Student Surveys: Perceptions of Achievement

Facilitated by the Assessment Office

December 2010

Assessment Office

• Faculty managed
• Mission: improve student learning through program assessment
• Collaborate with faculty, staff, and administrators
• Workshops, consultations, events, website

Workshop Outcomes

At the end of the workshop, you will
1. understand the circumstances in which a survey is appropriate in program assessment
2. be able turn a program learning outcome into a survey question

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Purpose of Program Assessment

Program Assessment \(\rightarrow\) Program Evolution or Improvement

Program Assessment \(\not\rightarrow\) Individual Course Assessment

“Direct” and “Indirect”

• “Direct” evidence of student learning
  – Student products, behavior
  – Reveals what students know and can do

• “Indirect” evidence of student learning
  – Student perceptions, self-reports
  – Can reveal beliefs about what was learned and why learning did/did not occur

Steps

1. Identify what you want to learn
2. Think about how you will use the results
3. Create the survey
4. Pilot test the survey
5. Distribute survey
6. Analyze data and use the results
Example SLOs (engineering)

At the time of graduation, students can

• design a system to meet desired needs within realistic constraints
• function on multi-disciplinary teams
• communicate effectively
• engage in life-long learning

Step 1: Identify what you want to learn

Example

• Are students confident in their ability to
  – design a system
  – function on multi-disciplinary teams
  – communicate effectively
  Why or why not?

• Do students embrace the values of our profession? Do they embrace life-long learning?

Step 2: How might the results be used?

<table>
<thead>
<tr>
<th>What you want to learn</th>
<th>Possible actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are students confident in the skills and abilities we said are important?</td>
<td>Reevaluate course sequencing</td>
</tr>
<tr>
<td>Do students embrace the values of our profession?</td>
<td>Consider how outcomes are emphasized in the program</td>
</tr>
<tr>
<td></td>
<td>Discuss where and how professional values are infused in the curriculum</td>
</tr>
<tr>
<td></td>
<td>Celebrate successes and put in program brochure</td>
</tr>
</tbody>
</table>
Step 3: Create survey

- **Closed-ended** questions provide answer choices

  I am confident in my ability to function on a multi-disciplinary team.
  - Strongly Agree
  - Agree
  - Neutral
  - Disagree
  - Strongly Disagree
  - Unsure

Step 3: Create survey

- **Open-ended** questions allow the respondents to write their own answers

  How can an engineer engage in life-long learning?

Your turn:

1. Identify what you want to learn
2. Create two survey questions
3. Evaluate your survey questions
4. Pilot test your questions with a partner
Step 4: Pilot test

- Are the instructions clear?
- Are the questions clear?
- Can the questions be interpreted in different ways?
- How long does it take to complete the survey?

Step 5: Distribute Survey

**Paper when . . .**
- Students physically present and no laptop, smartphone, computer
- Online survey fatigue may exist
- Online survey software too cumbersome to learn or use

**Electronic/online when . . .**
- Students physically present and they each have laptop, smartphone, computer
- Anonymity will encourage more honest answers
- Many open-ended questions
- Lengthy open-ended response desired
- Skip patterns are desired

SurveyShare (UH site license), Survey Monkey, Constant Contact, UHM’s OVCAA software in development

Step 6: Analyze data & use results

"I am confident in my ability to"

<table>
<thead>
<tr>
<th></th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Design</td>
<td>70</td>
<td>20</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>Multi-Disciplinary</td>
<td>60</td>
<td>20</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>Team</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Present Ideas</td>
<td>50</td>
<td>20</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>Life-Long Learning</td>
<td>80</td>
<td>5</td>
<td>15</td>
<td></td>
</tr>
</tbody>
</table>

Note: There were no "Strongly Disagree" or "Unsure" responses
Final tip:

Ask yourself:

• What do I want to learn?

• Does the survey question shed light on what I want to learn?

• What will I do with the survey responses?

Recap

Learning Outcomes

What you want to learn

Improvement Plan

Learning Opportunities
(curriculum map)

Assessment Results

Collection & Analysis of Evidence

Wrap-Up

• Questions?

• Evaluation
  – Please complete the Workshop Evaluation Form

• Tomorrow’s Workshop
  – *How to Use Course Assignments/Exams for Program Assessment*

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Thank you!

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**Example**

**Program SLOs (engineering)**

At the time of graduation, students can:

- a) Design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability and sustainability
- b) Function on multi-disciplinary teams
- c) Communicate effectively
- d) Recognize the need for, and an ability to engage in life-long learning
- e) Apply knowledge of mathematics, science, and engineering
- f) Design and conduct experiments, as well as analyze and interpret data
- g) Understand professional and ethical responsibility

Please indicate your level of agreement or disagreement with each statement.

