

Lertap Quiz Research Questions Set A

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The research questions presented below are with reference to the November 2006 version of the Lertap Quiz data set.

This version of the Lertap Quiz data set is in an Excel workbook. It's called "*LrtpQuizNov06a.xls*", and may be found at this URL:

<http://larrynelsonstuff.com/Documentation/Samples/LertapQuiz/LrtpQuizNov06a.xls>

The workbook contains two worksheets: 'Data' and 'CCs'. The information contained in these worksheets is located at the following URL:

<http://larrynelsonstuff.com/Documentation/Samples/LertapQuiz/LrtpQuizNov06aCodeBook.doc>

The actual questions used in the original Lertap quiz are published in Appendix A of the Lertap manual; they may also be seen by visiting this URL:

[http://larrynelsonstuff.com/Documentation/Samples/LertapQuiz/AppendixA\(LRTPQuiz\).doc](http://larrynelsonstuff.com/Documentation/Samples/LertapQuiz/AppendixA(LRTPQuiz).doc)

Research questions set 1 (descriptive)

The following questions may be answered by using any one of a number of techniques. Some of them may be answered by simply visually counting the values found in the appropriate column. All could be answered with little difficulty by using Excel or SPSS.

- 1.1 How many respondents were from private schools, and how many were from public schools?

- 1.2 Which of the twenty-five cognitive questions, Q1 – Q25, were correctly answered by at least 50% of the students? (Remember: the correct answers to these questions are shown in the **key* line in the CCs worksheet.)

- 1.3 Which was the hardest cognitive question? Which was the easiest?

- 1.4 Regarding the ten affective questions, Q26 – Q35, on which questions did at least 50% of the respondents agree or strongly agree? On which question was there the most disagreement (disagree or strongly disagree)?

- 1.5 For the two ratio variables, YrsComp and YrsTest, what were the median and mean values? What were the ranges and standard deviations?
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Research questions set 2 (visual)

I feel that, whenever possible, results should not simply be tabulated, but also graphed. There should not only be statistics, but charts. Present software systems often make it fairly easy to produce charts, and I invite you to try making some by suggesting these tasks:

- 2.1 Make a pie chart of the data from question 1.1 above.
- 2.2 Make histograms for the two ratio variables, YrsComp and YrsTest.
- 2.3 Can you think of some sort of chart which would represent the results from the ten Likert questions, Q26 – Q35?

Note: *I will ask for volunteers to display their results to the rest of the class.*

Research questions set 3 (group differences)

Your boss has asked you to see if there were any differences on the two ratio variables, YrsComp and YrsTest, according to school Type – did the teachers from private schools (for example) have more computer experience than those from public schools? What about YrsTest?

- 3.1 Compute the statistics necessary to answer your boss's questions.
- 3.2 Create charts which will help the boss see what has happened – these could be histograms, or they could be boxplots.

Note: *Here I will again ask for volunteers to display their results to the rest of the class.*

Comment: the *LrtpQuizNov06a.xls* data set has only N=60 respondents, and that the Type variable's results are artificial. It could be that the results will be ambiguous – the charts, for example, may not look too good due to small N.

But give these questions a good try, and submit a written report to your instructor according to her / his instructions.