

Abstract: Kellar Instructional Handheld data System (KIHD System)

Technology and Media Services For Individuals With Disabilities--Steppingstones of
Technology Innovation for Students with Disabilities (84.327A)

Purpose: To implement a Phase 2 project using the Kellar Handheld Instructional data (KIHD) System to determine intervention efficacy of single subject designs through randomization tests across a range of environments. The use of the KIHD System, a universally accessible Internet (browser based) Personal Digital Assistant (PDA) and Personal Computer (PC) data collection system, is appropriate for use with children with disabilities enabling wireless discrete trial data collection using Microsoft Access, a commonly available database, for data analysis.

Need: The fields of data collection and the influx of children with disabilities, needing one to one training and data collection and analysis to show individual student performance have converged so that development of an uncomplicated system of handling data only one time is possible. This system needs to be flexible enough to collect data according to the way that teachers teach a curriculum in a step-by-step fashion or to enter an entire curriculum into a database for a parent before implementation. The NCLB mandate for accountability and maximum access to the general education curriculum embodied in IDEA is leading to higher expectations and greater accountability for schools and students with disabilities.

Outcomes: . KIHD System consists of two platforms, a Personal Digital Assistant (PDA) to primarily collect data and a Personal Computer (PC), which will mainly define and analyze the data collected. The data input to the PDA will be transmitted to the PC and stored into the Microsoft Access Database which can be accessed on the internet. The KIHD System will allow educators and other data collectors to begin collecting chosen individual student performance data. The KIHD System will be designed for collecting discrete performance data on children with autism for whom discrete data performance collection is appropriate. As a tool, the KIHD System is designed so that the data collectors of teachers, parents, and aides, can collect individual performance data on a handheld device. That information (data) is stored making analysis possible using a commonly available database software tool, Microsoft (MS) Access. The KIHD System will provide the technology to have one touch data collection and immediate analysis for teachers and parents to make evidence-based, educational decisions.

Method: The Kellar Institute for Human disAbilities (KIHD) of George Mason University (GMU) and the [REDACTED] School will implement an ABAB single subject study design with multi-baselines to collect data using the data types of frequency, duration, accuracy and fluency, to explore intervention effectiveness across the population of students with autism. The setting of [REDACTED] will represent approximately 80% of the project for 10 studies (20 subjects) in a school context over a two year period and the homes of parents from [REDACTED] which will represent 20% of the project for 4 studies. Fourteen total studies will be completed using 24 students with each study will last two to four months. Data analysis will include both standard visual representation for single subject designs and randomization tests using SPSS.

Participants: Participants on this project include faculty and staff from George Mason University's Kellar Institute for Human disAbilities, teachers, paraprofessionals, students with disabilities and their parents from [REDACTED], the KIHD System Advisory Committee, and the [REDACTED] Parent Teacher Association.