SURVEY DESIGN AND THE SCHOLARSHIP OF TEACHING AND LEARNING (SOTL):

Things to consider before drafting a survey

• What are some general concepts I am interested in? (e.g., how useful were parts of the course? How much do students feel they learned from the course as a whole? What suggestions do students have about improving the course?)
• What variables can I use to measure these concepts?
• What are the specific questions which help me get at these concepts (e.g., how useful were the lectures? How useful was assignment 1?)
• What demographic questions can I ask that help me address my research questions (e.g., gpa, expected grade, gender, major)?
• What quantitative or qualitative analyses can I use to answer the questions that I have?

Survey Question Types

Open ended (i.e., fill in the blank)
- Short answer
- Paragraph
- List

Closed ended
- Multiple choice (e.g., indicate your major) - Easy to gather data for variables when only one answer is possible
- Checklist (e.g., select all pre-requisite courses you have taken) - Easy to gather large amounts of data especially for multiple grouping variables when each answer can be present/absent
- Rating scale - easy to count for small scales and easy to convert to numbers for quantitative analysis
  o e.g., 1=strongly disagree; 2=disagree; 3=neither agree/disagree; 4=agree; 5=strongly agree
  o Keep category wordings as “evenly spaced”, balanced, and non-overlapping as possible
  o If absolutes (e.g., Always, Never) are used are these likely or meaningful?
  o 4-7 choices are most typical
  o Choices should generally be qualitative or both numerical and qualitative (e.g., 1=strongly disagree, 2=disagree... etc.)
  o Is a neutral response choice (odd number of categories) desired or is “forced choice” preferred (even number of categories)
  o Consider if a do not know/not applicable option should be included

Best Practices in Creating Questions

• Relate to variables/concepts you are interested in and analyses you plan to use
• Are clear and easy to interpret by intended reader. Have definitions and/or clarifications if required.
• Answers can be recalled easily by participants (e.g., didn’t happen too long ago, isn’t too hard to estimate)
• Word questions positively (e.g., how useful was the assignment?) rather than negatively (e.g., how useless was the assignment?)
• Questions should be concise
• Not leading or biasing (do not “suggest” an answer to the question, word as neutrally as possible)
• Not “double barrelled” (e.g., “do you like science and math?”)
• When reviewing your questions, ask the following:
  o Have all concepts of interest been represented by different questions?
  o Are all general concepts sufficiently covered by multiple questions (at least 3-5) to assess them?
  o Can the literature help inform question wording and/or variable choice(s)?
  o Does each question have a clear purpose?
  o Do I have an idea of how this question will be used in the analysis and why I’m asking it?
Using Validated Instruments

- Even if it is “validated” not all validated scales are created equal and modification of an instrument will require further work and reassessment
- Questions to consider regarding the validity of an instrument:
  - Where was it published? Has it been improved over time?
  - How frequently is it used/cited?
  - What methods were used to validate the instrument? How rigorous was this and how large/generalizable was the population used?
- How well-suited is this instrument for your study?
  - How closely does the construct in the instrument match your interest?
  - Has it been tested on a similar population to mine?
  - What adaptations might be needed for my own research?
  (Note: changing an instrument will “break” its validation)

Example Scales

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disagree</td>
<td>Somewhat</td>
<td>Neither agree</td>
<td>Somewhat</td>
<td>Agree</td>
</tr>
<tr>
<td></td>
<td>Disagree</td>
<td>nor disagree</td>
<td>Agree</td>
<td>Not Applicable or Do Not Know</td>
</tr>
<tr>
<td>Almost never</td>
<td>Seldom</td>
<td>Sometimes</td>
<td>Often</td>
<td>Very often</td>
</tr>
<tr>
<td></td>
<td>Not Applicable or Do Not Know</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very Poor</td>
<td>Poor</td>
<td>Satisfactory</td>
<td>Good</td>
<td>Very Good</td>
</tr>
<tr>
<td></td>
<td>Not Applicable or Do Not Know</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very little</td>
<td>A little</td>
<td>Somewhat</td>
<td>A lot</td>
<td>Quite a lot</td>
</tr>
<tr>
<td></td>
<td>Not Applicable or Do Not Know</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Mostly not useful</td>
<td>Not very useful</td>
<td>Somewhat useful</td>
<td>Very useful</td>
<td>Extremely useful</td>
</tr>
<tr>
<td></td>
<td>Not Applicable or Do Not Know</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Further Reading

For more in-depth information on scale development and survey design, we recommend the following resources:
