Evaluation Mapping

A Tool for Curriculum Alignment Within Your Course


The Objects in these slides are the creation of PresenterMedia
Agenda

1. Background details – how this was developed
2. Purpose of the Evaluation Mapping Tool.
3. A quick overview & survey results
4. Mock Course Outline - Application
5. Comments/suggestions
Background Details

• An idea – thanks to Sheridan

• Draft 2012 – develop matrix
  And conduct mock trials
Why Map Our Courses?

- Demonstrate quality and program integrity – new quality standards specify that “evaluation methods are aligned with course outcomes”
- Assess strengths and areas to enhance
- Establish alignments between VLO’s, CLO’s, EESO’s, weighting, content and evaluation methods
- Enhance excellence in teaching and learning
- Prevent curriculum drift within course and program
- Prevent an appeal
Roll Out – Program Reviews

Phase I – Internal Review & Recommendations
- Faculty orientation
- Mapping Meetings: Program Maps, Evaluation Mapping, COMMS
- Complete Internal Assessment Report

Phase II – External Review & Recommendations
- External Focus Group Meeting with industry experts
- External Chair to guide the meeting

Phase III – Action Plan
- Review all recommendations and develop action plan
- Approvals through College Leadership and BOG

Continuous Quality
- Review action plans after one year
- Annual Program Reporting and Action

When is it used?

Five Year Cycle

FANSHAWE
Pilot Study

- Spring 2015
- Survey of participating faculty
- Focus group with Curriculum Consultants
  - Establish what works for faculty
    - Usefulness, ease of use
    - Training – who, when
    - Enhancements for the tool

- The story that unfolded…
The Story – What did we learn?

- Continue to use the form
- Considerations for Part-Time & Partial Load
- Time Commitment to Learn & Complete the Survey
- Adjustments to the Form – visual, flexibility
- Useful to enhance consistency across different delivery options and campuses

- Use in course development
Limitations of Note

- Timing – class schedules, vacations, “busyness” of working in a college environment

- Faculty Employment Status – part-time, partial load, full-time

- COMMS Study – pursued concurrent to this one

- Survey Response Rate – low at 31% = 18 respondents
Constructive Alignment

- Purpose of evaluation mapping tool is to show alignment (or identify where re-alignment is needed)
Learning Outcomes

- **Vocational Learning Outcomes (VLOs)**
  - Requirements for graduate or entry-level practitioner
    - Knowledge
    - Skills
    - Attitudes

- **Essential Employability Skills (EESs)**
  - Critical for success in any workplace, day-to-day living, and life-long learning
    - Communication
    - Numeracy
    - Critical thinking and problem solving
    - Information management
    - Interpersonal
    - Personal

"Reliably demonstrate…"
Mapping Matrices

Each Course is Part of a Path or Puzzle
“Curriculum”

<table>
<thead>
<tr>
<th>PROGRAM VOCATIONAL LEARNING OUTCOMES</th>
<th>LEVEL ONE</th>
<th>LEVEL TWO</th>
<th># OF COURSES EVALUATING THE OUTCOME</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Introductory</td>
<td>CHEM 7002 Chemistry 1</td>
<td>MATH 7002 Mathematics 1</td>
<td>1</td>
</tr>
<tr>
<td>2. Intermediate</td>
<td>COMM 7001 Introductory Communications</td>
<td>INDIV XXXX General Education Elective</td>
<td>2</td>
</tr>
<tr>
<td>3. Advanced</td>
<td>ENVR 7004 Environmental &amp; World Issues</td>
<td>PHYS 7101 Physics 1</td>
<td>1</td>
</tr>
<tr>
<td>4. Assist in the design of good experimental and laboratory management practices and procedures.</td>
<td>BIOU 7002 Molecular Biology</td>
<td>HIST 7003 History &amp; Philosophy of Science</td>
<td>2</td>
</tr>
<tr>
<td>5. Obtain a sound practical background in the interdisciplinary subjects that are the basis of Biotechnology.</td>
<td>CHEM 7003 Chemistry 2</td>
<td>BIOU 7003 Plant &amp; Animal Anatomy &amp; Physiology</td>
<td>1</td>
</tr>
<tr>
<td>6. Conduct all functions with a full understanding of and in adherence to relevant regulatory and ethical issues and requirements.</td>
<td>INDIV XXXX General Education Elective</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

The graduate has reliably demonstrated the ability to: (Source: MTCU Code: 81304)
Developing Course Learning Outcomes

Start here…

Go here…

And here…

VLO

COURSE

LESSON

LESSON

LESSON

LESSON

COURSE

COURSE

COURSE

VLO
Developing Course Learning Outcomes

• Reflect the intended knowledge, skills, and/or attitudes taught and evaluated in a course

