APPLIED BEHAVIOR ANALYSIS AND SCHOOL PSYCHOLOGY

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This special section is devoted to applied behavior analysis research in school psychology. School psychology practitioners (approximately 87,000 worldwide) work in educational settings and address the problems that children, families, and teachers encounter during the educational process. Most school psychologists in the United States (estimated to be approximately 25,000) work in public schools, and the practice of school psychology has become increasingly diverse within this setting. The issues and problems that school psychologists address are far reaching and truly reflect the challenges that society presents to those who educate children and youth. In recent years, behavior analysis has become a primary technology for the provision of psychoeducational services by school psychologists, but this has not always been the case.

Traditionally, school psychologists in the United States played a very narrow role in the provision of psychological services in schools. This role typically involved testing and classification activities with students in need of special services for academic or behavioral problems. Several developments facilitated the adoption of behavior-analytic procedures by school psychologists, thereby modifying the role that these professionals played in practice and in research. To begin with, early in the profession's development, school psychologists were exposed to advances in basic and applied research in behavior analysis, and many of these

applications occurred in educational settings (Kratowill & Bijou, 1987). Researchers publishing in the *Journal of Applied Behavior Analysis* helped to shape the role of school psychologists by focusing on applied issues of social significance (Baer, Wolf, & Risley, 1968) and demonstrating numerous applications of behavioral principles in educational settings. These activities introduced a technology that school psychologists could use to address the mental health and educational needs of children and families. Growing empirical support for behavioral treatment programs as well as an increasing emphasis on comprehensive graduate training for practitioners of school psychology facilitated the application of behavioral techniques in schools.

Second, developments in behavioral assessment provided new methods that researchers and practitioners could use to assess students who experienced academic and behavioral difficulties. An important feature of the assessment practices used by behavior analysts was that they facilitated the development of treatment programs and were useful in monitoring the outcomes of these programs. This new way of conceptualizing school-based assessment served as a setting event for new roles and patterns of interaction with students and educators by both researchers and practitioners in school psychology. School psychologists still spend over 50% of their time involved in psychoeducational assessment (a role broader than testing), but the range and scope of assessment techniques are expanding and feature both treatment planning and evaluation components that are based, in part, on the conceptual foundations of applied behavior analysis. For example, exciting developments have occurred in functional analysis technology, and these are now

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beginning to be integrated into research and practice in the field of school psychology.

Third, school psychologists spend over 40% of their time in either direct or indirect psychological services (Fagan & Sachs-Wise, 1994). With typical service ratios of psychologists to school-age children in the 1:2,100 range, finding alternatives to direct treatment models has always been a high priority. Relative to other professions, the development of indirect service delivery models (often labeled consultation) in school psychology research and practice has been quite advanced, both conceptually and empirically. For example, behavioral consultation is one of the most frequently used indirect service models in practice and, relative to other models, has considerable empirical support (Bergan & Kratochwill, 1990; Martens, 1993). The technology of behavioral consultation depends on the empirical knowledge base in applied behavior analysis (see Martens & Meller, 1990, for a review) and has relied heavily on research in the *Journal of Applied Behavior Analysis*.

Finally, reports of behavior analysis research in various journals representing the interests of school psychologists have prompted increased attention to behavioral approaches for meeting the needs of children, families, and schools. Despite gains made in this area, the challenge continues to disseminate intervention-related research to school psychology professionals. Whereas the *Journal of Applied Behavior Analysis* has served as the flagship for intervention research in behavior analysis, during the period of 1981 to 1986 it had a reported reading by school psychologists of only 6% (Shapiro, 1987). Similarly, although Shapiro found that most school psychology journals contained a relatively small percentage of intervention articles, the vast majority of interventions reported were behavioral in nature. It is our hope that the articles appearing in this special section will encourage renewed interest in the adoption of behavior-analytic technology by school psychologists.

Each of the nine articles in the special section showcases a school-based application of recent advances in applied behavior analysis. The first three

articles report applications of functional analysis technology to children's learning and adjustment problems. The lead article by Kern, Childs, Dunlap, Clarke, and Falk describes a process of descriptive assessment, functional analysis, and assessment-based curricular intervention for increasing a student's on-task behavior. Repp and Karsh show the value of conditional probability analyses in selecting among hypothesized functions of behavior, and use this information to implement effective reinforcement-based interventions. Northup, Wacker, Berg, Kelly, Sasso, and DeRaad demonstrate how school personnel can be taught to use functional assessment procedures through in-service instruction and the provision of periodic technical assistance.

The next four articles report the outcomes of innovative and effective school-based intervention programs. Kamps, Barbetta, Leonard, and Delquadri use classwide peer tutoring to increase the reading performance and social interactions of students with autism and their peers. Gardner, Heward, and Grossi demonstrate the efficacy of a response-card procedure over traditional hand raising for increasing active student responding and subsequent test performance. The article by Miller and Kelley describes how parents can help improve their children's homework performance through goal setting and contingency contracting, and Olympia, Sheridan, Jenson, and Andrews describe a school-based program for improving homework completion that is managed by students.

The final two articles in the special section highlight the diversity of school-based applications that are possible within a behavior-analytic framework. Carey, Stoner, Ikeda, and Shinn demonstrate the utility of a behavioral assessment technology known as curriculum-based measurement for evaluating the effects of medication on the academic performance of children diagnosed with attention deficit hyperactivity disorder. The final article by Gillat and Sulzer-Azaroff describes a program for improving children's academic performance in which goal setting, feedback, and praise are provided by building principals.

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