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Errors in Handling Data

Planning Research Papers 9

In Gathering Research Data

1. Not paying enough attention to establishing and maintaining rapport with the subjects. This often leads to refusals to cooperate or to a negative attitude that can reduce the validity of tests and other measures.
2. Weakening the research design by making changes merely for convenience.
3. Failing to explain the purposes of measures used in the research to those who will be administering the measure. If a research assistant thinks a test or measure is silly or worthless, subjects may easily sense his/her attitude, leading to poor cooperation.
4. Failing to evaluate available measures completely before selecting those to use in the research. This often leads to the use of invalid or inappropriate measures.
5. Selecting measures to use in the research that have such low reliability that true differences are hidden.
6. Selecting measures to use in the research that the researcher is not qualified to administer and score.

In Processing Data

1. Failing to set up a systematic routine for scoring and recording data.
2. Not recording details and variations in scoring procedures when scoring data and then being unable to remember what was done when called upon to describe the procedure in the report.
3. Not checking the scoring for errors.
4. Changing the scoring procedure during the process of scoring the research data.

In Using Standard Measuring Instruments

1. Failing to check the content validity of achievement measures in the situation in which the research is to be carried out. That is, an achievement measure may be valid in one situation but not in another.
2. Failing to standardize or control the role of the person administering the measure in the data collection situation. That failure introduces problems nonstandard instructions and variations in the amount and kind of assistance given the subjects during the test.

3. Checking the overall validity and reliability of measures selected but failing to check validity and reliability data on subtest scores when these scores will be used in the research analysis.
4. Using personality inventories and other self-reporting devices in situations in which the subject might be expected to fudge answers to create a better impression.
5. Assuming that standard tests measure what they claim to measure without thoroughly evaluating available validity data.
6. Attempting to use measures that the researcher is not sufficiently qualified to administer, analyze, or interpret.
7. Failing to use the testing time well. For example, a researcher might wrongly administer long tests when shorter ones are available that meet the requirements of the research project equally well.
8. Not carrying out a pretrial of the measuring instruments and procedures, thereby making mistakes when collecting the data, and introducing bias.

In Using Statistical Tools

1. Selecting a statistical tool that is not appropriate or correct for the proposed analysis.
2. Collecting research data and then trying to find a statistical technique that can be used to analyze them.
3. Using only one statistical procedure when several can be applied to the data. This often leads to overlooking results that could have made a significant contribution to the research.
4. Using the incorrect statistical technique, such as using a series of t-tests when an anova is called for.
5. Overstating the importance of small but statistically significant differences.