**Quiz Intro-2 Cortland Watson**

Part I – Individual Quiz (Before Class)

Part II – Group Quiz (During Class)

1. What are the four types of responses (2 pts)? (HELP)

“The response is the measurement you use to judge the effect of the conditions.”

Nominal – The measurement is the name of a category. (Eye color, blood type)

Ordinal – The measurement sorts items into categories. (Color of beetles)

Interval – The measurement is a number and the distance has no meaning. (Birthyear)

Ratio – The measurement has a meaningful distance and lowest value. (ml)

1. What does it mean that responses should have reliability and validity (2 pts)?

Reliability is concerned with repeatability and Validity is concerned with relevance. This means that the results that we obtain should be relevant to the question that we are asking. That this experiment should collect data about oranges rather than apples. Second, reliability means that we should develop the experiment in such a way that others would be able to do it and obtain similar results.

1. What is the difference between an observational study and an experimental design (2 pts)?

“In an experiment, you start with one set of subjects or material to which you assign treatments.”

“In an observational study, you start with several populations of subjects and take sample from them.”

The difference between these two things is that in an experiment we are testing the treatment that is given, and in an observational study you simply observe samples of a population of interest. I would venture to say that observational studies lead us to experimental studies.

1. What does an experimental design compare and what does an observational study compare (2 pts)?

An experiment compares treatments and an observational study compares populations. They may use the same testing or methods to analyze the data, but the interpretation is the real difference. They compare different things. Therefore, they are limited in what they can do. In an experiment, you can only see directness from the controlled variables, while in observational, you can rarely discuss relationships because of the lack of control.

1. What does it mean that material should be uniform and representative (2 pts)?

Representative means that the sample accurately portrays the population, which is done through random sampling. Uniformity is the effort in trying to control for extra variables, thus allowing us to make more direct conclusions from the data or the results. For example, separating the participants to male/female, age or different factors.

**End of Part I**

1. Were you in class on time (2 pts)?

YES

1. Determine the Response, conditions and material for problem #2 Exercise set A, page 109 (2 pts.).

Response – hatch rate

Conditions – temperature, water solutes

Material – trout eggs

1. Are Self-Evaluation Exams and the Experiment on Non-Contextual word frequencies for evaluating Unique authorship both valid tests? (2 pts.)

I think that the second is more of a valid test because the material is much more simple and measurable. This means that when looking at a group of text, there are less factors that come into play than when assessing one’s self. When assessing one’s self there are all kinds of factors that can play a role, the mental state of the individual, their values, their desire to be honest, or look good, ect. Validity comes in the accuracy of a measure to accurately measure what it is meant to test. Self-evaluation is one that is questionable in regards to its validity.

1. What type of measurement do you obtain from a Self-Evaluation Exams and the Experiment on Non-Contextual word frequencies for evaluating Unique authorship both valid tests? (2 pts.)

In the self-evaluation exam we use a likert scale which then gives us a nominal response because each number represents a different category such as low or high. With the ENCU it would also be a nominal response because the word would be considered non-contextual or not.

1. pg125 #6 (2 pts.)

Knowledge of treatment confounding with response.

1. pg127 #1 (2 pts.)

Random sample would be representative because we are looking at the university.