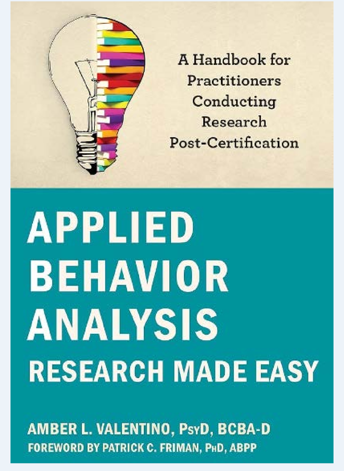
How to Develop a Scientist-Practitioner Culture

John O'Neill, Halle Apelgren, Lynde Kayser, Jessica Lindsay, Joseph Tacosik, Dawn O'Neill, and Nathan Blenkush
Judge Rotenberg Educational Center

Introduction

Existing accumulation of recommendations for obtaining and sustaining research support (Valentino & Onofrio, 2023):

- Establish values and connect them to research
- Obtain leadership buy-in
- Establish an ethics committee/RRC
- Create opportunities
- Create systems for efficiently accessing resources
- Create a decision-making model for research resource use
- Build community connections
- Obtain outside consultation and mentorship
- Provide education and training



What's Missing?

No experimental analyses of procedures

- Surveys only (Valentino & Juanico, 2020)

No mention of:

- Reinforcement procedures
- Functional Behavior Assessment

Little to no support for:

- Even for prolific practitioners (Kelley et al., 2015)
- Competing contingencies are ubiquitous (Morris & Lionello-DeNolf, 2022)

Method

Online survey, based on Valentino and Jaunico (2020), was distributed to all behavior analysts at the facility:

- Research was important to respondents
- Would conduct research if there were no barriers
- Lack of time, knowledge, and mentorship were barriers
- Interest in a variety of research opportunities (e.g., mentoring/supervision, group meetings, involvement in projects, presenting, writing, and publishing)

Package of intervention components (described later)

- Create a supportive culture
- Promote research activity

Participants

Participants *not aware* of study until debriefed at close

- All provided written consent to use their data for research
- No coercion

Four licensed and Board Certified Behavior Analysts

- Clinicians for residential students and clients with severe problem behavior
- Master's level dyad: Participants 1 and 2
- Doctoral student dyad: Participants 3 and 4
- Participants in each dyad shared an office and worked on inter-related research projects

Design and Procedures

Concurrent multiple baseline across participant dyads

IV – Component Package:

- Setting event - Conference abstract submission and acceptance
- Monthly journal club (ACE Provider) – 1 hour discussion of research topics relevant to clinical practice
- Weekly research meetings (Group) – 1 hour to detail progress and receive feedback/assignments
- Time-based contingencies (Deadlines) - Staggered introduction across dyads

DV – Emailed draft or revisions to the Director of Research with criteria for project completion:

- Thorough literature review
- Behavioral conceptualization of the topic
- Development of clinical guidelines

