Back to Basics
Designing and assessing library instruction
Workshop for CCLI 2020
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Learning outcomes
• Describe elements of key models for instructional planning, design and assessment
• Apply principles to actual instruction program
• Identify relevant measures for assessing instructional effectiveness

The objective of education is learning, not teaching.

Ackoff & Greenberg,
Turning Learning Right Side Up (2008)
Start with the learner

- Learner analysis
- Learning theories
- Learning styles
- Learning context

What do we need to know about our students?

- Demographics
- Learning styles
- Information processing styles
- Communication styles
- Experience, preferences, expectations
- Habits, emotions
- Social norms, value systems, beliefs
- Collectivist versus individualist societies

Learner analysis

We are different

- Experiences
- Personalities
- Talents & skills
- Culture
- Genetic
We are the same

- Groups we belong to
- Cultures, teams, age groups...
- Cultural norms
- Behaviors

We can change

- Ages and stages of life
- Changing as we experience and learn new things

Yet we can stay the same

Your best friend from second grade who hasn’t changed all that much...
Learning styles

VARK
- Visual
- Auditory
- Read/Write
- Kinesthetic

Fleming & Mills, 1992

Many others...
- Multiple intelligences
  (Gardner, 1983)
- Learning Style Inventory
  (Kolb, 1984)
- Learning Styles Questionnaire
  (Honey & Mumford, 1989)

Activity #1

- Compare data on college enrollment
- What do you know about these learners?
- Fill out worksheet
- Discuss
Elements of instruction planning

- What do we know about our learners?
- What do learners need to know/learn?
- What activities and materials will we use?
- How will we evaluate and revise instruction?
- How will we assess student learning?

Learning objectives: ABCD method

- Audience
- Behavior
- Conditions
- Degree

Learning outcome example
Encourage higher-level learning when you can

Lower level: memorizing facts and concepts

Higher level: thinking critically, solving problems

Bloom's Taxonomy

Bloom's Taxonomy verb wheel

https://elearningcentralia.wordpress.com/2012/05/31/blooms-taxonomy-and-the-verb-wheel/
ACRL Information Literacy Framework

- Authority Is Constructed and Contextual
- Information Creation as a Process
- Information Has Value
- Research as Inquiry
- Scholarship as Conversation
- Searching as Strategic Exploration

--ACRL 2016

http://www.ala.org/acrl/standards/ilframework

Bad example

"Using their hands, the students will be able to clap the rhythm of 'Mary Had a Little Lamb' with 90% accuracy"

Problems?
Bad example

“Using their hands, the students will be able to clap the rhythm of ‘Mary Had a Little Lamb’ with 90% accuracy”

Problems?
- “Using their hands”: unnecessary
- “Will be able to clap” can’t be seen
  - Better: “will clap”
- What does a student have to do to achieve 90% accuracy? Can the instructor tell?

Higher level learning examples

“The learner will analyze websites to determine the kinds of information they contain”

“The learner will evaluate websites to determine which is best for his or her purpose”

“The learner will create a site that directs others to different kinds of information on hypertension”

Activity #2

- Select an instructional need to fill
- Construct learning outcomes
- Fill out worksheet
- Discuss
Designing instruction

Merrill's Principles of Instruction

<table>
<thead>
<tr>
<th>Integration</th>
<th>Activation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem/Task</td>
<td></td>
</tr>
<tr>
<td>Application</td>
<td>Demonstration</td>
</tr>
</tbody>
</table>

Engaged in solving real-world problems
Activation
Recall existing knowledge, experience

Knowledge is demonstrated

Knowledge is applied
Knowledge is integrated

Instructional modes, formats

- Synchronous-async
- Remote – F2F
- Paper – video – podcast
- Static – interactive
- Demonstration modes
- Activities
- Assessments
- Etc…

About these choices…

- Audience level – characteristics (age, education, skills, etc.)
- Audience size
- Mode/format (synchron vs. asynch, remote – F2F etc.)
- Institutional expectations
- Budget
- Technology
- Time for preparation, learning
- Facilities – space, equipment for development, delivery
- And more…
Activity #3