• Focus on the terminal performance
  • “Upon successful completion of the course, students will be able to…”

• Are measurable

• Reflect the learning domain and level of learning
  • Begin with a verb
### The Evaluation Mapping Template

**Legend:**
- **DOMAIN:** Cognitive (C), Psychomotor (P), Affective (A)
- **LEVEL OF LEARNING:** Introductory (1), Building (2), Culminating (3)
- **T, P, or T/P:** T = theory; P = practical; T/P = both theory and practical (circle what applies)

| COURSE LEARNING OUTCOMES | Linked to VLO(s) # | Associated DOMAIN C, P, A | Level of LEARNING 1, 2 OR 3 (circle) | T/P | T/P | T/P | T/P | T/P | T/P | T/P | T/P | T/P | T/P |
|--------------------------|--------------------|--------------------------|------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|                          | 1                  | 5%                       |                                    |     |     |     |     |     |     |     |     |     |     |     |
|                          | 2                  | 5%                       |                                    |     |     |     |     |     |     |     |     |     |     |     |
|                          | 3                  | 15%                      |                                    |     |     |     |     |     |     |     |     |     |     |     |
|                          | 4                  | 15%                      |                                    |     |     |     |     |     |     |     |     |     |     |     |
|                          | 5                  | 15%                      |                                    |     |     |     |     |     |     |     |     |     |     |     |
|                          | 6                  | 15%                      |                                    |     |     |     |     |     |     |     |     |     |     |     |
|                          | 7                  | 15%                      |                                    |     |     |     |     |     |     |     |     |     |     |     |
|                          | 8                  | 15%                      |                                    |     |     |     |     |     |     |     |     |     |     |     |
|                          | 9                  | 15%                      |                                    |     |     |     |     |     |     |     |     |     |     |     |
|                          | 10                 | 15%                      |                                    |     |     |     |     |     |     |     |     |     |     |     |

**Percentage (%) of the evaluation towards final grade:**
- 25%
- %
- %
- %
- %
- %
- %

**Identify the Essential Employability Skills (EES) associated with each evaluation:**
- #1, 5, 8

**Steps:**
1. **Course Learning Outcomes** (note link to Program VLOs) and ESSs
2. **Evaluations**
3. **Map CLOs and Evaluations**
4. **Check Alignment**
# Step 1a – Align CLOs and Program VLOs

## Legend:
- **Domain**: Cognitive (C), Psychomotor (P), Affective (A)
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| Course Learning Outcomes | Linked to VLO(s) # | Associated Domain C, P, A | Level of Learning 1, 2 or 3 | (circle) T | P | T/P | T | P | T/P | T | P | T/P | T | P | T/P | T | P | T/P | T | P | T/P | T | P | T/P | T | P | T/P | T | P | T/P |
| 1                        |                     |                            |                             |         | T | T/P | T | P | T/P | T | P | T/P | T | P | T/P | T | P | T/P | T | P | T/P | T | P | T/P | T | P | T/P | T | P | T/P | T | P | T/P | T | P | T/P | T | P | T/P | T | P | T/P |
| 2                        |                     |                            |                             |         |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |
| 3                        |                     |                            |                             |         |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |
| 4                        |                     |                            |                             |         |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |
| 5                        |                     |                            |                             |         |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |
| 6                        |                     |                            |                             |         |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |
| 7                        |                     |                            |                             |         |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |
| 8                        |                     |                            |                             |         |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |
| 9                        |                     |                            |                             |         |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |
| 10                       |                     |                            |                             |         |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |   |   |      |

### Example

#### Test #1

- Total % of final grade that measures the outcome
- Estimated (%) of time spent teaching the outcome
- Is there an alignment between A & B?

### Identify the Essential Employability Skills (EES) associated with each evaluation

- #1, 5, 8

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**1. Course Learning Outcomes (note link to Program VLOs) and ESSs**
Step 1b – Identify Learning Domains

Learning Domains
Cognitive = knowledge
Affective = attitudes, values
Psychomotor = physical skills or tasks
Step 1c – Identify Level of Learning

- **Introductory** – foundational, taught for the first time, or basic information
- **Intermediate/Building** – builds on something taught previously, or slightly more involved than basic information
- **Advanced/Culminating** – builds on previously taught information, highest stage of learning *appropriate to the credential*
Steps 2 & 3 – Evaluations & Map

- Identify and record evaluation method (e.g., test, case study, project)
- Indicate evaluation method focus: theory-based (T), practical (P), or a combination of both (T/P)
- Approximate % of each evaluation method that addresses each course outcome
- Add up row to determine total % of final grade for each course outcome
Steps 4 – Check Alignment

• Estimate % of time spent teaching each course outcome
  • Example: 1 course = 45 hours If you spend 1.5 weeks (approximately 4.5 hours) on an outcome, you have spent 10% of the course on that outcome.