Cumulative Record of Project Revisions submitted to the Director of Research

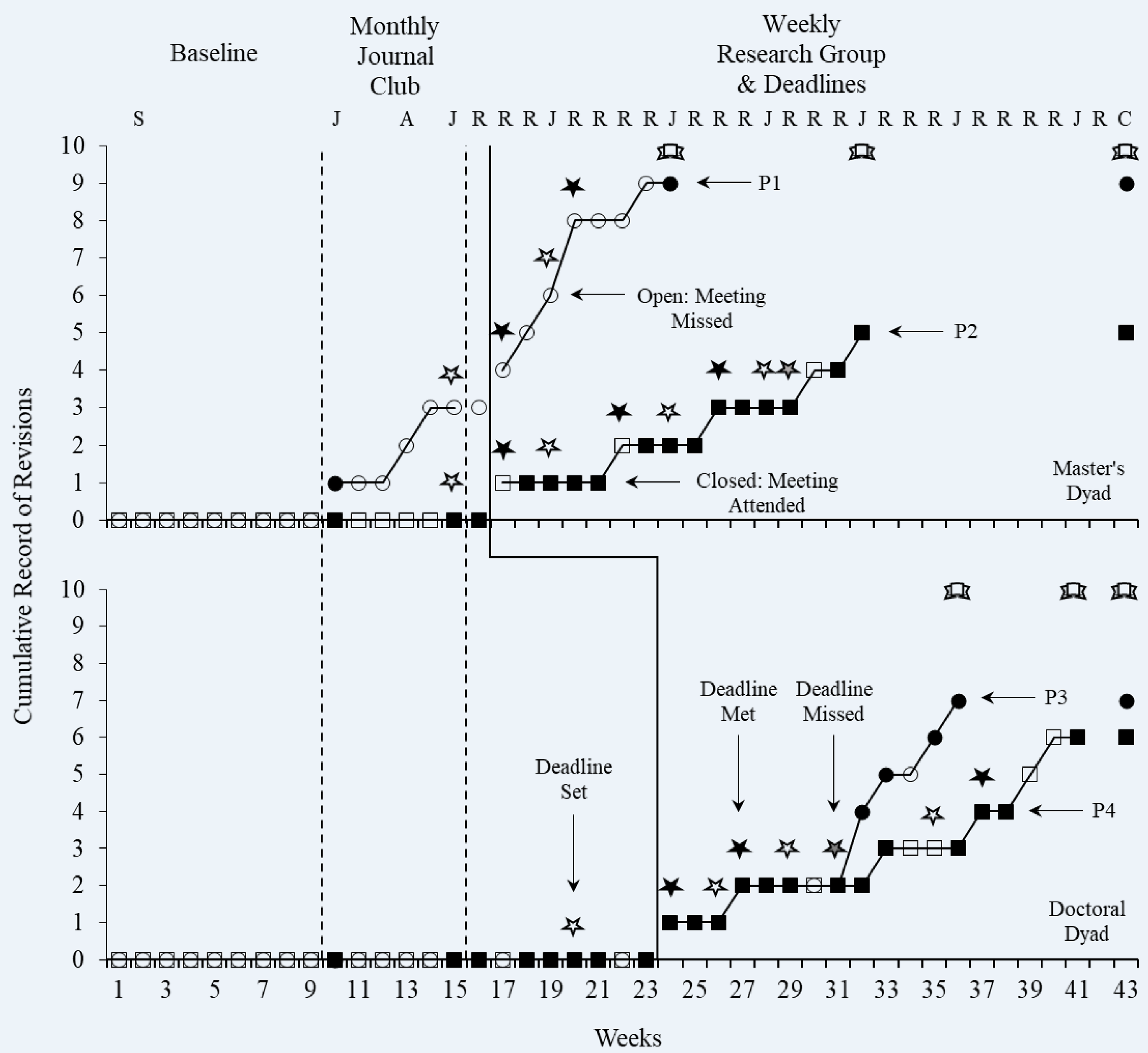


Figure 1. A cumulative record of project revisions submitted to the Director of Research across a master's (top tier) and doctoral (bottom tier) dyad of clinicians (differentiated by data markers). Survey (S) and conference submission (C). Closed data points denote attendance at monthly journal club (J), weekly research group meetings (R), and conference (C) while open data point reflect a missed meeting. Stars denote deadlines set (white), met (black), and missed (gray).

