

IAT 834 Mixed Methods in Design Evaluation
Research Design Weekly Assignment 7
Assignment: Quantitative Methods
Due: Sunday

Read: Creswell chapter on Quantitative Methods

Based on your mixed methods design and to the best of your ability at this time ...

1. Design and write up a 1-2 page plan for the procedures to be used in a survey study as per Creswell. Review the checklist Table after you write the section to determine if all components have been addressed.

OR

Design and write up a 1-2 page plan for an experimental study as per Creswell. For example, you may use an experimental method for a usability study of an interface design or on a user performance study comparing two interface designs. Refer to Table to ensure that you have addressed all questions.

OR

If your study mixes at a methodological level, then combine Assignment 7 and 8 with clear articulation of quantitative and qualitative components and how the mixing works. However, if you use one or more quantitative methodologies and the mixing occurs in data, analysis, interpretation, then you should do this assignment. You can make notes where qualitative elements will fit in, and add details in Assignment 8 referring to Assignment 7.

2. Create an alignment chart that relates quantitative measures* to research questions as follows:

Research Question (or Hypothesis)	Independent Variable + Levels	Dependent Variable	Data collection method	Research instrument	Data type	Analysis method
Does service interface style affect user satisfaction?	UI style Level: 1) TUI 2) GUI	User satisfaction	After login and doing 3 main tasks -- > 3 Closed survey questions from SUS (validated usability questionnaire)	1. I think that I would like to use this service frequently [1-7] 2. I found the service unnecessarily complex [1-7] 3. I thought the service was easy to use [1-7]	Numeric, Ordinal (1-7)	Mann Whitney test of difference of means (for ordinal data)
Does service interface style affect login task time?	UI style Level: 1) TUI 2) GUI	Efficiency	Average task time for login using service over 10 trials with 2 learning trials thrown out.	S/W timer for task login	Numeric, ratio (seconds)	T-test if normal and homog variance.
ETC						

*In this example, data is quant – however, you can make a single table for Assignment 7 and 8 (quant and qual data) if that makes sense (for concurrent parallel or embedded designs). See example table in Assignment 8.