Curriculum Mapping for Program Assessment

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Goals for today’s session:

- Introduce curriculum mapping as part of the overall assessment planning process and discuss its value
- Break down the stages of developing a curriculum map into “doable” chunks
- Look at and try out some worksheets and other tools to begin curriculum mapping
- Leave with clearly articulated “Next steps” for your program

Goals of assessment

- Clear identification/description of program characteristics and expectations for student achievement
- Systematic collection of different kinds of (helpful) data to evaluate student progress towards/achievement of those expectations
- Use of analyzed data to inform curricular revision
- Repeat
Program Assessment is a Departmental Effort

- At different stages of the process, different groups may participate, or a ‘core’ of faculty may focus on curriculum and program assessment
- Multiple perspectives are necessary in developing outcomes and assessing student progress towards those outcomes

Few programs start at zero

Even if they do not have clearly stated/updated outcomes, most programs have been gathering and, to some degree, reviewing some data on student success in their program all along:

- Faculty impressions/frustrations
- Student satisfaction/dissatisfaction/pain points
- Grades or other course-level assessments that indicate student skill levels
- Anecdotal evidence about student success after graduation

Steps in Program Assessment – Where are you?

- Develop program-level outcomes with input/drafts by faculty
- Map curriculum to identify places where students learn, practice and demonstrate their mastery of the outcomes
- Gather additional information about student progress within this curriculum:
  - Surveys of majors and/or alums
  - Faculty summaries of students performance on expected skills
  - Other indicators (retention of skills from prerequisite courses; identifying predictors of student success, etc.)
- Use this initial information to develop a plan for assessment of student progress towards/achievement of learning outcomes
What is a curriculum map?

A curriculum map or matrix is a tool to link elements of a program (usually required courses and experiences) to learning outcomes.

The goal of curriculum mapping is to identify how graduation-level mastery of the outcomes is scaffolded across the program curriculum, where students’ progress is assessed feedback given

Why map your curriculum?

• Create a shared understanding of the program
• Check for “drift” in course goals - the role of courses in the curriculum may have changed over time
• Do a gap analysis to see where overlaps in emphasis, or gaps in coverage, may slow student progress
• Ensure that students are receiving sufficient feedback on key skills and knowledge as they develop the level of mastery expected
• Identify points in the curriculum where existing assessments can provide insights into student progress

Map formats
The basic form

While curriculum maps can take many forms, most are presented as a chart that lists learning outcomes on one axis and key courses, experiences or assessments along the other.

<table>
<thead>
<tr>
<th>Programs / Outcomes</th>
<th>Courses and Experiences</th>
<th>Program Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>LO 1</td>
<td>BIO L 101</td>
<td></td>
</tr>
<tr>
<td>LO 2</td>
<td>BIO L 202</td>
<td></td>
</tr>
<tr>
<td>LO 3</td>
<td>BIO L 303</td>
<td></td>
</tr>
<tr>
<td>LO 4</td>
<td>BIO L 404</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Filling in the map

The chart is filled in using a key (usually letters) that record information about what is being taught and the level of skill or knowledge students are demonstrating in the course.

Sample map worksheet: UVM Philosophy

<table>
<thead>
<tr>
<th>LO 1: Read philosophical writing clearly, discovering the structure of philosophical arguments</th>
<th>BIO L 101</th>
<th>BIO L 202</th>
<th>BIO L 303</th>
<th>BIO L 404</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>LO 2: Accurately and critically analyze arguments and positions</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>LO 3: Write clear and coherent philosophical prose</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
A different format (and a complex map):

Step by step How-to’s

1. Identify the axes
2. Populate the axes
3. Choose or create a key
   a) Which key do you recommend?
4. Gather data from faculty
5. Compile
6. Alignment
7. Using what you have learned
First step: Identify the axes

- Most curriculum maps have outcomes across the top, and courses listed down the left-hand side; these axes can be reversed.
- However, you can also use this matrix approach to organize many kinds of data, e.g., where different kinds of course-level assessments occur or how types of learning experiences are distributed across required vs. elective coursework.
- Take 5 minutes to look at the sample map and think about what would be most useful to map for your program.

Step 2: Populate the axes

- Decide how much detail you want in the outcomes axis. For example, if you have a few learning outcomes with a number of sub-components, you may choose to stay with the larger outcomes or split each outcome into its components.
- Choose whether to include only required courses/experiences, or whether to also map out elective coursework or coursework for optional tracks.
- Let’s discuss how you would populate the axes.

Step 3: Choose or create a key

- There are almost as many sets of descriptors utilized in curriculum mapping as there are books on assessment.
- One of the most common ones is: I/R/M/A
  - I=introduced; R=reinforced; M=mastery (graduation level); A=assessed
- Stassen et al. use I/E/U/A
  - Introduced/Emphasized/Utilized/Comprehensive Assessment
- Other keys focus more on student behavior, e.g., I/P/D
  - Introduced/Practiced/Demonstrated
- And/or level expectations for progress on an outcome, e.g., B/I/A
  - Beginning/Intermediate/Advanced
Alternative approach:

RSEN Core – level of instruction/learning

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Step 3a: Is there a key you recommend?

I recommend a key that fits the way your program is organized and your immediate goals for the curriculum mapping process. For example:

- A key focused on faculty behaviors (e.g. IRMA) will help identify where faculty are teaching aspects of the outcomes
- A key focused on student performance (e.g. IPD) will help focus on where students are asked to demonstrate progress on the outcomes
- A key focused on level (e.g. B/I/A) will help identify whether elements of the outcomes are sufficiently scaffolded across the curriculum

What if we want to know all of this?

- Curriculum mapping can be an intensive process that moves through several levels, or you may find that a single “pass” through the course is enough.
- You can have faculty fill out several matrices using different keys
- I recommend keeping the matrices separate at first, so you can see patterns emerging that are relevant to each key, before combining the data.
Step 4: Gather data from instructors

- Some data may be available from syllabi, however instructors will be able to quickly identify the outcome/outcome components covered in their courses as well as assessments of student progress on those outcomes.
- For a first pass, simply ask instructors to fill out the rows of the matrix for the classes they teach, using ONLY the key that you have chosen -- no notes, asterisks or caveats.
- Depending on your department/curriculum, this can be done together or individually.

Give it a try

- List the courses you teach, or courses in your program that you are familiar with.
- Using the key you think is most helpful, try filling in the matrix for those courses.
- Now that you have tried it, what difficulties do you anticipate when you ask your faculty to complete a matrix?

Step 5: Compile

If individual instructors have filled out the matrix, combine their results into a single matrix, noting any areas of variation across instructors for a single course.

Before discussing alignment, it may be productive to have a discussion about the mapping process.
Step 6: Alignment

- Is course content/work aligned with the outcomes?
- Are there any gaps? Overlaps? If so, are these problematic?
- Is student progress appropriately scaffolded across the curriculum?
- Where are students assessed on their progress?
- Are there direct or indirect course-level or program-level assessments in place that can be used to check alignment?

Step 7: Use what you learned

- The curriculum mapping process may highlight some areas for immediate change (e.g., a gap in your coverage of outcomes)
- The map can also serve as the basis for developing an assessment plan.
  - Are students actually working at the expected level in these classes?
  - Which course-level assessments can provide information on student progress?
  - At what point in the program will students achieve graduation-level achievement of the outcomes?

Questions?

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