Request #: 503 - SPED - Dissertation

Effects of Presentation Modality on Teacher Preference for Classroom Management Techniques

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Background

The purpose of this project is to evaluate how elementary schoolteachers' preferences for five (possibly up to seven) commonly used classroom management strategies (e.g., contingent praise or school-home behavior notes; Simonsen et al., 2008) are affected by the modality (e.g., animated illustration, spoken, or written) in which behavior management strategy options are presented. In other words, how does the format in which treatment options are presented affect a teacher's choice in selecting to use one classroom management technique over another? To answer this question, researchers will randomly (ideally equally) assign recruited elementary school teachers to one of two groups (possibly three) after demographic information is collected (i.e., post-test only control group design). In all groups, teachers will be presented with a written unchanging behavioral concern and the teacher will select one of two simultaneously available treatment options they would elect to use to address the concern (i.e., a paired choice preference assessment; Fisher et al., 1996). Each treatment option (five to seven total) will be presented at least once with each alternative, but all options will be presented an equal number of times. In the "control" group the simultaneously available treatment options from which teachers will select, will all be described in written text. The "treatment" group's options will be displayed as animated cartoons from which they'll be required to select one choice (the third group might receive spoken only options). The only change between groups is the specific form in which treatment options are provided. The researchers will then measure the percentage of each item was selected when presented over the alternative. The researchers will then rank order the treatment options within each group based on the percentage of selection to establish a hierarchy of preference. Researchers will also evaluate if mean differences for each specific treatment option are statistically significant across the included groups. Once the choice task is complete, all groups will have the opportunity to provide qualitative narrative responses for each individual treatment option.

Sample

We have not collected any data at the present time nor have we sufficiently identified the necessary sample size. The data we plan to collect include teacher demographic information (age, gender, race, years teacher, etc.), the percentage of selection for each treatment option when available (e.g., teachers in group A on average selected the Good Behavior Game 80{%} of the time when available), and qualitative narrative responses for each treatment option.

Since we are seeking assistance in confirming the particular research methodology and data analysis, we have not conducted formal power analyses. While initial informal power analyses calculations have been performed in G*Power, the researchers do not have particular expertise in group design methodology and the parameters of these calculations.

Considering that there are very few known investigations seeking to answer this question and even fewer or no known group methodologies used to answer this or a similar question, we have no guidance on the expected effect size. We would assume to at least see a moderate effect both within and across groups. Also, since we are skeptical about the ability to recruit large amounts of participants within a three-six month

time frame we would like to discuss if there might be alternative analyses in the event ideal sample sizes cannot be obtained.

Hypothesis

How are elementary schoolteachers' preferences for five (possibly up to seven) commonly used classroom management strategies (i.e., planned ignoring and contingent praise, Good Behavior Game, school-home behavior notes w/ response cost, self-managed response cost, and dependent group contingency; Simonsen et al., 2008; Stage {&} Quiroz, 1997) affected by the modality (e.g., spoken, written, or animated illustration) in which treatment options are presented. In other words, how does the format of presentation for treatment options affect a teacher's choice in selecting to use one classroom management technique over another when using a paired choice preference assessment (Fisher et al., 1996)?

We hypothesize that teachers who experience illustrated videos depicting treatment options (treatment group) will show more preference for (i.e., higher selection of) classroom management techniques that use positive reinforcement (i.e., dependent group contingency, Good Behavior Game, and contingent praise and ignoring) opposed to the included punishment-based techniques (i.e., self-managed response cost or school-home letter; additional options include reprimands and/or removal from class). Teachers in this group are likely to establish a hierarchy of preference with the positive reinforcement methods being selected the most (ranked highest based on the percentage of selection) and the punishment-based options selected less or not at all. We hypothesize teachers in the control group (written group) will likely show a relatively undifferentiated preference (i.e., a lack of preference hierarchy) between the treatment options. Teachers in this group are alternatively expected to prefer punishment-based strategies over positive reinforcement techniques.

Additional questions/hypothesis investigating demographic/covariate relationships: -Does gender affect teacher preference for management strategy? -Do the age of teachers influence classroom management selection? -Do teacher's years of experience influence reported preferences for management strategy? -Does being employed in a school using PBIS affect preference?

Progress

We have currently developed a working outline of the research methodology including the procedures, the possible data analyses that might be conducted, as well as, preliminary power analyses. However, since the researchers' primary areas of study do not generally use group research methodologies or statistical analysis, we have not progressed further and require confirmation of the method to be used, the data analyses that might occur, and the necessary sample sizes.

Request

We are seeking help in confirming the particular research methodology/statistical analysis strategy to be used (i.e., AN(C)OVA, MAN(C)OVA, linear regression), as well as, the needed sample size. The researchers both have a vague idea of the particular method that would be used (i.e., two/three group post-test only control group design), but prior to beginning the project would prefer confirmation and insight as this is neither the advisee's nor advisor's primary research methodology.

Since there are two groups with measurement of selection for five (to seven) separate variables using a continuous measure (i.e., percentage of selection), we assume a MAN(C)OVA would be appropriate. We also have outlined the possible tests that might be ran in this design, but there are still some questions that remain and confirmation that would be required. First, is this the appropriate analysis given the design, measures, and goals of the current project? If this design is not correct, which should be considered in lieu of (or addition to)? Given the identified data analysis method, would the ideal sample size be given a moderate effect size? What alternative analyses might be considered in the event recruited sample sizes are under power analysis recommendations?

Timeline

We would prefer to submit a proposal document outlining the research methods, needed samples, and possible data analysis plan by mid-January 2021 to allow for project department and IRB approval and commencement by no later than February. We are hopeful data collection can be terminated by May-June, with final analyses occurring before the end of July 2021 at the latest.