Multi-Item Scale Development and Testing
Summer Institute in Survey Research Techniques, 2014

Instructor: Dr. Pamela Campanelli
Time: 29 June – 2 July, 1.00 to 5.00 pm
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Course Description
Standardised multi-item scales are more common in some disciplines than others. This one week course is designed to inspire participants from all disciplines that it is possible to develop your own high quality multi-item scales (or correctly adapt existing multi-item scales) and offers an introduction on how to do this. It covers the psychometric principles of question development while adding in principles of general questionnaire design. Focusing first on Classical Measurement Theory, participants design their own multi-item scales. The course then introduces some basic statistical tools for assessing the reliability and dimensionality of multi-item scales and participants get to practice evaluating some existing scales in a computer lab session. The course finishes with an introduction to Item Response Theory. There will also be session time where participants can discuss their own scale concerns with the instructor.

Evaluation
Grading for the course will be based on a two-part assignment due 1 week after the last day of class. The first part will involve writing your own new multi-item scale adhering to the principles learned in the course. The second component will tap your knowledge of the required readings. It is a take home exam with short answer and multiple choice questions. (Please submit your assignments on time, as points will be removed for late assignments.)

Prerequisite
There is no prerequisite, but a little knowledge about questionnaire design, multi-item scales and SPSS would be of value.

Course Website
The course website (https://ctools.umich.edu/portal) contains assigned articles and is maintained by Dr. Pamela Campanelli [dr.pamela.campanelli@thesurveycoach.com].

Students using a UMich e-mail can access the site instantly with their UMich e-mail address and password.

On the site under “Resources”, you will find the required articles to read. Note that some of the readings are password protected. The password 'surv630cam' is needed.
Visiting students and UMich students who wish to use a non-UMich e-mail will need to get a UMich Friend Account, a special kind of computer account that is used to give non-University of Michigan members access to the general University of Michigan web environment. You can use any e-mail address you want for your Friend Account, but this same e-mail address has to be entered into the CTools system in order for you to access the course materials.

Steps to accessing the website with an non-UMich e-mail:
1. Tell Dr. Campanelli your preferred e-mail address so these can be put in CTools.
2. When you receive a reply from her that it is in, go to https://friend.weblogin.umich.edu/friend/ and do what it says to create a Friend Account. This is just a few simple steps.
3. You can then go to the CTools site https://ctools.umich.edu/portal, click on “login in” in the upper right-hand corner, and use your Friend Account login and password.
4. This will then show you a tab for the class (and any other classes where that e-mail has been entered in CTools)
5. On the site under “Resources”, you will find the required articles to read. Note that some of the readings are password protected. The password 'surv630cam' is needed.
6. Be sure to contact Dr. Campanelli if you have any problems.

### Course Schedule

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<thead>
<tr>
<th>Day</th>
<th>Topic</th>
<th>Suggested Reading</th>
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<tbody>
<tr>
<td>29 June</td>
<td>• General overview of wording survey questions&lt;br&gt;• <strong>Workshop</strong> in question wording&lt;br&gt;• Testing survey questions&lt;br&gt;• Background to multi-item scales</td>
<td>• Krosnick and Presser (2010)&lt;br&gt;• DeVellis (2012), Chapters 1-2 and 8</td>
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<td>30 June</td>
<td>• Background to multi-item scales (continued)&lt;br&gt;• Psychometric principles of validity and reliability&lt;br&gt;• How to write multi-item scales&lt;br&gt;• Group <strong>workshop</strong> in writing a multi-item scale&lt;br&gt;• Statistical assessment of multi-item scales</td>
<td>• DeVellis (2012), Chapters 3-5&lt;br&gt;• Heath and Martin (1997)</td>
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<td>1 June</td>
<td>• Statistical assessment (continued) scales&lt;br&gt;• ‘Open surgery’: Bring in your own research and have it commented on by the instructor. The instructor will also bring in examples.</td>
<td>• DeVellis (2012), Chapters 6</td>
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<td>2 June</td>
<td>• Practice in evaluating some existing scales in a computer lab session&lt;br&gt;• Introduction to item response theory&lt;br&gt;• If time permitting, computer lab session on Guttman and Rasch scales</td>
<td>• DeVellis (2012), Chapters 7</td>
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Readings

Assigned Textbook


Assigned Reading on the Ctools Website


Optional Reading on the Ctools Website


Other useful references