- Thinking about the instructional outcomes you designed earlier, how might you apply Merrill's principles?
- Fill out worksheet.
- Discuss

Evaluating instruction

- Theory of change - logic model
- Kirkpatrick's model for evaluating training

Logic models

- What is a logic model?
  - Describes relationships among project elements
  - Illustrates details of project plan
- Benefits
  - Document inputs, activities, outcomes
  - Clarify understanding
  - Facilitate planning

| Resources | Activities | Short-term outcomes | Long-term outcomes |
Elements of a logic model

- **Resources**
  - aka inputs
  - funding, personnel, facilities

- **Activities**
  - specific actions that make up program

- **Short-term outcomes**
  - outputs

- **Long-term outcomes**
  - impact

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Example of a logic model for an instructional program

- **Resources**
  - funding
  - teaching staff
  - classroom
  - computers
  - supplies

- **Activities**
  - develop lesson
  - teach students
  - assess learning

- **Short-term outputs**
  - # students reached
  - # contact hours

- **Long-term outcomes**
  - growth in learning
  - change in behavior
  - user satisfaction

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Evaluation questions

- Quality of training?
- What did participants learn?
- Did participants use what they learned?
- How useful are resources?
- What was impact of training on students near-term?
- Impact of program on students long-term?
A model for evaluating training

**Level 1: Reaction**
- Did participants react favorably to training? Why/not?
- Room comfortable? Subject engaging?

**Level 2: Learning**
- Knowledge acquired? Attitudes changed?
- Skills improved?

**Level 3: Behavior**
- What on-the-job behaviors changed as a result of training?
- To what degree were outcomes reached as result of training?

**Level 4: Results**
- Final impact of training on organization


Assessment measures & techniques

- Observation (reaction, learning)
- Satisfaction survey (reaction)
- Pre-post test: knowledge (learning)
- Follow-up survey: skills, abilities, application (learning, behavior)
- Follow-up survey: long-term impact (behavior, impact)

Assessment examples

### Workshop Evaluation Table

<table>
<thead>
<tr>
<th>Statement</th>
<th>Extremely Satisfied</th>
<th>Very Satisfied</th>
<th>Neutral</th>
<th>Very Dissatisfied</th>
<th>Extremely Dissatisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge of subject</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Application of subject</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Final impact</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Would recommend</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>What could be improved</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

(Preceding page)

- Observation (reaction, learning)
- Satisfaction survey (reaction)
- Pre-post test: knowledge (learning)
- Follow-up survey: skills, abilities, application (learning, behavior)
- Follow-up survey: long-term impact (behavior, impact)
Assessment examples

- Assessing reaction to instruction
- Assessing knowledge & skills: MANY techniques! See Angelo & Cross
- Quizzes
- Assessing attitudes, values, self-awareness
- Individual, group feedback

Assessment techniques

- Assessing reaction to instruction
- Assessing knowledge & skills: MANY techniques! See Angelo & Cross
- Quizzes
- Assessing attitudes, values, self-awareness
- Individual, group feedback

Wrapping up

- Learning versus teaching
- Know your students
- Activities that enable learning (Merrill)
- Learning outcomes: higher order learning
- Program logic model
- Levels of training evaluation (Kirkpatrick)

QUESTIONS?
References & resources


Resources (continued)


Thanks for attending!

Contact me with questions, comments:
Jen Sweeney
jksweeney572@gmail.com
ACTIVITY #1

What do you know about the students at Spokane Community College and Antelope Valley College?

<table>
<thead>
<tr>
<th></th>
<th>Antelope Valley</th>
<th>Spokane</th>
</tr>
</thead>
<tbody>
<tr>
<td>How old are students?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What is the gender breakdown?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What racial/ethnic groups are represented?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>How much prior education do students have?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What are they studying?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>How many are employed while in school?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What kind of special populations can you identify?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

What else would you want to know about these students?
ACTIVITY #2

Using what you know about SCC and/or AVP, select an instructional need to fill. Who is the audience? Write a broad, overall goal for your instruction: what do you want students to learn? Why is this goal important? Using the ABCD method and/or Bloom’s taxonomy, draft three or four higher level learning outcomes to achieve this goal.

Audience:

Overall instructional goal:

Why is this goal important?

Using the ABCD method and/or Bloom’s taxonomy, draft three or four higher level learning outcomes to achieve this goal. List these below.

<table>
<thead>
<tr>
<th>Learning outcome #1</th>
<th>What will students be able to do? How will you be able to tell?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning outcome #2</td>
<td></td>
</tr>
<tr>
<td>Learning outcome #3</td>
<td></td>
</tr>
<tr>
<td>Learning outcome #4</td>
<td></td>
</tr>
</tbody>
</table>

What other evidence would show that students have achieved these objectives? What behaviors do you expect students to exhibit? What characteristics do they now have? Consider using these behaviors and characteristics to enhance your learning outcomes above.
ACTIVITY #3

Consider the instructional outcomes you designed earlier for your AVP and/or SCC students. How might you apply Merrill’s principles of instruction?

<table>
<thead>
<tr>
<th>What is the real world problem or task?</th>
</tr>
</thead>
<tbody>
<tr>
<td>How will you activate prior knowledge</td>
</tr>
<tr>
<td>How will you demonstrate what you want them to learn?</td>
</tr>
<tr>
<td>How will students apply their new knowledge? How will they use it?</td>
</tr>
<tr>
<td>How will you have student integrate their new skill into their lives?</td>
</tr>
</tbody>
</table>

What did you find difficult about this exercise? What do you still have questions on?
### Quarterly Demographics

**Includes “Not Reported” where applicable**

**Total Students:** 18,000  
**Award-Seeking Students:** 12,340

#### Gender

<table>
<thead>
<tr>
<th>Not Reported</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>21.55%</td>
<td>45.14%</td>
<td>33.31%</td>
</tr>
</tbody>
</table>

#### Age

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3,757</td>
<td>3,876</td>
<td>2,468</td>
<td>1,770</td>
<td>1,338</td>
<td>798</td>
<td>565</td>
<td>490</td>
<td>478</td>
<td>544</td>
<td>1,712</td>
</tr>
</tbody>
</table>

**Average Age:** 33.21  
**Median Age:** 27.00

#### Employment While in School

<table>
<thead>
<tr>
<th>Full-time employed</th>
<th>Full-time homemaker</th>
<th>Not employed, not seeking employment</th>
<th>Not employed, seeking employment</th>
<th>Part-time off-campus</th>
<th>Part-time on-campus</th>
<th>Not Reported</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,905</td>
<td>81</td>
<td>1,770</td>
<td>2,977</td>
<td>2,445</td>
<td>29</td>
<td>8,743</td>
</tr>
</tbody>
</table>

#### Special Populations

<table>
<thead>
<tr>
<th>Limited English</th>
<th>International</th>
<th>Veteran</th>
<th>Physically_Disadvantaged</th>
<th>Documented_Disability</th>
<th>First_Generation</th>
</tr>
</thead>
<tbody>
<tr>
<td>587</td>
<td>339</td>
<td>599</td>
<td>910</td>
<td>678</td>
<td>5,064</td>
</tr>
</tbody>
</table>

#### Prior Education

<table>
<thead>
<tr>
<th>Less than 9th Grade</th>
<th>Less than High School</th>
<th>GED</th>
<th>High School Graduate</th>
<th>Some Post HS, no cert or degree</th>
<th>Certificate (less than 2 years)</th>
<th>Associate Degree</th>
<th>Bachelor's Degree or above</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.7%</td>
<td>1.7%</td>
<td>9.7%</td>
<td>59.7%</td>
<td>24.9%</td>
<td>0.4%</td>
<td>0.7%</td>
<td>1.6%</td>
<td>0.7%</td>
</tr>
</tbody>
</table>

#### Tuition Status

<table>
<thead>
<tr>
<th>Apprenticeship</th>
<th>I-Best</th>
<th>International</th>
<th>Resident</th>
<th>Running Start</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.3%</td>
<td>3.4%</td>
<td>6.7%</td>
<td>73.3%</td>
<td>8.2%</td>
</tr>
</tbody>
</table>

