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**Advancing the Effectiveness of Functional Communication Training for Children With
Intellectual and Developmental Disabilities in Schools**

NCT05445596

Primary Investigator: Jessica Torelli, Ph.D., BCBA-D
Western Kentucky University
270-745-4054

Sponsor:
KY INBRE

Statistical Analysis Plan

We planned to enroll eight participants. The project uses single case experimental design, which relies on visual analysis, rather than statistical analysis to infer functional relations (i.e., causal evidence) for each dependent variable (rate of problem behavior, rate of functional communicative responses, percentage of trials with academic work completion, percentage of correctly implemented procedures). In each of the three aims, participants serve as their own control, providing a baseline from which to compare intervention data. The specific single case designs used in each aim vary. We will infer the presence of a functional relation by observing for consistent changes in the level, trend, or variability of a dependent variable with the introduction of an independent variable relative to baseline or other comparison conditions (Barton et al., 2018).

We planned to use a consecutive controlled case series design across participants to evaluate the generality of procedures. We will report data for all consecutively encountered participants, regardless of outcome and analyze data at both the individual and group level. In our analysis of data across participants, we will report the proportion of cases with 80% and 90% reductions in problem behavior during two treatment points (i.e., the final three sessions of FCT with concurrent schedules and the final three sessions of the treatment extension) (Hagopian, 2020; Rooker et al., 2013).

All studies were designed in accordance with What Works Clearinghouse (WWC) Single Case Design Standards (Kratohwill et al., 2013). Each study was designed and implemented to meet standards. Study rating determinants for these standards include data availability, the independent variable, interobserver agreement, residual treatment effects, and design specific criteria. We will report findings in accordance with The Single Case Reporting Guideline in Behavioral Interventions (SCRIBE; Tate et al., 2016), a set of 26 items designed to enhance the clarity, completeness, accuracy, and transparency of single case research manuscripts. We will follow current guidelines for designing, analyzing, and reporting data from consecutive controlled case series designs (Hagopian, 2020).