DOCUMENT RESUME

ED 384 860 CS 012 210

AUTHOR Sonnenschein, Susan; And Others

TITLE Documenting the Child's Everyday Home Experiences:

The Ecological Inventory as a Resource for Teachers.

Instructional Resource No. 11.

INSTITUTION National Reading Research Center, Athens, GA.;

National Reading Research Center, College Park,

MD.

SPONS AGENCY Office of Educational Research and Improvement (ED),

Washington, DC.

PUB DATE 95

CONTRACT 117A20007

NOTE 32p.

PUB TYPE Guides - Classroom Use - Teaching Guides (For

Teacher) (052) -- Guides - Non-Classroom Use (055) --

Tests/Evaluation Instruments (160)

EDRS PRICE MF01/PC02 Plus Postage.

DESCRIPTORS Early Childhood Education; *Evaluation Methods;

*Family Environment; *Family Influence; *Parent Teacher Cooperation; Social Influences; Student

Characteristics

IDENTIFIERS *Ecological Inventory; *Emergent Literacy

ABSTRACT

This paper describes the Ecological Inventory, a technique developed to document the range and frequency of literacy-related activities available in pre-kindergartners' everyday lives. This technique can be used by teachers to broaden understanding of their students' home-based experiences. Results from the Ecological Inventory can be used as a basis for improved understanding between teachers and parents, for developing classroom educational plans, and for identifying the socialization agents in children's lives. Contains 25 references. Appendixes present guidelines for telling parents about the diaries, guidelines for diary keeping, and the Ecological Inventory. (Author/RS)



^{*} Reproductions supplied by EDRS are the best that can be made

DOCUMENTING THE CHILD'S EVERYDAY HOME EXPERIENCES: THE ECOLOGICAL INVENTORY AS A RESOURCE FOR TEACHERS

SUSAN SONNENSCHEIN

LINDA BAKER

ROBERT SERPELL









NRRC

National Reading Research Center

U.S. DEPARTMENT OF EDUCATION Office of Educational Hestarich and Improvement EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

- This document has been reproduced as received from the person or organization originating it
- Minor changes have been made to improve reproduction quality
- Points of view or opinions stated in this document do not necessarily represent official OERI position or policy

Instructional Resource No. 11
Spring 1995

NRRC

National Reading Research Center

Documenting the Child's Everyday Home Experiences: The Ecological Inventory as a Resource for Teachers

Susan Sonnenschein

Linda Baker

Robert Serpell

University of Maryland Baltimore County

INSTRUCTIONAL RESOURCE NO. 11
Spring 1995

The work reported herein is a National Reading Research Project of the University of Georgia and University of Maryland. It was supported under the Educational Research and Development Centers Program (PR/AWARD NO. 117A20007) as administered by the Office of Educational Research and Improvement, U.S. Department of Education. The findings and opinions expressed here do not necessarily reflect the position or policies of the National Reading Research Center, the Office of Educational Research and Improvement, or the U.S. Department of Education.



NRRC

National Reading Research Center

Executive Committee Donna E. Alvermann, Co-Director University of Georgia John T. Guthrie, Co-Director University of Maryland College Park James F. Baumann, Associate Director University of Georgia Patricia S. Koskinen, Associate Director University of Mary!and College Park Nancy B. Mizelle, Acting Associate Director University of Georgia Jamie Lynn Metsala, Interim Associate Director University of Maryland College Park Penny Oldfather University of Georgia John F. O'Flahavan University of Maryland College Park James V. Hoffman University of Texas at Austin Cynthia R. Hynd University of Georgia Robert Serpell University of Maryland Baltimore County Betty Shockley Clarke County School District, Athens, Georgia Linda DeGroff University of Georgia

Publications Editors

Research Reports and Perspectives Linda DeGroff, Editor University of Georgia James V. Hoffman, Associate Editor University of Texas at Austin Mariam Jean Dreher, Associate Editor University of Maryland College Park Instructional Resources ice Galda, University of Georgia Research Highlights William G. Holliday University of Maryland College Park Policy Briefs James V. Hoffman University of Texas at Austin **Videos** Shawn M. Glynn, University of Georgia

NRRC Staff
Barbara F. Howard, Office Manager
Kathy B. Davis, Senior Secretary
University of Georgia

Barbara A. Neitzey, Administrative Assistant Valerie Tyra, Accountant University of Maryland College Park **National Advisory Board** Phyllis W. Aldrich Saratoga Warren Board of Cooperative Educational Services, Saratoga Springs, New York Arthur N. Applebee State University of New York, Albany Ronald S. Brandt Association for Supervision and Curriculum Development Marshá T. DeLain Delaware Department of Public Instruction Carl A. Grant University of Wisconsin-Madison Walter Kintsch University of Colorado at Boulder Robert L. Linn University of Colorado at Boulder Luis C. Moll University of Arizona Carol M. Santa School District No. 5 Kalispell, Montana Anne P. Sweet Office of Educational Research and Improvement, U.S. Department of Education Louise Cherry Wilkinson

Production Editor
Katherine P. Hutchison
University of Georgia

Rutgers University

Dissemination Coordinator Jordana E. Rich University of Georgia

Text Formatter Ann Marie Vanstone University of Georgia

NRRC - University of Georgia
318 Aderhold
University of Georgia
Athens, Georgia 30602-7125
(706) 542-3674 Fax: (706) 542-3678
INTERNET: NRRC@uga.cc.uga.edu

NRRC - University of Maryland College Park 2102 J. M. Patterson Building University of Maryland College Park, Maryland 20742 (301) 405-8035 Fax: (301) 314-9625 INTERNET: NRRC@umail.umd.edu



About the National Reading Research Center

The National Reading Research Center (NRRC) is funded by the Office of Educational Research and Improvement of the U.S. Department of Education to conduct research on reading and reading instruction. The NRRC is operated by a consortium of the University of Georgia and the University of Maryland College Park in collaboration with researchers at several institutions nationwide.

