DOWLING COLLEGE
School of Education
Department of Educational Administration, Leadership, and Technology

EDE 9802: EXPERIMENTAL RESEARCH METHODS
Summer 2011

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FINAL ASSESSMENT – Due July 27, 2012

This assessment will measure your ability to choose the appropriate statistical analysis, conduct various statistical analyses, and interpret your findings. For each item, a) write what statistical technique is appropriate, b) list your findings including relevant statistics and level of significance, and c) interpret your findings (explain what the numbers mean and answer the question posed). Using the appropriate statistical test and interpreting the output is just as important as providing the correct numbers. Pasting some tables is fine, but please do not provide a great deal of extraneous statistical information. You do not need to write how you used SPSS to reach each number. Statistical techniques might include different types of t-tests, correlations, analysis of variance, linear regressions, and descriptive statistics.

Please work on this assessment individually. For this assignment, please email your written assignment (as a Word document with your last name in the file name) to me at perrysm@dowling.edu. Do not submit your SPSS files unless later requested.

1) Make sure all variables are correctly classified (as Scale, Ordinal, or Nominal). If any are incorrectly classified, explain why.

2) Add the following value labels to the appropriate variables below. Answers should refer to these labels, not the original designations (e.g. "Asian or Asian-American" instead of "1."
    a. Gender: 0 = Female, 1 = Male
    b. RaceEthnicity: 1 = Asian or Asian-American, 2 = Black or African-American, 3 = White or European-American
    c. Liketheprogram: 1 = Strongy Dislike, 2 = Dislike, 3 = Neither Like nor Dislike, 4 = Like, 5 = Strongly Like
    d. Like School: 1 = Strongy Dislike, 2 = Dislike, 3 = Neither Like nor Dislike, 4 = Like, 5 = Strongly Like

3) Calculate means and standard deviations for ReadingPre, ReadingPost, MathPre, and MathPost.

4) Determine if MathPre differs significantly from MathPost. Explain by reporting appropriate statistics.

5) Determine if ReadingPre differs significantly from ReadingPost. Explain by reporting appropriate statistics.

6) Does MathPre differ significantly by race? Explain by reporting appropriate statistics.

7) Do English Language Learners (ELLs) differ significantly from Non-ELL students on Reading Pre? Explain by reporting appropriate statistics.

8) Calculate the new variables of ReadingGrowth and MathGrowth (you do not need to provide a response for this item).

9) Calculate Mean, Median, Range, and 25^{th} and 75^{th} percentiles for ReadingGrowth and Math Growth.

10) Determine if ReadingGrowth and MathGrowth differ significantly by Gender.

11) Does MathGrowth or ReadingGrowth differ significantly by Race? Explain.

12) What is the nature of the relationship between MathGrowth and the degree to which respondents like the program? Explain by reporting appropriate statistics.

13) Does ReadingGrowth differ significantly by Free & Reduced Lunch status? Explain by reporting appropriate statistics.

14) What is the nature of the relationship between ReadingGrowth and ReadingPre? Explain your findings.

15) Did students who participated in the program experience significantly greater mean ReadingGrowth? Explain your findings.

16) Did students who participated in the program experience significantly greater mean MathGrowth? Explain your findings.

17) From this question forward, filter out students that did **not** participate in the program (the Program = 0 people). To do this, go to Data -> Select Cases -> If condition is satisfied button -> If -> Program = 1-> Continue -> Confirm that Output says "Filter out unselected" -> Press OK. You should now have a line through the people that were not in the program.

18) Are there significant relationships between the ProgramHours, liking the program, ReadingGrowth, and MathGrowth?

19) For students that participated in the reading program, how well can you predict ReadingGrowth? Conduct a linear regression (stepwise method) using ProgramHours, ReadingPre, and any demographic variables you wish.

20) For students that participated in the math program, how well can you predict MathGrowth? Conduct a linear regression (stepwise method) using ProgramHours, MathPre, and any demographic variables you wish.