and guide and attempt to move them to the next level (e.g., from interested to involved).

8. **Use authentic assessment strategies such as papers, projects and portfolios along with traditional assessment measures.**
Typical objective tests have one right answer. Authentic assessment strategies include the coordination and integration of many aspects of knowledge and skills including critical thinking ability. Students should be given assignments and assessments that require them to use their knowledge to identify and address enduring and emerging issues and problems in their disciplines.2

9. **Build rapport with the learners. Distance learners often feel isolated.**
Use streaming media to retain the "live" presentation in a classroom. Encourage student discussion on the bulletin board. Respond to students on the bulletin board along with encouraging students to respond to other students' questions. Put students in small discussion groups or teams to brainstorm or create a solution to a problem.

10. **Provide appropriate infrastructure for learning.**
Students must have access to libraries and other resources online. Admissions, registration and technical support must be user-friendly. Quick resolution of technical issues is very important. Institutional strategic vision and administrative support is required.
Estimated Time It Takes To Develop Materials

<table>
<thead>
<tr>
<th>Activity</th>
<th>Number of materials</th>
<th>Estimated Time for each</th>
<th>Total time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Syllabus</td>
<td>1</td>
<td>4 hours</td>
<td>4 hours</td>
</tr>
<tr>
<td>Development of learning objectives</td>
<td>30</td>
<td>10 min</td>
<td>5 hours</td>
</tr>
<tr>
<td>Textbook selection</td>
<td>1</td>
<td>1 hour</td>
<td>1 hour</td>
</tr>
<tr>
<td>20-minute lecture</td>
<td>18</td>
<td>4 hours</td>
<td>72 hours</td>
</tr>
<tr>
<td>20-minute preproduced video</td>
<td>3</td>
<td>1 hour</td>
<td>3 hours</td>
</tr>
<tr>
<td>Assignment</td>
<td>3</td>
<td>4 hours</td>
<td>12 hours</td>
</tr>
<tr>
<td>Test</td>
<td>2</td>
<td>4 hours</td>
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<tr>
<td>Self quiz</td>
<td>10</td>
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<tr>
<td>Development of discussion board questions</td>
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</tr>
<tr>
<td>Review materials</td>
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<td>13 hours</td>
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<tr>
<td>Upload materials</td>
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<td>-</td>
<td>5 hours</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>128.5 hours</strong></td>
</tr>
</tbody>
</table>

Learning Objectives

- [Bloom's Taxonomy](#)
- [Learning Objectives (CMU)](#)
- [Tips on Writing Course Goals/Learning Outcomes and Measurable Learning Objectives (ISU)](#)

1. Content on this page is a summary of key ideas in the paper, "Let's Consider the Learner! Top 10 Course Design Considerations," by Kim Dooley, Lance Richards and James Lindner of Texas A & M University, 2002 Distance Education Conference Proceedings, Center for Distance Learning Research.