The NRRC's mission is to discover and document those conditions in homes, schools, and communities that encourage children to become skilled, enthusiastic, lifelong readers. NRRC researchers are committed to advancing the development of instructional programs sensitive to the cognitive, sociocultural, and motivational factors that affect children's success in reading. NRRC researchers from a variety of disciplines conduct studies with teachers and students from widely diverse cultural and socioeconomic backgrounds in pre-kindergarten through grade 12 classrooms. Research projects deal with the influence of family and family-school interactions on the development of literacy; the interaction of sociocultural factors and motivation to read; the impact of literature-based reading programs on reading achievement; the effects of reading strategies instruction on comprehension and critical thinking in literature, science, and history; the influence of innovative group participation structures on motivation and learning; the potential of computer technology to enhance literacy; and the development of methods and standards for alternative literacy assessments.

The NRRC is further committed to the participation of teachers as full partners in its research. A better understanding of how teachers view the development of literacy, how they use knowledge from research, and how they approach change in the classroom is crucial to improving instruction. To further this understanding, the NRRC conducts school-based research in which teachers explore their own philosophical and pedagogical orientations and trace their professional growth.

Dissemination is an important feature of NRRC activities. Information on NRRC research appears in several formats. Research Reports communicate the results of original research or synthesize the findings of several lines of inquiry. They are written primarily for researchers studying various areas of reading and reading instruction. The Perspective Series presents a wide range of publications, from calls for research and commentary on research and practice to first-person accounts of experiences in schools. Instructional Resources include curriculum materials, instructional guides, and materials for professional growth, designed primarily for teachers.

For more information about the NRRC's research projects and other activities, or to have your name added to the mailing list, please contact:

Donna E. Alvermann, Co-Director National Reading Research Center 3.48 Aderhold Hall University of Georgia Athens, GA 30602-7125 (706) 542-3674

John T. Guthrie, Co-Director National Reading Research Center 2102 J. M. Patterson Building University of Maryland Co'lege Park, MD 20742 (301) 405-8035



NRRC Editorial Review Board

Patricia Adkins University of Georgia

Peter Afflerbach University of Maryland College Park

JoBeth Allen University of Georgia

Patty Anders
University of Arizona

Tom Anderson
University of Illinois at UrbanaChampaign

Harriette Arrington University of Kentucky

Irene Blum
Pine Springs Elementary School
Falls Church, Virginia

John Borkowski
Notre Dame University

Cynthia Bowen
Baltimore County Public Schools
Towson, Maryland

Martha Carr University of Georgia

Suzanne Clewell Montgomery County Public Schools Rockville, Maryland

Joan Coley
Western Maryland College

Michelle Commeyras University of Georgia

Linda Cooper Shaker Heights City Schools Shaker Heights, Ohio

Karen Costello Connecticut Department of Education Hartford, Connecticut Karin Dahl
Ohio State University

Lynne Diaz-Rico
California State University-San
Bernardino

Pamela Dunston
Clemsor University

Jim Flood
San Diego State University

Dana Fox University of Arizona

Linda Gambrell University of Maryland College Park

Valerie Garfield Chattahoochee Elementary School Cumming, Georgia

Sherrie Gibney-Sherman Athens-Clarke County Schools Athens, Georgia

Rachel Grant
University of Maryland College Park

Barbara Guzzetti
Arizona State University

Jane Haugh Center for Developing Learning Potentials Silver Spring, Maryland

Beth Ann Herrmann Northern Arizona University

Kathleen Heubach University of Georgia

Susan Hill
University of Maryland College Park

Sally Hudson-Ross University of Georgia Cynthia Hynd University of Georgia

Robert Jimenez University of Oregon

Karen Johnson
Pennsylvania State University

James King University of South Florida

Sandra Kimbrell West Hall Middle School Oakwood, Georgia

Kate Kirby Gwinnett County Public Schools Lawrenceville, Georgia

Sophie Kowzun

Prince George's County Schools

Landover, Maryland

Linda Labbo University of Georgia

Rosary Lalik Virginia Polytechnic Institute

Michael Law University of Georgia

Sarah McCarthey University of Texas at Austin

Veda McClain
University of Georgia

Lisa McFalls
University of Georgia

Mike McKenna Georgia Southern University

Donna Mealey Louisiana State University



Barbara Michalove

Fowler Drive Elementary School Athens, Georgia

Akintunde Morakinyo

University of Maryland College Park

Lesley Morrow

Rutgers University

Bruce Murray

University of Georgia

Susan Neuman

Temple University

Caroline Noyes University of Georgia

John O'Flahavan

University of Maryland College Park

Penny Oldfather

University of Georgia

Joan Pagnucco

University of Georgia

Barbara Palmer

Mount Saint Mary's College

Mike Pickle

Georgia Southern University

Jessie Pollack

Maryland Department of Education

Baltimore, Maryland

Sally Porter

Blair High School

Silver Spring, Maryland

Michael Pressley

State University of New York

at Albany

Tom Reeves

University of Georgia

Lenore Ringler

New York University

Mary Roe

University of Delaware

Nadeen T. Ruiz

California State University-

Sacramento

Rebecca Sammons

University of Maryland College Park

Paula Schwanenflugel

University of Georgia

Robert Serpell

University of Maryland Baltimore

County

Betty Shockley

Fowler Drive Elementary School

Athens, Georgia

Susan Sonnenschein

University of Maryland Baltimore

County

Steve Stahl

University of Georgia

Anne Sweet

Office of Educational Research

and Improvement

Liqing Tao

University of Georgia

Ruby Thompson

Clark Atlanta University

Louise Tomlinson University of Georgia

Sandy Tumarkin

Strawberry Knolls Elementary School

Gaithersburg, Maryland

Sheila Valencia

University of Washington

Bruce VanSledright

University of Maryland College Park

Chris Walton

Northern Territory University

Australia

Janet Watkins

University of Georgia

Louise Waynant

Prince George's County Schools

Upper Marlboro, Maryland

Priscilla Waynant

Rolling Terrace Elementary School

Takoma Park, Maryland

Dera Weaver

Athens Academy

Athens, Georgia

Jane West

Agnes Scott

Steve White

University of Georgia

Allen Wigfield

University of Maryland College Park

Shelley Wong

University of Maryland College Park



About the Authors

Susan Sonnenschein is an Associate Professor in the Applied Developmental Psychology Program at the University of Maryland Baltimore County. She has conducted research in children's language development. She also has explored how parental beliefs and practices impact on children's cognitive development. She is currently one of the principal investigators, along with Linda Baker and Robert Serpell, in the Early Childhood Project, a longitudinal project investigating the development of literacy for children from different sociocultural backgrounds.