• Is there alignment?
  • Time spent teaching an outcome vs. weight of evaluation
  • Learning domain vs. evaluation type
  • Distribution of evaluations vs. outcome (Any CLOs or EESs missed?)
## Evaluation Mapping

**Legends:**
- **Domain:** Cognitive (C), Psychomotor (P), Affective (A)
- **Level of Learning:** Introductory (1), Building (2), Culminating (3)
- **T, P, or T/P:** T = theory; P = practical; T/P = both theory and practical (circle what applies)

### Course Learning Outcomes

By the end of this course, the student has reliably demonstrated the ability to:

<table>
<thead>
<tr>
<th>Course Learning</th>
<th>Linked to PVLO(s) #</th>
<th>Associated Domain C, P, A</th>
<th>Level of Learning 1, 2 OR 3</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Test #1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Total % of final grade that measures the outcome</th>
<th>Estimated (%) of time spent teaching the outcome</th>
<th>Is there an alignment between A &amp; B?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>15%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
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<td></td>
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<tr>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Percentage (%) of the evaluation towards final grade:

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>25%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify the Essential Employability Skills (EES) associated with each evaluation</td>
<td>1, 5, 8</td>
</tr>
</tbody>
</table>

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**Evaluation Map:**

- **Surprises?**
- **Questions?**
- **Suggestions?**
How can you see evaluation mapping contributing to the process of course development?
Thank You !
Some possible verbs for stating cognitive outcomes:

<table>
<thead>
<tr>
<th>KNOWLEDGE</th>
<th>COMPREHENSION</th>
<th>APPLICATION</th>
<th>ANALYSIS</th>
<th>SYNTHESIS</th>
<th>EVALUATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remembering previously learned information</td>
<td>Understanding the meaning of information</td>
<td>Using learned information in relevant situations (putting knowledge &amp; comprehension to work)</td>
<td>Breaking down information into its separate components so that its structure can be understood</td>
<td>Putting components together to create a material based on personal or given criteria</td>
<td>Judging the value</td>
</tr>
<tr>
<td>define</td>
<td>discuss</td>
<td>apply</td>
<td>appraise</td>
<td>arrange</td>
<td></td>
</tr>
<tr>
<td>identify</td>
<td>explain</td>
<td>change</td>
<td>break down</td>
<td>assemble</td>
<td></td>
</tr>
<tr>
<td>label</td>
<td>express</td>
<td>demonstrate</td>
<td>break down</td>
<td>choose</td>
<td></td>
</tr>
<tr>
<td>list</td>
<td>give examples</td>
<td>discover</td>
<td>calculate</td>
<td>compare</td>
<td></td>
</tr>
<tr>
<td>name</td>
<td>identify</td>
<td>manipulate</td>
<td>compare</td>
<td>contrast</td>
<td></td>
</tr>
<tr>
<td>outline</td>
<td>locate</td>
<td>modify</td>
<td>debate</td>
<td>compose</td>
<td></td>
</tr>
<tr>
<td>recall</td>
<td>paraphrase</td>
<td>operate</td>
<td>diagram</td>
<td>compose</td>
<td></td>
</tr>
<tr>
<td>record</td>
<td>recognize</td>
<td>practice</td>
<td>differentiate</td>
<td>construct</td>
<td></td>
</tr>
<tr>
<td>relate</td>
<td>report</td>
<td>predict</td>
<td>distinguish</td>
<td>estimate</td>
<td></td>
</tr>
<tr>
<td>repeat</td>
<td>restate</td>
<td>schedule</td>
<td>examine</td>
<td>create</td>
<td></td>
</tr>
<tr>
<td>underline</td>
<td>review</td>
<td>shop</td>
<td>experiment</td>
<td>evaluate</td>
<td></td>
</tr>
<tr>
<td>tell</td>
<td>translate</td>
<td>show</td>
<td>inspect</td>
<td>design</td>
<td></td>
</tr>
<tr>
<td>translate</td>
<td></td>
<td></td>
<td></td>
<td>develop</td>
<td></td>
</tr>
</tbody>
</table>

**EXAMPLES**

- Recite a policy. Quote prices from memory.
- Know the safety rules.
- Recite a policy. Quote prices from memory.
- Know the safety rules.

- Explain in your own words the steps for performing a complex task.
- Translate an equation into a spreadsheet.