Fixed Interval Negative Reinforcement Scallop Effect

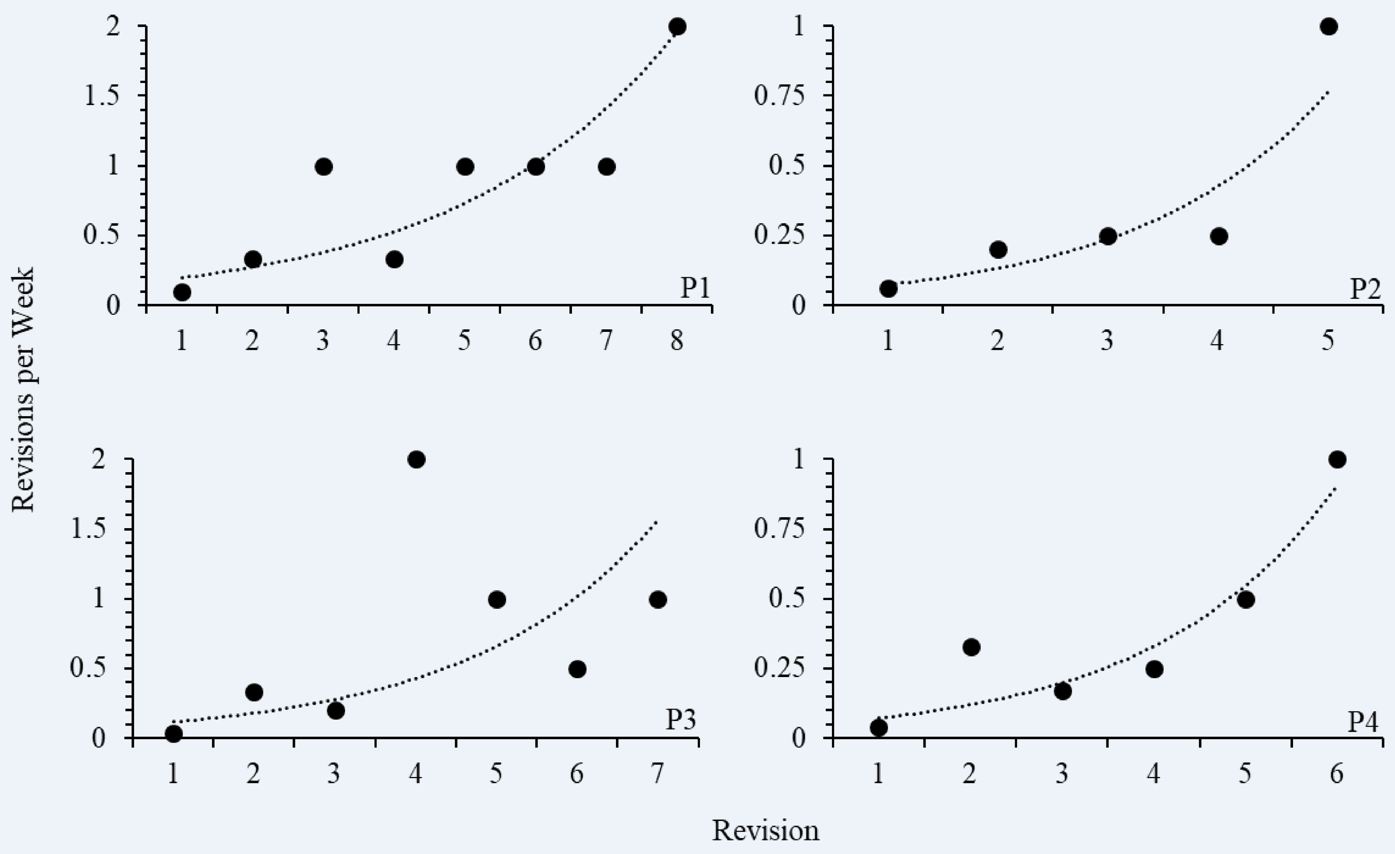


Figure 2. Fixed interval negative reinforcement scallop effect. Average number of revisions submitted to the Director of Research across all four participants. Calculated as a function of weeks from one revision to the next.

Results

All four participants successfully completed their projects

- Journal club and weekly meetings were not sufficient
- Initial drafts were submitted only after deadlines for 3 of 4 participants
- Revisions submitted more frequently with the approach of deadlines
- All participants presented at journal club as well as ABAI

Functional Behavior Assessment

Participant 1, 2, and 4: Avoidance/escape (i.e., meeting deadlines)
Participant 3: Automatic source of reinforcement (e.g., learning)
Ranked most important:

- Personal interest in the project
- Probability of permanent product (e.g., CEU event, publication)
- Accountability (e.g., deadlines, CEU presentation dates)

Ranked most impactful in preventing productivity

- Caseload management
- Availability of time

Conditions most likely to work on revisions

- Following feedback
- Approach of deadlines
- Approach of CEU presentation dates

Incentives that might promote research activity

- Monetary bonus for permanent products (e.g., CEU event, publication)
- Caseload reduction

Discussion

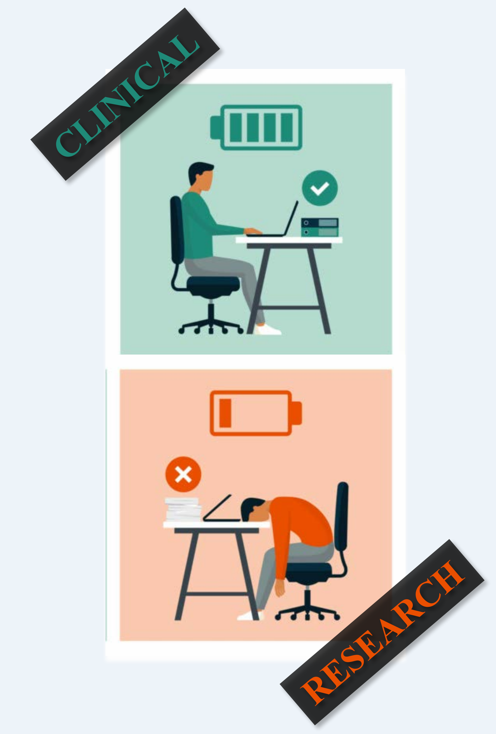
Over the course of a year, we produced 18 research products

- Eight continuing education events
- Three conference symposia (and this poster)
- Four papers in preparation
- Three preliminary clinical assessment tools

Organized group events may not be sufficient
Time-based contingencies were useful
Function: Avoidance of the inferred consequences of a missed deadline

Practical Recommendations

Step 1: Assess	Gain administrative Support Survey interest Identify and remove barriers Inventory personnel and resources Appoint a director of research
Step 2: Organize	Establish ethical review Conduct regular meetings Contact scholarly literature
Step 3: Implement	Arrange setting events Schedule contingencies Account for delayed consequences
Step 4: Focus	Incorporate experimental design Develop lines of research Seek funding/resources
Step 5: Expand	Provide education Utilize practicum hours Create research positions Collaborate Disseminate



Author Note

Dedicated to the memory of the first author's father, John O'Neill (Thrasher) of Clonoe.