Linda Baker is a Professor of Psychology at the University of Maryland Baltimore County and a principal investigator at the National Reading Research Center. She received her Ph.D. from Rutgers University. Her current research focuses on the social and cultural contexts of children's early literacy development. She is also interested in the development of metacognition and comprehension monitoring. Dr. Baker and her co-authors may be contacted at the Department of Psychology, University of Maryland Baltimore County, 5401 Wilkens Avenue, Baltimore, MD 21228-5398.

Robert Serpell is Director of the doctoral program in Applied Developmental Psychology at the University of Maryland Baltimore County. Born and raised in England, he received his Ph.D. in Experimental Psychology from the University of Sussex. Dr. Serpell worked at the University of Zambia from 1965 to 1989, and is a naturalized citizen of Zambia. His research has focused on socio-cultural factors in cognitive development and childhood disabilities. His publications include Culture's influence on behaviour (London: Methuen, 1976) and The significance of schooling (Cambridge University Press, 1993).



Documenting the Child's Everyday Home Experiences: The Ecological Inventory as a Resource for Teachers

Susan Sonnenschein Linda Baker Robert Serpell

University of Maryland Baltimore County

National Reading Research Center Universities of Georgia and Maryland Instructional Resource No. 11 Spring 1995

Abstract. In this report, we describe the Ecological Inventory, a technique we have developed to document the range and frequency of literacy-related activities available in pre-kindergartners' everyday lives. This technique can be used by teachers to broaden understanding of their students' home-based experiences. Results from the Ecological Inventory can be used as a basis for improved understanding between teachers and parents, for developing classroom educational plans, and for identifying the socialization agents in children's lives.

Many researchers, educators, and policy makers have noted that there is a crisis in equity in the academic achievement of mainstream and minority children (Alvermann & Guthrie, 1993; Whitehurst et al., 1994). That is, child-

ren from certain sociocultural groups fare worse in school from the earliest grades with the disparity in achievement increasing with years of schooling. There have been different explanations for these findings with different notions about how to improve the performance of the "at risk" children.

Several years ago, researchers at the National Reading Research Center conducted a poll of teachers throughout the United States, asking them to identify issues and problems warranting further research (O'Flahavan et al., 1992). One concern voiced by respondents was a need for research on instructional practices for "children placed at risk." As effective instructional practice must begin from the student's present competence, the primary purpose of this paper is to present information that can help teachers become more ware of the variety of different home experiences that can facilitate literacy development. By becoming cognizant of the myriad of educationally relevant experiences potentially available to children from different backgrounds, teachers can broaden their understanding of sociocultural similarities and differences, as well as different opportunities for enhancing literacy acquisition. In addition, we provide information for interested teachers as to how they might collect information about the children's home experiences.

Bronfenbrenner (1979) and Comer (1980), respected figures in the fields of psychology and education, both emphasize the developmental importance of harmonious relations between the different worlds inhabited by the child, more specifically, the world of the home and the world of the school. Moll and Greenberg (1990) make a related point as they dis-

cuss how "the funds of knowledge" available to children from their home experiences can be used by teachers to mediate effective classroom instruction. In order to design and implement culturally compatible educational programs, however, teachers need to have an accessible means of learning about their students' home experiences and cultures.

It has been our experience in working with teachers that many of them would be interested in knowing about the educationally relevant experiences their students have at home and outside the classroom in order to tailor classroom practices accordingly. As part of the Early Childhood Project, we have conducted in-depth interviews with the teachers of the pre-kindergarten and kindergarten children in our study. All of the teachers mentioned the importance of the role played by a child's family in fostering his or her interest in and success at school.

Although the teachers talked about the importance of knowing a child and his/her namily, many mentioned how limited their opportunities were for learning about the families. Pre-kindergarten and kindergarten teachers probably have more access to a child's family than do teachers of older children because young children are often walked to and from school by their parents. Nevertheless, the opportunities for extensive discussion between teacher and parent are limited.

In this paper, we describe a method called the Ecological Inventory that we developed for our research to facilitate the understanding of children's everyday home experiences. We are presently conducting a longitudinal research study, the Early Childhood Project. Of particular interest is how the children in our project experience and appropriate literacy as they progress from pre-kindergarten through the early years of formal schooling. More specifically, our focus is how the complex overlapping contexts of home and school interact to foster or impede reading development. The participants in the project are African American and European American children and their families residing in low-income and middle-income neighborhoods.

Our Ecological Inventory is designed to document the resources available to a child in his or her home environment that may foster literacy acquisition. Although the Ecological Inventory was developed as a research tool for documenting aspects of pre-kindergarten and kindergarten children's home experiences, it can be adapted for use by educators when working with children in the pre-kindergarten and early elementary school years. The adapted Ecological Inventory should facilitate understanding of what resources are available in a child's home environment and of what activities a child engages in, how frequently, and with whom. More importantly, the Ecological Inventory can be used as a conceptual guide to foster an understanding that children have many home experiences that may be educationally relevant and there may be cultural aspects adding definition to these experiences.

It is our belief that there is not one correct pathway to literacy but several. And it is especially important to consider these different pathways when working with children from different sociocultural groups. Although there are several reading intervention programs addressed to "children placed at risk" (e.g.,



Whitehurst et al.'s, 1994, dialogic reading program), most of these programs attempt to teach parents middle-class practices without considering sociocultural differences in the beliefs held by the families.

Theoretical Framework for the Early Childhood Project

Our development of the Ecological Inventory has been influenced by a broad theoretical framework that reflects the ideas and findings of psychologists, educators, and anthropologists. For example, Super and Harkness (1986) talked about the "developmental niche" to indicate that a child's development is influenced by his or her family's ethnotheories about development, the social milieu, and the experiences available to the child. Similarly, Bronfenbrenner (1979) believes that human development occurs in a context of overlapping and interdependent systems of social and cultural organization. Ethnographic studies of literacy (Heath, 1989; Scribner & Cole, 1981) indicate that an adequate description of this domain of cognitive activity must take into account the sociocultural context in which it is embedded. Thus, one needs to understand both the literate practices of a community and the learning processes through which the children in that community adopt those practices as their own and become skilled in them. Because behavior is often mediated by at least implicit notions of child development, one also needs to understand the belief systems that may structure individual behavior and interactions among people.

It is a commonly-cited fact that children from different sociocultural groups have different success records in school (Laosa, 1984). There are two general approaches to understanding these group differences in educational attainment, one focusing on deficits and the other on differences. The former approach attempts to explain sociocultural patterns of low academic performance through deficits within the child and/or the child's environment. The other approach, one to which we subscribe, attempts to characterize sociocultural patterns of poor academic outcome as a mismatch between home-based practices and school-based practices and expectations. That is, there is not necessarily a deficiency in the child, but rather the child's experiences are not congruent with the expectations of the school (see Cazden, 1972, for further discussion of how behavior may vary across contexts).

The literature suggests that children do best in school when there is a match between the home and school in terms of practices, expectations, and even instructional style. For example, Tharp (1989) and his colleagues have found with the Kamehameha Early Education Program (KEEP) that when Hawaiian children were instructed in a manner consistent with their home-based language and interactional styles, there were significant gains in reading achievement relative to a control group receiving more standard forms of instruction. Heath (1989) suggests comparable modifications in instructional practices be applied to other sociocultural groups. Note that the method that is successful with one sociocultural group may not generalize to other groups. As Jordan (1992) reports in her review of aspects of the





KEEP program, instructional methods successful with Hawaiian children in KEEP were not effective when tried with Navajo children.

In order to increase the compatibility between the school and the home, it is important that teachers and parents understand each other. That is, they need to have a common vocabulary. They need to have an awareness of the practices occurring in both contexts. As practices often reflect and are mediated by beliefs about how children learn and develop, teachers need to understand parents' theories of child development and vice-versa. However, such belief systems are often implicit and hard to explicate. We have found that a useful way of beginning to understand parents' beliefs is to identify recurrent activities and progress from there to the interpretation of the activities.

Some Practices Conducive to Early Literacy Development

Researchers have identified a common core of home-based characteristics and experiences associated with positive reading outcomes (see Sonnenschein, Brody & Munsterman, in press, and Morrow, 1989 for reviews of this research). These include:

- 1. Books for children are readily available.
- 2. There is a great deal of print material for adults around the house, including books, magazines, and newspapers.
- 3. Children are read to regularly.

- 4. Children see adults reading frequently.
- 5. Children are provided with space and opportunity for reading.
- 6. Parents provide reading guidance and encouragement.
- 7. Children go to the library and check out books frequently.
- 8. Parents express positive attitudes towards reading.
- 9. Parents take children on frequent outings.
- Children and adults engage in frequent conversation.

Note that the first eight items on the list focus on some aspect of reading and may represent common experiences for children from certain sociocultural groups. Thus, it may be reasonable for teachers of children from European American middle-income families to devise educational programs with the expectation that the students in their classes are coming from households with opportunities for engaging in reading. However, such book reading experiences may not be characteristic of other sociocultural groups. For example, Teale (1986) indicated that only 3 of the 24 low-income families (8 European American, 8 African American, and 8 Mexican American) in his longitudinal project engaged in recurrent storybook reading interactions.



Activities other than storybook reading can facilitate at least some aspects of literacy acquisition, as points 9 and 10 on the above list indicate. For example, Snow (1991) has hypothesized that the ability to use certain aspects of oral language facilitates literacy acquisition in the early school years. That is, the ability to use language to focus discussion on non-immediate events, objects, and ideas requires many of the higher-level skills relevant for reading and writing. Snow and her associates have studied a group of preschoolers from lowincome neighborhoods in Massachusetts, starting when they were 3 years old and following them into early elementary school. Their data indicate that conversations at mealtimes can foster certain literacy-related skills, such as vocabulary and narrative abilities.

Several researchers, including Snow and her associates, have broadened their scope of inquiry into literacy skills beyond book reading to consider what other literate opportunities are available to children. For example, Teale (1984) has found that low-income minority children have frequent exposure to a broad array of literate activities such as watching others read the mail, use coupons, and use television guides to look up listings. These activities may not foster as many literacy skills as does storybook reading, but they do affect certain aspects of literacy, such as an awareness of some of the functions of print available in children's environments. Likewise, Heath (1989) describes young children in a lowincome African American community observing while adults searched the newspaper for advertisements of shopping bargains and job openings. According to Heath, literacy was used primarily during the course of daily activities in such communities.

As our brief review of the literature suggests, all children growing up in a literate society have some exposure to a variety of literate practices, even before they enter elementary school. Although storybook reading may be the most effective means of helping young children appropriate literacy in some societies (Wells, 1982), this activity may not be typical of all families. Therefore, it could be beneficial to educators and practitioners, especially those working with children from lowincome families, to document the home experiences available to their students in order to better understand the families and home lives of the children. Instructional decisions could then be grounded in a more pervasive understanding.

Ecological Inventory Procedure

The Ecological Inventory, as we have used it, consists of two parts. Part One requires that a primary caregiver keep a detailed diary of his or her child's activities during a one-week period. Although such a person need not necessarily be the parent, we will refer to the primary caregiver as the parent in this paper. Part Two is a follow-up interview that clarifies and expands upon the information available in the diary.

The following sections briefly describe diary-keeping and follow-up interview procedures. A more detailed account of these procedures and their rationales is available in an NRRC research report (Baker, Sonnenschein, Serpell, Fernandez-Fein & Scher, 1994). We



present these procedures as we used them ourselves so that researchers and teachers, if interested, could implement them. However, even if a teacher is not interested in doing research, thinking about the nature of experiences available to different children is important.

Diary-Keeping Procedures

The parent is asked to keep a diary for a 1week period to document his or her child's daily activities. This diary can be kept in written form or in oral form recorded on audiotape. If necessary, due to missing one or several days, this diary can be kept over a 2-week period in order to collect information for 7 days. Instructions focus on the need to record as much detail as possible. Complete instructions are presented in "Guidelines for Telling Parents about the Diaries" (see Appendix A). A reminder sheet, "Diary Keeping," is left with the parent (see Appendix B). The parent is contacted at the end of the first day of keeping the diary to clarify any questions that have arisen. After the diary is collected, it is reviewed for omissions and areas to be clarified or amplified. Of major interest are the activities that the focal child engages in as well as the participants in the activities. This information is entered in the appropriate places on the Follow-up Ecological Inventory form (See Appendix C). One important advantage of our diary procedure is that it requires the parents to identify, in their own words, their children's activities. We did not want to introduce potential bias by asking the parents to respond to a preselected list in case they thought we were telling them what we consider to be important (and hence, what they should consider appropriate). However, the diary keeping procedure requires considerable work both on the interviewer's and the respondent's parts. In cases where a strong basis of open communication has already been established, it may not be necessary to have the parents keep the diary. Instead the information can be obtained directly during the interview.

