

## Calculating to Convince Your Readers: A Proposed Quantitative Tool-Kit for Thesis Writers

The purpose of this note is to continue a faculty discussion about quantitative tools that could usefully be introduced, or further emphasized, to our thesis students. My own interest in this forum is the experience of helping students use quantitative tools to convince their readers that the research question has been answered. I hope this note will encourage each of my colleagues to present their own suggestions as to what, how, and when, quantitative focused materials could be (or should be) introduced into our own research curriculum. In the diagram below, I've listed a few tools that have helped my students with some very basic analysis, synthesis, and presentation tasks. There are quantitative tools available for both numeric data sets as well as discourse (textual) data. Following the diagram I have included the first couple of pages of a few handouts that I make available to my students as an example of what I think we ought to try to encourage along these lines.

### *Proposed Discussion Agenda*

1. Why develop and implement a quantitative tool kit across the research (elsewhere?) curriculum? (we already have 'writing across the curriculum'). "calculating across. . ."
2. Do this now? - if 'yes' to(1).
3. What tools, and in what sequence ought they to be introduced in the RES? curriculum (given yes to (1) and (2)).

<p><b>Exploring Numerics</b> (Basic) Stem&amp;Leaf Plots 5-Number Summaries Box &amp; Whisker Plots Comparisons &amp; Trends</p> <p><i>Easy Numeric Presentation Summaries</i> Pareto Plots Bar Charts Contingency Tables</p> <p><i>Confirming Conjectures</i> Trend Analysis (Linear Regression) Multiple Regression Contrasting Means (Analysis of Variance)</p>	<p><b>Basic Stats</b> mean, variance, Random Variables, *Normal Distribution</p> <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: 80%;"> <p style="text-align: center;">Thesis as a Framework for: Posing a Question &amp; Presenting a Convincing Answer</p> </div> <p><i>Experimental Design</i>  <i>Introduce Geometry of Statistics</i> (long range desirable perspective)</p>	<p><b>Exploring Discourse</b> (Basic) Survey Design demographics psychographics yes/no, Likert, AHP (follow on from Likert)</p> <p><i>Survey Analysis</i> yes/no analysis Likert analysis AHP analysis</p> <p><i>Interview Design</i> <i>Interview Analysis</i> Exploratory Discourse Analysis (argument analysis)</p> <p><i>Organizational Structures for Context:</i> MOISE Diagrams other org diagrams</p>
<p><b>FIGURE 1. Quantitative Tools for Thesis Writers</b></p>		