#### Family Status

<table>
<thead>
<tr>
<th>Not Reported</th>
<th>Single Parent</th>
<th>Couple with Dependents</th>
<th>No Dependents</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>74.9%</td>
<td>4.8%</td>
<td>3.5%</td>
<td>16.9%</td>
<td>0.1%</td>
</tr>
</tbody>
</table>

#### Source of Student

<table>
<thead>
<tr>
<th>Continuing Student</th>
<th>Transfer Student</th>
<th>Former Student Returning</th>
<th>First Time Student</th>
</tr>
</thead>
<tbody>
<tr>
<td>50.2%</td>
<td>11.4%</td>
<td>14.1%</td>
<td>25.0%</td>
</tr>
</tbody>
</table>

**Data Source:** Unless otherwise noted in ToolTips, SBCTC Data Warehouse.  
**Developed by:** CCS IR - BJW and AMM  
**We recognize that this dashboard may not be fully accessible to everyone. Please contact CCS Institutional Research 509-434-5240 if you need help with the data contained within.**
Community Colleges of Spokane is a community college district comprised of two accredited colleges, Spokane Community College and Spokane Falls Community College. In addition to serving a large urban and suburban population in greater Spokane, the district provides educational services to rural communities throughout a 12,302 square-mile region in Eastern Washington. This region includes all of Spokane, Stevens, Whitman, Ferry, and Pend Oreille Counties, as well as portions of Lincoln County.

Both colleges of CCS are accredited by the Northwest Commission on Colleges and Universities and governed by the Washington State Board of Community and Technical Colleges.
VISION
To provide quality education that transforms lives

MISSION
Antelope Valley College, a public institution of higher education, provides a quality, comprehensive education to a diverse population of learners. We are committed to student success, offering value and opportunity, in service to our community.

VALUES
Education—We are dedicated to students, faculty, staff, and alumni in their endeavor for lifelong learning.
Integrity—We expect honesty, trust, candor, and professionalism from one another.
Excellence—We commit to the highest quality in all our endeavors, being responsive to our community in innovative ways.
Community—We create and foster relationships between AVC and its diverse constituents: students, faculty, staff, alumni, and the community at large.

AVC FACTS
District Size: 1,945 Sq. Miles | Number of Buildings: 35
2017-2018 Student Enrollment: 18,787
Offering Associate Degree Programs: 92
Certificate Programs: 60 | Bachelor Degree Programs: 1

Antelope Valley College is fully accredited by the Accrediting Commission for Community and Junior Colleges/Western Association of Schools and Colleges (ACCJC/WASC). AVC’s last reaffirmation of accreditation was Fall 2016.
OFFERINGS

- Associate Degree Programs
- Career Technical Programs
- Transfer/General Education Courses
- Basic Skills Courses
- Student Support and Instructional Support
- Workforce Preparation and Economic Development
- Personal Enrichment and Professional Development
- Open Educational Resource Courses
- Non-credit Courses
- Honors Program
- Bachelor’s Degree in Airframe Manufacturing Technology

PROGRAM AWARDS

<table>
<thead>
<tr>
<th>Year</th>
<th>AVC Total</th>
<th>Degrees Total</th>
<th>Certificates Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014-2015</td>
<td>2,202</td>
<td>1,475</td>
<td>727</td>
</tr>
<tr>
<td>2015-2016</td>
<td>2,491</td>
<td>1,748</td>
<td>743</td>
</tr>
<tr>
<td>2016-2017</td>
<td>2,632</td>
<td>1,733</td>
<td>899</td>
</tr>
<tr>
<td>2017-2018</td>
<td>3,033</td>
<td>1,790</td>
<td>1,243</td>
</tr>
</tbody>
</table>
AVC STUDENT DEMOGRAPHICS
2017-2018