<table>
<thead>
<tr>
<th>I am confident in my ability to</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Unsure</th>
</tr>
</thead>
<tbody>
<tr>
<td>- design a system to meet desired needs within realistic constraints</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>- function on multi-disciplinary teams</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>- present ideas to a client group</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>- engage in life-long learning</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

Survey Responses (in percentages)

Note: There were no “Strongly Disagree” or “Unsure” responses

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Your Turn

1. Using your own program’s SLOs or ones in the example, identify what you want to learn

2. Using your own program's SLOs or ones in the example, create two survey questions.

3. Evaluate your survey questions using the “Hints & Tips” handout

4. Mock up your own results or use the example results. How could these results be used?
Student Surveys: Perceptions of Achievement  
Useful Answer Categories

If you want to know how often something occurs, ask for the exact number of times or ask, “how often...” and choose from the following categories:

<table>
<thead>
<tr>
<th>Never</th>
<th>Almost Never</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rarely</td>
<td>Occasionally</td>
<td>Almost Never</td>
</tr>
<tr>
<td>Occasionally</td>
<td>Sometimes</td>
<td>Sometimes</td>
</tr>
<tr>
<td>Regularly</td>
<td>Often</td>
<td>Fairly Often</td>
</tr>
<tr>
<td>Don’t Know</td>
<td>Don’t Know</td>
<td>Very Often</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Never</th>
<th>Hardly Ever</th>
<th>Not At All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rarely</td>
<td>Rarely</td>
<td>Occasionally</td>
</tr>
<tr>
<td>Sometimes</td>
<td>Sometimes</td>
<td>Frequently</td>
</tr>
<tr>
<td>Most of the Time</td>
<td>Often</td>
<td></td>
</tr>
<tr>
<td>Always</td>
<td>Very Often</td>
<td></td>
</tr>
</tbody>
</table>

If you want to find out the degree of people’s feelings, their attitude, or belief, ask “to what extent...” and choose from the following categories:

<table>
<thead>
<tr>
<th>Not Very Effective</th>
<th>Not Very Prepared</th>
<th>Very Dissatisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Somewhat Effective</td>
<td>Somewhat Prepared</td>
<td>Dissatisfied</td>
</tr>
<tr>
<td>Moderately Effective</td>
<td>Uncertain</td>
<td>Neutral</td>
</tr>
<tr>
<td>Very Effective</td>
<td>Moderately Prepared</td>
<td>Satisfied</td>
</tr>
<tr>
<td>Not Sure</td>
<td>Well Prepared</td>
<td>Very Satisfied</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Very Poor</th>
<th>Needs Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disagree</td>
<td>Poor</td>
<td>Good</td>
</tr>
<tr>
<td>Neutral</td>
<td>Fair</td>
<td>Excellent</td>
</tr>
<tr>
<td>Agree</td>
<td>Good</td>
<td></td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>Very Good</td>
<td></td>
</tr>
</tbody>
</table>

If you want to find out about people’s intentions or aspirations ask, “do you expect to...” and ask them to choose from the following categories:

<table>
<thead>
<tr>
<th>Definitely No</th>
<th>No Chance</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>Very Little Chance</td>
<td></td>
</tr>
<tr>
<td>Uncertain</td>
<td>Unsure</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>Some Chance</td>
<td></td>
</tr>
<tr>
<td>Definitely Yes</td>
<td>Very Good Chance</td>
<td></td>
</tr>
</tbody>
</table>

Sources consulted:
Student Surveys: Perceptions of Achievement
Hints & Tips

General Tips

1. Identify what you want to learn.
2. Skip “wouldn’t it be nice to know” questions. Only include questions that directly shed light on what you want to learn.
3. If you are not sure how or if you will use the survey responses, do not ask the question(s).
4. Do all respondents have access to the information needed to answer the question?
5. Are the questions ones which all respondents will be willing to answer?

Question Construction

6. One issue, skill, ability per question. Split “double-barreled” questions into two questions
   - **Problematic**: I am confident in my ability to design a system, component or process.
   - **Better**: I am confident in my ability to design a system.

7. Avoid double negatives
   - **Problematic**: I am not incompetent when I am part of a multi-disciplinary team
     a) Strongly Disagree  b) Disagree)  c) Neutral  d) Agree  e) Strong Agree
   - **Better**: I am competent when I am part of a multi-disciplinary team
     a) Strongly Disagree  b) Disagree)  c) Neutral  d) Agree  e) Strong Agree

8. Make questions as specific and concrete as possible
   - **Problematic**: I am confident in my ability to communicate effectively
   - **Better**: I am confident in my ability to speak to large groups of engineers

Response Construction

9. Response alternatives should be exhaustive and mutually exclusive
   - **Problematic**: How many articles have you submitted while in the program?
     a) 1       b) 2       b) 2 or more
   - **Better**: How many conferences did you attend this semester?
     a) 0       b) 1       b) 2       c) 3 or more

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10. Used balanced scales (i.e., equal number of positive and negative response options)

- **Problematic**: I am a lifelong learner.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Agree</td>
<td>Strongly Disagree</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Better**: I am a lifelong learner.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Neutral</td>
<td>Strongly Agree</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Pilot Test**

11. Take the survey yourself

12. Have someone similar to the target group take the survey and ask him/her:

* Are the instructions clear?
* Are the questions clear?
* Can the questions be interpreted in different ways? How did you interpret the questions?
* Do the response options allow you to accurately answer the question?
* Can the questions be answered? Will survey takers have the requested information at their fingertips when they take the survey?
* How long does it take to complete the survey?

**If in doubt, ask yourself:**

* What do I want to learn?
* Does the survey question shed light on what I want to learn?
* What will I do with the survey responses?