- Use a manual to calculate employee's vacation time.
- Apply laws of statistics to evaluate the reliability of a test.

- Troubleshoot a piece of equipment by using logical deduction. Gather information from a department and select the required tasks for training.
- Write a company operations or process manual for a machine to perform a specific task. Integrate training from several sources to solve a problem.

**INTRODUCTORY**

**INTERMEDIATE**

**ADVANCED**

Adapted from: *Making the Grade: Evaluating Student Progress* Scarborough, Ontario Prentice Hall Canada Inc. 1987, and http://www.nwlink.com/~donclark/index.html
Some possible verbs for stating psychomotor outcomes

<table>
<thead>
<tr>
<th>GUIDED RESPONSE</th>
<th>MECHANISM</th>
<th>COMPLEX OVERT RESPONSE</th>
<th>ADAPTATION</th>
<th>ORIGINATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>SET</td>
<td>The early stages in learning</td>
<td>The skillful performance of motor tasks that involve complex movement patterns. Proficiency is indicated by a quick, accurate, and highly coordinated performance, requiring a minimum of energy.</td>
<td>Skills are well developed patterns to fit a particular situation or specific problem. Learning outcomes emphasize creativity based on highly developed skills.</td>
<td>Creating new movement.</td>
</tr>
<tr>
<td>ORIGINATION</td>
<td>ORIGINATION</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### ORIGINATION

- Some possible verbs for stating psychomotor outcomes:
- Creates new movement
- **PERCEPTION**
  - Readiness to act. It includes the ability to use sensory cues to guide motor activity. This ranges from dispositions that predetermine a sensory stimulation, person's response to different situations (sometimes called translation, to modifications).---

<table>
<thead>
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</table>

<table>
<thead>
<tr>
<th>EXAMPLES</th>
<th>EXAMPLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detects non-verbal communication cues. Estimate where a ball will land after it is thrown and then moving to the correct location to catch the ball. Adjusts heat of stove to correct temperature by smell and taste of food. Adjusts the height of the forks on a forklift by comparing where the forks are in relation to the pallet.</td>
<td>Knows and acts upon a sequence of steps in a manufacturing process. Recognizes one's abilities and limitations. Shows desire to learn a new process (motivation). Performs a mathematical equation as demonstrated. Follows instructions to build a model. Responds to signals received from instructor while learning to operate a forklift. Performs a mathematical equation as demonstrated. Follows instructions to build a model. Responds to signals received from instructor while learning to operate a forklift. Performs a mathematical equation as demonstrated. Follows instructions to build a model. Responds to signals received from instructor while learning to operate a forklift.</td>
</tr>
</tbody>
</table>

Adapted from: http://www.nwlink.com/~donclark/index.html
<table>
<thead>
<tr>
<th>(Bloom, et al. 1956)</th>
<th>Some possible verbs for stating affective outcomes</th>
<th>INTERNALIZING VALUES</th>
</tr>
</thead>
</table>

**RECEIVING PHENOMENA**

- Awareness, willingness to hear, selected attention.

**RESPONDING TO PHENOMENA**

- Active participation on the part of the learners. Attends and reacts to a particular object, phenomenon, or contrast.

**ORGANIZATION**

- The worth or value a person attaches to a particular object, phenomenon, or behaviour. This ranges from simple to a more complex state of commitment. Valuing involves accepting the more complex state of commitment. Valuing is based on the internalization of values and is on comparing, relating, and synthesizing values.

**VALUING**

- Organizes values into priorities by value system that controls conflicts between them, and creating an unique value system. The emphasis is on penaising, consistent, predictable, and most.

**VALUES**

- The learner. Instructional objectives are concerned with the student's general patterns of adjustment (personal, social, emotional).

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- The learner. Instructional objectives are concerned with the student's general patterns of adjustment (personal, social, emotional).

**EXAMPLES**

- Listen to others with respect. Listen for and remember the name of newly introduced people.

- Participates in class discussions. Gives a presentation. Questions new ideas, concepts, models, etc. in order to fully understand them. Knows the safety rules and practices them.

- Displays a belief in the democratic process. Is sensitive towards individual and cultural differences (value diversity). Shows the ability to solve problems. Proposes a plan to social improvement and follows through with the commitment. Infoms management on matters that one feels strongly about.

- Recognizes the need for balance between freedom and responsible behaviour. Accepts responsibility for one's behaviour. Explains the role of systematic planning in solving problems. Accepts professional ethical standards. Creates a life plan in harmony with abilities, interests, and beliefs. Prioritizes time effectively to meet the needs of the organization, family, and self.


Adapted from: http://www.nwlink.com/~donclark/index.html