The Effectiveness of a Streamlined Data Management System on the Frequency of Teacher Data Collection

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Introduction: Need for Intervention

•Data collected infrequently; time management cited
•Measuring performance on IEP objectives difficult when there is a lack of sufficient data
•Planning and revising instruction is best achieved through adequate data collection
•Opportunities to practice skills related to objectives need to be embedded more often into routines; helps students AND assists in data collection

Research/Importance of Data Collection and Embedding Learning Opportunities

Performance Monitoring and Data Collection

•Barriers to collecting data, inconsistent in this practice, doing so and in a non-systematic way.
•Beliefs and practices: the emerging themes included time, data management, nature of the setting, and the nature of IEPs.. Collaboration with other professionals also cited as an issue.
•Using the data: limitations in time and expertise; performance monitoring important, but lack of confidence in ability to document performance; rarely used to plan/revise instruction, belief that it is not always necessary**(Sandall, Schwartz, & Lacroix, B, 2004).**
•Tech-enhanced PM yielded greater performance/progress when programs implemented with integrity (**Ysseldyke, J., & Bolt, 2007).**

Embedded Learning Opportunities

•Children reached identified criterion with 100% accuracy on target goals, and one of two did so on nontarget goals **(Daughtery, Grisham-Brown, & Hemmeter, 2001)**
•By providing the results of three case studies conducted in a single-subject fashion, all of which were conducted in varied settings, evidence of the positive impact of ELOs is apparent **(Horn, Lieber, Li, Sandall, & Schwartz, 2000).**
•Both CTD and SP were equally effective as embedded opportunities in teaching the leisure skills to three of the four children with autism
•Mixed results regarding efficacy of CTD vs. SP **(Kurt, & Tekin-Iftar, 2008)**
•Social competency increased for all three participants, and social skills improved on the selected social goals that were embedded into classroom routines **(Macy, & Bricker, 2007)**
•The use of embedded teaching strategies among caregivers remained at levels consistently above baseline levels
(Woods, , Kashinath, & Goldstein, 2004)

Method

Setting

•Euclid, Ohio: suburban Cleveland
•Glenbrook Education Center: Preschool inclusion classroom
-AM and PM classes; AM class observed for study (9am-11:30am)
-Classes consist of children with mild-severe needs, and are mixed with typically developing peers.

Participants

-5 of 11 students in the class have IEP language objectives (2 girls, 3 boys) that were grouped on to data collection forms
-1 early intervention specialist and 2 paraprofessionals shared data collection responsibility during the experimental phase; only the EIS did so prior

Intervention/Experiment

•IEP objectives related to language goals for the AM class were grouped together relative to their relatedness in specificity and placed on data collection sheet
•Data collection sheets allowed for collection by day of the week as opposed to week of the month
•The EIS and paraprofessionals were briefed about the purpose of the study, and provided with written direction and explanation
•Baseline data were collected on the AM class's language objectives prior to the start of the experimental phase. The frequency of data collected on each objective (by week) served this purpose
•For comparative purposes data for social domain objectiv for the same students were also documented (and will be collected through the end of the study).
•During the experimental phase, the EIS and paraprofessionals share responsibility for data collection
•A social validity measure for participants and other building staff; open-ended and Likert-scale

Discussion

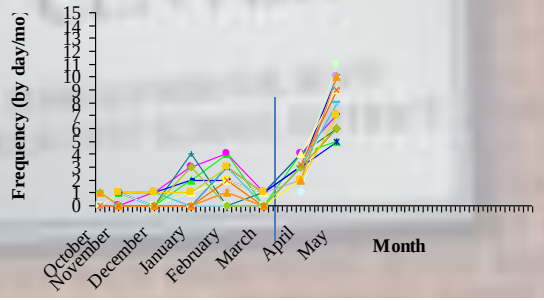
Based on the results of this project, future research may evaluate the feasibility of technological applications that group IEP objectives by domain, skill sets, and tiers, and by:
•Linking back to databases that document children's performance over time.
•tying them to possible embedded learning opportunities which could be accessed by the touch of a button

Survey for Participants:

•Did you collect data more frequently using this system?
•Did you find yourself embedding learning opportunities related to the IEP objectives in order to collect data?
•Did this method of grouping make it easier to collect data on multiple children?
•Do you think this method would work for data collection across multiple domains?
•Do you think this method would work better if sheets of paper were not necessary (i.e., plugging in data on computer-based tools)?
•Do you think this method makes it easier to share responsibility for data collection across adults in the classroom?

Results

Frequency of Data Collection on AM class Language IEP Objectives



General Findings

•Data collected infrequently during baseline for many students
•Multiple methods used to document data previously (tallies vs. days vs. activities)
•Preliminary questioning of participants reveals that grouping behaviors seems to make data collection for a larger group of students easier (study ongoing; results graph is projected frequency for April and May)
•Sharing data collection with other staff may also be beneficial.

Discussion continued..

•Streamlined data collection systems minimize burdens such as time and paperwork
•Data collection systems that group IEP objectives can allow for a tiered method of instruction