Follow-Up Interview

The follow-up interview is completed at a visit with the family which should be scheduled within a week or two after the completion of the diary. This visit typically takes about 60 min.

The follow-up interview allows for some standardization in collected information by the inclusion of certain questions asked of all informants (see Appendix C). In particular, it samples a range of activities in five domains:

- 1. game and play activities
- 2. mealtime activities
- 3. tv-watching, radio
- 4. recurrent outings
- 5. reading, writing, and drawing activities

These five domains afford opportunities for development of skills pertinent to literacy. The follow-up interview also allows for quantification of experiences and documentation of participant identity. Frequency of occurrence of events is rated on a 4-point scale: 0 (never), 1 (less than once a week), 2 (at least once a



week), 3 (daily or almost daily). Participants are categorized in terms of age relative to the focal child: Older child, younger child/peer, or adult. The follow-up interview also allows for description of the home and description and quantification of material resources found in the home (see Appendix C).

The interviewer needs to review the diary before the follow-up interview. More specifically, information in section 1 "Mentioned in the diary" and follow-up questions for that information should be filled in for the various domains prior to the interview. In beginning the interview, the interviewer should ask whether the diary was kept during a typical week, whether any of the activities mentioned were not usually likely to occur in a typical week, and whether any activities were omitted that usually occur. If the diary was not kept during a typical week, that is, either certain normally recurrent activities did not take place or certain nonrecurrent ones did, this information should be noted.

Strengths of Our Method

We believe that our Ecological Inventory has three general methodological strengths. One, our method is sensitive to the caregivers' priorities. Although the focus of our project is on literacy acquisition and our procedures were developed for that purpose, we do not specify this in our discussions with the caregivers. In developing this procedure, we wanted to avoid biasing caregivers' answers to our questions. To that end, we developed an open-ended response format based on information generated by the caregiver, and indicated that we were

interested in all aspects of how children develop and learn.

Two, the domains explored in the followup interview are grounded in empirical research. As discussed earlier, researchers have shown that a wide variety of experiences with oral as well as with written language foster aspects of literacy.

Three, our quantification and coding scheme can reveal differential patterns of emphasis both within and across groups of children. For example, a teacher might note that one family engages in a variety of oral activities that could foster literacy-related skills, but has less involvement with print. Thus, that child spends much time singing, making up rhymes, and playing hand-clapping games, but spends relatively less time looking at books. Alternatively, different children in the class might engage in variable amounts of pretend play. Note that the activities mentioned in both examples have been shown by researchers to facilitate some aspect of literacy development.

We do not think that there is a correct amount of time that any one child should engage in any activity. Rather, we are interested in what types of literacy-related skills are acquired through engagement in different activities. For example, would engaging in singing and rhyming games foster greater phonological awareness?

As part of our longitudinal project, we are collecting outcome data and will be able to determine relations among variables. We currently have collected data to assess what literacy-related competencies the children in the Early Childhood Project have at the end of



their pre-kindergarten year. All the children appear to have some exposure to activities that could be expected to foster literacy growth. Nevertheless, the specific activity and the frequency of occurrence varies across individual families and groups. For example, almost all families reported that their children read storybooks at least once a week. Few families, however, reported this to be a daily occurrence. There also appear to be some sociocultural differences among our groups in terms of activities repertedly engaged in by the children. For example, African American children from low-income families were more likely to look at preschool books (containing alphabet letters and numbers) than European American children from low-income families. Children from middle-income families appeared more likely than children from low-income families to go to the library.

Modifying the Procedures

The richest understanding of a child's developmental niche will come from implementing full ecological inventory procedures. By allowing initial identification of activities to originate with the caregivers, it avoids some potential bias, as has been previously discussed. On the other hand, the diary may be perceived by the family as requiring too much time and effort on their part. It also requires more extensive time and effort on the part of the investigator. The follow-up interview, if fully implemented, takes about 60 min.

If desired, only certain aspects of the Ecological Inventory can be implemented. For example, one could forego the diary and focus instead on the follow-up interview. Or perhaps, only certain aspects of the follow-up interview could be explored. Some teacher researchers have reported successful integration of similar daily reporting on the child's general or literacy-related activities within a system of homeschool correspondence that was much appreciated by the families (McNamee, 1990; Shockley, 1993).

If the diary procedure is not utilized and the follow-up interview is the only means of collecting information, then the procedures need to be modified accordingly. If the diary is not kept, then the distinction between questions 1 and 2 (asked in some domains of activity mentioned in the diary and added during the interview, see Appendix C) is not relevant. Instead, the interview should commence with question 2 amended to reflect that all the information was collected during the interview. For example, when asking about games and play activities, the interviewer would ask the ways that the child often plays at home, in the family, or in the neighborhood.

Suggested Applications

In this section, we suggest three ways that the Ecological Inventory may increase a teacher's understanding of a child's home experiences. Such increased understanding can serve as the basis for educational programs based on the knowledge children are bringing to school. Even if a teacher has not actually implemented the Ecological Inventory, thinking about these applications is a useful exercise for making the classroom practices more accessible to all the children.



Negotiating a Shared Understanding Between the Teacher and Parent

In our research, we have used the Ecological Inventory as a basis for beginning discussion with the parent about their child and their beliefs about their child. As mentioned, many theorists hypothesize that behaviors of parents are mediated by their beliefs about how children learn and develop. Members of different sociocultural groups may have different belief systems. Explicating what may be quite implicit beliefs becomes increasingly important if there is a chance that two people's belief systems differ. For example, Delpit (1986), in recounting her experiences as a new teacher, indicated that the parents of the African American students in her class did not accept her "modern" teaching practices. They wanted their children to be taught with a more traditional skills-oriented approach. Although Delpit herself was African American, it is possible that a mismatch in belief systems may be even more likely to occur if the teacher and parent come from different sociocultural groups.

The teacher can begin discussion with the parent by identifying activities from the ecological inventory and asking what the parent's views of the child's activities are. For example, what is the parent's opinion about the amount or type of television watching, pretend playing, or storybook reading the child is doing? Do the teacher and the parent share similar views? What goals does the parent have for his or her child? How are the activities that the child engages in related to the parent's goals? How do the child's experiences at school relate to the goals that the parent may have for the

child? The teacher also can offer his or her own goals for the child and indicate how these goals are being implemented at school.

More specifically, imagine that a parent reports that their child does a lot of pretend play activities, such as playing school and house. The teacher could ask what meanings such activities have for the child and the parent. If the parent says that pretend play is a good way of fostering creativity and imagination (a common response given by several parents in our study), the teacher could probe for whether developing one's imagination is important to this parent. The teacher could share her views on creativity and imagination, and discuss ways that these traits are being fostered at school.

In order for the child's educational program to be successful, we believe teachers and caregivers need to understand each other and work together in the best interests of the child (Baker et al., in press; Thompson, Mixon, & Serpell, in press). The Ecological Inventory offers a basis for beginning a dialogue between teachers and caregivers that can serve to facilitate mutual understanding and collaboration. It also affords teachers an opportunity to reflect upon their views of what can foster literacy and what experiences might be available for children from different sociocultural groups.

Identifying Recurrent Activities Outside of School for a Child

By documenting the range of activities and experiences familiar to the child, the teacher can more readily find topics of discourse. For example, a shy child might be "drawn out" if



NATIONAL READING RESEARCH CENTER, INSTRUCTIONAL RESOURCE NO. 11

a teacher knew that this child liked to look at Dr. Seuss books or liked to watch "Barney" on television. The teacher could then talk about these topics with the child. For example, if a child reported frequently watching "Full House" on television, the teacher could discuss the child's favorite character on the show.

In reviewing the Ecological Inventory, teachers can look for areas where children's home experiences are more plentiful. Classroom activities can be designed to reflect or expand upon children's home experiences. For example, if a teacher knows that the children in his/her class frequently play hand-clapping games at home, s/he might incorporate this into the lesson plans to help increase the children's phonological awareness. By inviting the children to suggest rhymes for the class to recite, the teacher may build up their self-confidence, help to show the cultural legitimacy of activities rooted in the local neighborhood, and, at the same time, increase his/her own professional repertoire of instructional routines. Or, consider the example of watching "Full House" mentioned previously. A teacher might read to the class one of the books based on that series to complement the child's interest.

Moll and Greenberg (1990) report implementation of a somewhat comparable technique by teachers of fourth and fifth graders of Mexican background. The teachers successfully sought to improve their students' writing skills by drawing on the children's home experiences and knowledge.

The Ecological Inventory also can serve as a basis for delineating a child's need for additional learning opportunities. For example, a child may have many home experiences with oral language activities such as pretend play and rhyming games (both of which have been shown to foster literacy-related skills), but fewer opportunities with print. A teacher might decide to use the child's facility to make up rhymes as a basis for exposure to print by actually making books consisting of the child's own rhymes as text. Or to continue with the "Full House" example, a teacher could ask the child to write a letter to Stephanie, one of the main characters on the show.

Identifying Socialization Agents in the Child's Home

The Ecological Inventory also affords an opportunity to document who in a child's family interacts with that child in specific activities. By looking at the participants in the documented interactions, teachers will gain a better understanding of the social organization of the home learning experiences available to the children. For example, in many European American middle-income families, parents read to their young children. This may not be the norm for children from other sociocultural groups. For example, in other sociocultural groups, older siblings may play a more formative role.

Knowing who in the home are the socialization agents may influence how the teacher chooses to design in-class instruction—small group, individual, and so forth. For example, if the Ecological Inventory indicates that peer interaction is the most common form of interaction at home, then the teacher might want to emphasize such interactions in classroom instruction. Or if a child is read to at home by older siblings rather than parents, a teacher might adjust programs accordingly by recruit-



ing children from the older grades to read to some of the younger children. In the Early Childhood Project, we have found that approximately one-third of the storybook reading interactions occur with older siblings reading to their younger siblings.

Identifying socialization agents in the home also may serve as the first step toward a collaborative home-school relationship. For example, if it is a child's grandmother who takes care of the child after school and helps with homework, she may be a good candidate for the teacher to include in discussions of designing and implementing learning opportunities for that child.

Author Note. The Early Childhood Project on which we are reporting represents a collaborative effort by our research team in the Psychology Department of the University of Maryland Baltimore County. We deeply appreciate the contributions of our other colleagues on the team without which this project would not be possible: Hibist Astatke, Marie Dorsey, Sylvia Fernandez-Fein, Susan Hill, Tunde Morakinyo, Kim Munsterman, and Deborah Scher. We also thank the undergraduate assistants on the project: Sharon Adar, Laurie Fairall, Kris Hardwick, Jennifer Kaupert, Eun Kim, Will Lamb, Gail Morrow, Laurie Shaw, Erika Smith, and Teniko White. We are grateful to the administration, principals, teachers, parents, and children of the Baltimore City Public Schools for their assistance and participation.

References

Alvermann, D. E., & Guthrie, J. T. (1993).

Themes and directions of the National Reading
Research Center (Perspectives in Reading Re-

search, No. 1). Athens, GA: NRRC, Universities of Georgia and Maryland College Park.

Baker, L., Allen, J. B., Shockley, B., Pellegrini, A. D., Galda, L., & Stahl, S. (in press). Connecting school and home: Constructing partnerships to promote reading development. In L. Baker, P. Afflerbach, & D. Reinking (Eds.), Developing engaged readers in home and school communities. Hillsdale, NJ: Erlbaum.

Baker, L., Sonnenschein, S., Serpell, R., Fernandez-Fein, S. E., & Scher, D. (1994). Contexts of emergent literacy: Everyday home experiences of urban preschoolers (Research Report No. 24). Athens, GA: NRRC, Universities of Georgia and Maryland College Park.

Bronfenbrenner, U. (1979). The ecology of human development. Cambridge, MA: Harvard University Press.

Cazden, C. B. (1972). Child language and education. New York: Holt, Rinehart & Winston.

Comer, J. P. (1980). *School power*. New York: Free Press.

Delpit, L. D. (1986). Skills and other dilemmas of a progressive black educator. *Harvard Educa*tional Review, 56, 379-385.

Heath, S. B. (1989). Oral and literate traditions among black Americans living in poverty. *American Psychologist*, 44, 367-373.

Jordan, C. (1992). The role of culture in minority school achievement. The Kamehameha Journal of Education, Fall, 53-67.

Laosa, L. (1984). Social policies toward children of diverse ethnic, racial, and language groups in the United States. In W. H. Stevenson & A. E. Siegel (Eds.), *Child development research and social policy* (Vol. 1, pp. 1-109). Chicago: Chicago University Press.

McNamee, G. D. (1990). Learning to read and write in an inner-city setting: A longitudinal study of community change. In L. C. Moll (Ed.), Vygotsky and education: Instructional implications and applications of sociohistorical



- psychology (pp. 287-303). Cambridge: Cambridge University Press.
- Moll, L. C., & Greenberg, J. B. (1990). Creating zones of possibilities: Combining social contexts for instruction. In L. C. Moll (Ed.), Vygotsky and education: Instructional implications and applications of sociohistorical psychology. Cambridge: Cambridge University Press.
- Morrow, L. M. (1989). Literacy development in the early years. Englewood Cliffs: Prentice Hall.
- O'Flahavan, J., Gambrell, L. B., Guthrie, J., Stahl, S., Baumann, J. F. & Alvermann, D. E. (1992, August/September) Poll results guide activities of research center. *Reading Today*, p. 12.
- Scribner, S. & Cole, M. (1981). The psychology of literacy. Cambridge, MA: Harvard University Press.
- Shockley, B. (1993). Extending the literate community: Reading and writing with families. *The New Advocate*, 6, 11-24.
- Snow, C. E. (1991). The theoretical basis of the Home-School Study of Language and Literacy Development. *Journal of Research in Child-hood Education*, 6, 1-8.
- Sonnenschein, S., Brody, G., & Munsterman, K. (in press). Contexts for the early appropriation of literacy. In L. Baker, P. Afflerbach, & D. Reinking (Eds.), Developing engaged readers in school and home communities. Hillsdale, NJ: Erlbaum.
- Super, C., & Harkness, S. (1986). The developmental niche: A conceptualization at the interface of child and culture. *International Journal of Behavioral Development*, 9, 545-569.
- Teale, W. H. (1984). Reading to young children: Its significance for literacy development. In H. Goelman, A. Oberg, & F. Smith (Eds.), Awakening to literacy. Exetor, NH: Heinemann Educational.
- Teale, W. H. (1986). Home background and young children's literacy development. In W.

- H. Teale & S. Sulzby (Eds.), Emergent literacy: Writing and reading (pp. 123-206). Norwood, NJ: Ablex.
- Tharp, R. G. (1989). Psychocultural variables and constants: Effects on teaching and learning. *American Psychologist*, 44, 349-359.
- Thompson, R., Mixon, G., & Serpell, R. (in press). Engaging minority youth in reading: Focus on the urban learner. In L. Baker, P. Afflerbach, & D. Reinking (Eds.), Developing engaged readers in school and home communities. Hillsdale, NJ: Erlbaum.
- Wells, G. (1982). Story reading and the development of symbolic skills. *Australian Journal of Reading*, 5, 142-152.
- Whitehurst, G. J., Arnold, D. S., Epstein, J. N., Angell, A. L., Smith, M., & Fischel, J. E. (1994). A picture book reading intervention in day care and home for children from low-income families. *Developmental Psychology*, 30, 679-689.



APPENDIX A

Guidelines for Telling Parents about the Diaries

We think that children learn a lot from activities in their homes and neighborhoods. We are interested in the things your child does during a typical week.

When you tell us about what your child has done during the day, we would like you to tell us as much about the day as you remember. Don't worry that something may not be interesting to us, because we think that children learn from all sorts of experiences.

Here are some things we would like you to include in your record of the day:

getting up activities, breakfast activities, morning activities, lunch activities, afternoon activities, dinner activities, evening activities, going to bed activities

In telling us about an activity, we would like a description of what the child is doing and who else is there. So, if you say that your child was playing in his/her room, we would like to know what kind of play it was, what kinds of items were used, who else was there, and what they were doing (whether or not they were actively involved).

If possible, please tell us how long an activity lasted.

After going over instructions, say "Let's do an example. What went on yesterday (or last day that child was there)." Go over, in detail, example (role-play tape or writing). Determine time (days) when diary will be kept. Say "will call at end of day 1." Go over. Have them read notebook or lay tape. Praise and discuss in detail difficulties or omissions. Leave written copy of activities.

Call after day 1 to review diary and problem-solve if necessary.



APPENDIX B

Diary Keeping

When making your diary entry, think about the following kinds of activities:

GETTING UP ACTIVITIES

BREAKFAST ACTIVITIES

MORNING ACTIVITIES

LUNCH ACTIVITIES

AFTERNOON ACTIVITIES

DINNER ACTIVITIES

EVENING ACTIVITIES

GOING TO BED ACTIVITIES

Remember to include:

WHAT WAS YOUR CHILD DOING?

WHAT KINDS OF ITEMS WERE USED?

WHO ELSE WAS THERE AND WHAT WERE THEY DOING?

HOW LONG DID THE ACTIVITY GO ON?



APPENDIX C

Record Form for Second Visit with Family

PREPARATORY INSTRUCTIONS:

Ecological Inventory (pages 1-5)

BEFORE THE VISIT, each activity recorded in the diary will be entered on a relevant page of the inventory. On each of the following pages, section 1 is reserved for these ENTRIES FROM THE DIARY, together with questions designed to clarify and/or amplify the account in the diary. On most pages, section 2 is reserved for ADDITIONAL ACTIVITIES mentioned during the home visit interview in response to the following open-ended question:

"Are there any other activities of this type, apart from what we've discussed already today, that your child, ______, gets involved in, either by taking part directly (i.e., as an active participant), or by just watching (i.e., as an observer)?"

Section 3 contains a set of questions about certain SPECIFIC TYPES OF ACTIVITY falling under the general heading of that page, with pre-coded alternatives concerning (1) the frequency with which the caregiver estimates that the child participates in that type of activity, and (2) the age-range of the other people with whom the child generally shares the activity (principal co-participants). The last column in this table is to be used as a key to link this list of types of activity to each of the more detailed descriptions in sections 1 and 2 and on the reverse side of the page, as examples of each type. The detailed descriptions will be numbered serially as they appear on the record form, and the serial number of a given activity will be entered in the appropriate row of this column in section 3.

