

Barbara A. Schaefer

Penn State University
105 CEDAR Bldg
University Park, PA 16801-3108

e-mail: bas19@psu.edu
phone: 814-865-1953
fax: 814-863-1002

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Research Agenda

My primary research goal is to improve assessment of school-age youth so that interventions can be more effectively tailored to aid children in the school environment. Achieving this objective has involved three components. First, I examined behavior prevalence using a nationally representative sample of American youth ages 5-17 and delineated how behaviors may vary based on sample demographic characteristics. An important aspect of this research is that it examined psychopathology and behavioral variation in a normative, rather than clinical, sample (McDermott & Schaefer, 1999).

The second component of my research has focused on improving assessment via the application of multivariate statistical analyses to demonstrate the psychometric integrity of assessment instruments. For example, I examined interrater agreement of two teacher-completed behavior rating scales and found that observations completed in the same setting are more consistent than those from different settings (Buchanan, McDermott & Schaefer, 1999; Schaefer, Watkins & Canivez, 2001). This indicates that classroom environments can influence students' behavior in school in important ways. My research with the Learning Behaviors Scale (McDermott, Green, Francis & Stott, 2000) has demonstrated it to be a useful tool in understanding school-aged children's academic difficulties. In particular, my publications reported on the incremental and interactive validity of learning styles and intelligence as predictors of academic achievement in both American (Schaefer & McDermott, 2000) and Caribbean samples (Durbrow, Schaefer & Jimerson, 2001).

The third component of my research has focused on improving assessment of children living in disadvantaged circumstances. In 1997, I obtained a faculty research initiation grant to investigate learning styles among preschool children. In 1998, my colleagues and I received funding for a proposal to assess risk factors, learning behaviors, and academic outcomes among a longitudinal sample of Caribbean village youth. Comparison of academic measures and learning behavior indicated that behavior contributes substantially to educational outcomes and suggests that interventions can be designed to improve youth's learning. In addition, I have volunteered as a consultant to an area school district to develop a program evaluation of two interventions that have been implemented in some of the district's elementary schools. As coordinator of this evaluation, I worked with graduate students to conduct pre- and post- intervention testing with first- and second- grade students.

Together, the three components of my research and their application in area schools reflect my commitment to furthering sound assessment practices, effective interventions, and research focused on preschool and school-aged youth.

The proposed research will extend some of my prior research with school-aged youth into the preschool age range by investigating the concurrent validity of a preschool learning behavior scale in comparison with social skills and problem behaviors. While I have done some preliminary, unpublished work with this instrument, my research has been limited both by small sample size and local sampling which severely limits the generalizability of results.

Specific research questions that will be addressed by the proposed research include the interrelationships between various subtypes of children's behaviors in the preschool setting such as when interacting with peers, dealing with learning tasks, and conforming to normal structural and behavioral expectations. Similarly, the relationship between learning behaviors, ability, and school readiness skills will be investigated. Lastly, the contribution of learning behaviors to the prediction of basic concept attainment beyond that accounted for by demographic characteristics and intelligence will also be explored. Ideally, the research would also include a predictive component, such as children's academic achievement in grade 1; however, I would like to explore the feasibility of adding this component with experienced senior colleagues before including it as part of the research proposal.

Implications for practice of psychology in the schools based on the proposed research are threefold. First, further evidence of validity for the fairly new behavioral, intellectual, and school readiness instruments will be provided based on a national sample. Psychologists who work with preschool children would have additional evidence as to the utility of these instruments. Second, psychologists would have information about the interrelationships between behavior and evidence of learning. Inasmuch as preschool and early childhood educators' mission is to help young children develop physical, language, cognitive, and social skills, further inquiry into how behavior can influence learning will be beneficial. Third, the proposed research will permit delineation of the contributions of demographic characteristics, cognitive ability, and learning behavior to the prediction of school readiness and basic concept attainment. Should learning behavior increment the prediction of basic concept attainment after controlling for demographics and cognitive ability, this would be strong evidence that psychologists and educators need to intervening early on in children's preschool experiences to help change maladaptive learning behaviors so that children's learning can be maximized.

Research Proposal Abstract

Barbara A. Schaefer

Teacher observation of classroom functioning has been shown to be an effective tool for identifying children's skills and abilities in relation to similarly aged peers in social, competitive, and learning environments. The purpose of this proposal is to establish evidence of concurrent and predictive validity for the Preschool Learning Behaviors Scale (PLBS; McDermott, Green, Francis & Stott, 2000) via comparisons with measures of social skills, problem behaviors, intelligence, and basic concept attainment. A randomly selected national sample (N = 400) of preschool children ages 3 years, 0 months to 5 years, 6 months will be recruited from 40 Head Start preschools and private child care facilities in the northeast, south, midwest, and west regions of the U.S. The PLBS will be used to assess children's approaches to learning tasks. Children's social skills and problem behaviors will be assessed using the Preschool and Kindergarten Behavior Scales (PKBS-2; Merrell, 2002). Cognitive ability will be assessed using the Pictorial Test of Intelligence (PTI-2; French, 2002), a brief, individually administered test for which no verbal response is required of the examinee. The Bracken Basic Concept Scale-Revised (BBCS-R; Bracken, 1998) will assess concept attainment of categorical knowledge of color, numbers, counting, shapes, size, letter identification, texture, quantity, and comparisons. Rating scales will be distributed to teachers, and trained psychology undergraduate and graduate students will individually administer the PTI-2 and BBCS-R in counterbalanced orders. Standard scores for the PLBS, PKBS-2, PTI-2 and BBCS-R will be calculated according to the scoring mechanisms prescribed in each measure's respective manual. The following research questions will be addressed: 1) What is the relationship between learning behaviors, social skills, and problem behaviors? 2) Do learning behaviors relate to intelligence and concept attainment? and 3) Can learning behavior incrementally contribute to the prediction of basic concept attainment once demographics and intelligence have been controlled? Application of bivariate and canonical correlations will

investigate the first two research questions; hierarchical set-wise multiple regression will be used to address the third research question.