<table>
<thead>
<tr>
<th>ETHNICITY</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hispanic</td>
<td>9,978</td>
<td>53%</td>
</tr>
<tr>
<td>White Non-Hispanic</td>
<td>3,761</td>
<td>20%</td>
</tr>
<tr>
<td>African-American</td>
<td>3,121</td>
<td>17%</td>
</tr>
<tr>
<td>Multi-Ethnicity</td>
<td>921</td>
<td>5%</td>
</tr>
<tr>
<td>Asian</td>
<td>785</td>
<td>4%</td>
</tr>
<tr>
<td>Other</td>
<td>221</td>
<td>1%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GENDER</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>10,933</td>
<td>58%</td>
</tr>
<tr>
<td>Male</td>
<td>7,627</td>
<td>41%</td>
</tr>
<tr>
<td>Unknown</td>
<td>227</td>
<td>1%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AGE GROUP</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>19 or Less</td>
<td>5,651</td>
<td>30%</td>
</tr>
<tr>
<td>20 to 24</td>
<td>6,082</td>
<td>32%</td>
</tr>
<tr>
<td>25 to 29</td>
<td>2,563</td>
<td>14%</td>
</tr>
<tr>
<td>30 to 34</td>
<td>1,402</td>
<td>7%</td>
</tr>
<tr>
<td>35 +</td>
<td>3,089</td>
<td>16%</td>
</tr>
</tbody>
</table>
Antelope Valley College Quick Data

<table>
<thead>
<tr>
<th></th>
<th>2015-16</th>
<th>2016-17</th>
<th>2017-18</th>
<th>% Change 2015-16 to 2017-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual FTES</td>
<td>11,139.6</td>
<td>10,906.5</td>
<td>11,069.4</td>
<td>-0.6%</td>
</tr>
<tr>
<td><strong>Program Awards</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AA</td>
<td>1,080</td>
<td>1,035</td>
<td>1,094</td>
<td>1%</td>
</tr>
<tr>
<td>AS</td>
<td>668</td>
<td>698</td>
<td>696</td>
<td>4%</td>
</tr>
<tr>
<td>Certs 30+ Units</td>
<td>544</td>
<td>683</td>
<td>824</td>
<td>51%</td>
</tr>
<tr>
<td>Certs 18 to &lt;30 Units</td>
<td>197</td>
<td>212</td>
<td>225</td>
<td>14%</td>
</tr>
<tr>
<td>Certs 6 to &lt;18 Units</td>
<td>2</td>
<td>4</td>
<td>194</td>
<td>9600%</td>
</tr>
<tr>
<td>Total Awards</td>
<td>2,491</td>
<td>2,632</td>
<td>3,033</td>
<td>22%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Fall 2015</th>
<th>Fall 2016</th>
<th>Fall 2017</th>
<th>% Change Fall 2015-2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Enrollment</td>
<td>14,530</td>
<td>14,215</td>
<td>14,298</td>
<td>-1.6%</td>
</tr>
<tr>
<td><strong>Unit Load</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Part-time (&lt;12 Units)</td>
<td>10,229</td>
<td>9,847</td>
<td>9,991</td>
<td>-2.3%</td>
</tr>
<tr>
<td>Full-time (12+ Units)</td>
<td>4,097</td>
<td>4,170</td>
<td>4,063</td>
<td>-0.8%</td>
</tr>
<tr>
<td>Non-Credit</td>
<td>204</td>
<td>198</td>
<td>244</td>
<td>19.6%</td>
</tr>
<tr>
<td><strong>Employee Count</strong></td>
<td>891</td>
<td>946</td>
<td>956</td>
<td>7.3%</td>
</tr>
</tbody>
</table>

Top 10 Declared Majors at AVC, Fall 2017

1. Registered Nursing
2. Biological Sciences
3. Administration of Justice
4. AA-T Psychology
5. LAS: Arts and Humanities
6. Business Administration
7. LAS: Social/Behavioral Science
8. Undeclared
9. Child & Family Education
10. AS-T Business Administration
Antelope Valley College prohibits discrimination and harassment based on race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, sex, age, or sexual orientation.
BLOOM’S TAXONOMY PEDAGOGY WHEEL

From: Cal State TEACH: Technology Enhancement Project