The reverse side of each page is reserved for **FURTHER ADDITIONAL EXAMPLES** of recurrent activities in the child's niche mentioned by the caregiver while responding to section 3.

The following headings define the broad categories under which the various types of activity in which we are interested have been classified in the following pages.

Page 2: Game-playing activities

Page 3: Meal-time activities

Page 4: TV-watching, radio, cassette-player, etc.

Page 5: Recurrent outings

Page 6: Reading, writing, or drawing activities



NATIONAL READING RESEARCH CENTER, INSTRUCTIONAL RESOURCE NO. 11

CODING scheme.

Frequency with which the caregiver estimates that the **child participates** in a given type of activity,

 $\mathbf{0}$ = not at all

1 = very rarely (i.e, less than once a week)

2 =occasionally (i.e., somewhere between the extremes of 1 and 3)

3 = very often (i.e., almost every day)

Age-range of the other people with whom the child generally shares the activity (**principal co-participants**):

YC = young children (i.e., one or more children of about the same age as, or younger than the focal child)

OC = older children (i.e., one or more children who are clearly regarded by the caregiver as older than the focal child, and therefore in a position to provide some guidance to the focal child's participation in the activity)

A = adult (i.e, one or more persons who are not construed by the caregiver as having the social status of a child in the niche of the focal child; this may include teenagers)



Ecological Inventory

Date:_____

Games and Play Activities								
1. Mentioned in Diary (+ questions) (serial no.)								
	2. Added during interview (other ways in which your child often plays at home, in the family or in the neighborhood):							
3. Type of play activity	0/1/2/3 Frequency of child's engagement	YC/OC/A Principal co-participants (age-group)	Instances (e.g.) (serial no.)					
Pretend play (e.g., with peers; in the bath	 n, etc.)							
Story-telling								
Word-games (incl. rhyming)								
Hand-clapping								
Singing								
Board-games								
Educational toys			·······					



NATIONAL READING RESEARCH CENTER, INSTRUCTIONAL RESOURCE NO. 11

Meal	l-time	Acti	vities

1.	Mentioned	in	Diary	(+ questions)
	(serial no.)					

2. Added during interview (other activities in which your child often participates at meal-times):

3.	Type of meal-time activity	0/1/2/3 Frequency of child's engagement	YC/OC/A Principal co-participants (age-group)	Instances (e.g.) (serial no.)
Fo	od preparation	· · · · · · · · · · · · · · · · · · ·		
ref	aying with rigerator displays secify type: e.g., letters, n	umbers, dinosaurs, etc	 :.)	
Co	nversation			
ΤV	/-watching			
_	her g., prayers, quizzes, read	 ing, etc.)		



NATIONAL READING RESEARCH CENTER, INSTRUCTIONAL RESOURCE NO. 11

TV / Radio / Video or Audio Casseile Reco 1. Mentioned in Diary: (serial no.)	orders / Record-	-players
2. Does the home contain any of the follow TV, video (VCR), radio, record-player,		•
3. Does the focus child ever watch the fell and (if so) how often?	0 01	
	0/1/2/3	YC/OC/A
Type of program	Frequency of child's	Principal co-participants
	engagement	(age-group)
Cartoons	*****	•••••
Sit Coms (e.g., Murphy Brown)		•••••
Educational (e.g., Sesame St)	••••	•••••
Game-shows	••••	•••••
Story/movie (e.g., Quantum Leap)	••••	•••••
Sports	••••	•••••
News/Documentary	••••	•••••
Musical	••••	•••••
Does the focus child ever listen to music	on radio or reco	rd-player/audio-cassette-
recorder/CD, and (if so) how often?	••••	•••••
Does the focus child ever sing any of the record-player/CD? Yes/No	songs s/he hear	s on TV/video/radio/cassette/
If so, what are the titles of two songs the	child knows ho	w to sing?
	···	

NATIONAL READING RESEARCH CENTER, INSTRUCTIONAL RESOURCE NO. 11

How does the focus child locate programs on TV?

a) by asking an adult or elder child to select the channel

b) by using the numbers on the selection panel/remote control



Does the focus child ever select programs by looking for them in the newspaper/TV guide? Yes/No

How often does the focus child watch the family VCR? (0,1,2,3)

Does s/he have any favorite videos that s/he likes to watch over and over again? Yes/No If so, what are her/his 2 most favorite videos?

١.	 	 	• • • • • • • • • • • • • • • • • • • •
).			

Does the home have a video game system (e.g., Nintendo) the child is allowed to play with? Yes/No



Recurrent Outings

1.	Mentioned	in	Diary	(-	questions)
	(serial no.)					

2. Added during interview (other outings on which your child is often taken):

3. Type of outing	0/1/2/3 Frequency of child's engagement	YC/OC/A Principal co-participants (age-group)	Instances (e.g.) (serial no.)
Visit to another home (e.g., grandparent)			
Shopping			•••••
Errands		•••••	
Library		•••••	•••••
Lessons or classes (e.g., music, dancing, religious ins	 struction)		
Other			•••••

NATIONAL READING RESEARCH CENTER, INSTRUCTIONAL RESOURCE NO. 11



Reading,	Writing,	or	Drawing	Activities
----------	----------	----	---------	------------

1. Mentioned in diary (+ questions)

2. Added during interview (other activities in which your child participates that involve reading, writing or drawing)

3. (If no mention has been made of reading activities) Does your child ever have any books or magazines read to her/him? Yes/No
If yes,

	0/1/2/3 Frequency of child's engagement	YC/OC/A Principal co-participants
A. Books		
Preschool		*******
(e.g., ABCs)		
Picture books	•••••	*******
(no words)		
Storybooks	•••••	•••••
Nonfiction books		
B. Other printed mat	terials	
(e.g., magazines, ne	ewspapers, coupons)	
	•••••	********



C	e. Does your child ever le (e.g., cards, coupons, T		inted materials on his or he	er own?
	Specify type,	0/1/2/3 frequency	Principal co-participants	
. D	oes your child ever do dr	awings or coloring?		
	Specify type,	0/1/2/3 frequency	Principal co-participants	
. E	Ooes your child ever do w	riting?		
	Specify type,	0/1/2/3 frequency	Principal co-participants	





NRRC National Reading Research Center

> 318 Aderhold, University of Georgia, Athens, Georgia 30602-7125 3216 J. M. Patterson Building, University of Maryland, College Park, MD 20742