Proposal

Effective evaluation of children's educational and behavioral needs is reliant on presently available, psychometrically sound, standardized instruments. Unfortunately, even with adequate technical requirements, no measure has demonstrated significant treatment validity (Reschly, 1988). Current educational practices for preschool- and school-aged youth primarily entail testing and eligibility determination in which little emphasis is placed on assessment with intervention goals clearly in mind (Ysseldyke & Christenson, 1988). One avenue of assessing youth is via teacher observation of classroom functioning. This has been shown to be an effective tool for identifying children's skills and abilities in relation to similarly aged peers in social, competitive, and learning environments (McDermott, 1986). Furthermore, research has demonstrated that prediction of young students' academic success or failure by teacher ratings can be as accurate but more efficient than standardized test batteries (Feshbach, Adelman & Fuller, 1974).

Keogh and Becker (1973) recommended a behavioral approach to evaluating children specifically designed to involve observation of classroom behavior and an analysis of students' problem-solving strategies. Assessment utility could thus be evaluated by the degree to which problem identification leads to appropriate intervention implementation and positive outcomes. Potentially alterable, observable learning behaviors include the constellation of learning-related behavior (e.g., problem solving, persistence) displayed by individuals as they learn in the school context. One unique rating scale that addresses learning behaviors is the recently developed Preschool Learning Behaviors Scale (PLBS; McDermott, Green, Francis, & Stott, 2000; McDermott, Leigh & Perry, 2002).

The purpose of this proposal is to establish evidence of concurrent and predictive validity for the PLBS via comparisons with measures of social skills, problem behaviors, intelligence, and basic concept attainment using a national sample of preschool children.

Method

A national sample ($N = 400$) of preschool children ages 3 years, 0 months to 5 years, 6 months will be recruited from 40 Head Start preschools and private child care facilities in the northeast, south, midwest, and west regions of the U.S. After obtaining preschool administration and teachers' permission, randomly selected children's parents will be sent explanatory letters, consent forms, and demographic information (e.g., birthdate, sex, ethnicity, parent education) forms to recruit participants. Consent for participation will be obtained from parents and assent will be obtained from the child. Preschool teachers and classroom aides will be requested for their participation, with no individual asked to rate more than two children in their classroom. Psychology graduate students will assist in collecting the rating scale forms and will be trained to administer the intelligence and basic concept tests.

Learning behavior. A paper-and-pencil instrument, the PLBS (McDermott et al., 2000) consists of 29 behavioral descriptive items rated on a 3-point scale (*Most often applies*, *Sometimes applies*, and *Doesn't apply*) by preschool students' classroom teachers. The PLBS is applicable for children ages 3 to 5-1/2 years and is scored on three factors: Competence Motivation, Attention/Persistence, and Attitude Toward Learning.

Social skills and problem behavior. The Preschool and Kindergarten Behavior Scales (PKBS-2; Merrell, 2002) is designed for use with children ages 3 through 6 and is comprised of two sections: Social Skills and Problem Behaviors. Teachers rate each item on a 4-point scale (*Never*, *Rarely*, *Sometimes*, *Often*) resulting in three social skill subscale and five problem behavior subscale scores.

Cognitive ability. The Pictorial Test of Intelligence (PTI-2; French, 2002) is an individually administered test for children ages 3 through 8. Administration requires 15-30 minutes, and no verbal response is required of the examinee. Three subscales are scored: Verbal Abstractions, Form Discrimination, and Quantitative Concepts.

Concept attainment. The Bracken Basic Concept Scale-Revised (BBCS-R; Bracken, 1998) is nationally normed instrument designed to measure concept attainment in preschoolers and early school-aged children from 2.6 to 8 years. Eleven subtests assess the child's knowledge in categories such as color, numbers, counting, shapes, size, letter identification, texture, quantity, and comparisons.

Rating scales will be distributed to teachers, and trained psychology students will individually administer the PTI-2 and BBCS-R in counterbalanced orders. Standard scores for the PLBS, PKBS-2, PTI-2 and BBCS-R will be calculated according to the scoring mechanisms prescribed in each measure's respective manual.

Research Questions

The study will assess the relationships between learning behaviors, social skills, problem behaviors, intelligence, and basic concept attainment among preschool children. The following research questions will be addressed: 1) What is the relationship between learning behaviors, social skills, and problem behaviors? 2) Do learning behaviors relate to intelligence and concept attainment? and 3) Can learning behavior incrementally contribute to the prediction of basic concept attainment once demographics and intelligence have been controlled? Application of bivariate and canonical correlations will investigate the first two research questions; hierarchical set-wise multiple regression will be used to address the third research question.

The researcher has previously accomplished smaller-scale preschool studies with the help of school psychology graduate students. A larger-scale study would require site selection near existing training programs to access qualified examiners. Examiner training may require travel to the sites by the project director. Providing that reliable examiners are facile with testing, scoring, data entry and verification, the same individual could complete each of these tasks. Approximately \$38,000 would be necessary to accomplish this research (see Appendix).

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