

DOCUMENT RESUME

ED 213 990

CE 031 855

AUTHOR Boraks, Nancy; Schumacher, Sally  
 TITLE Ethnographic Research on Word Recognition Strategies of Adult Beginning Readers: Summary Report.  
 INSTITUTION Virginia Commonwealth Univ., Richmond.  
 SPONS AGENCY Office of Vocational and Adult Education (ED), Washington, D.C.; Virginia State Dept. of Education, Richmond. Adult Education Service.  
 PUB DATE 81  
 NOTE 63p.

EDRS PRICE MF01/PC03 Plus Postage.  
 DESCRIPTORS Adult Basic Education; Adult Literacy; \*Adult Reading Programs; Ethnography; \*Literacy Education; \*Reading Attitudes; Reading Difficulties; \*Reading Habits; \*Reading Instruction; Reading Research; Reading Skills; Teaching Methods; \*Word Recognition

ABSTRACT

A study was conducted to describe factors influencing the acquisition of facilitating and inhibiting reading strategies by adult beginning readers (ABRs) in order to generate potential guidelines for instruction. Using an adapted form of the Goodman and Burke taxonomy of oral reading miscues as initial framework, the investigators described ABRs' reading behavior. In addition, field notes on classroom observations and on interviews with ABRs, teachers, and consultants were considered in discussing the pattern of reading behavior of ABRs. A detailed analysis of the reading and learning-to-read behavior of seven ABRs and general descriptions of the reading behavior of seven more ABRs provided a basis for identifying reading behaviors associated with success and failure. Although the highly idiosyncratic reading behavior of ABRs and the limited number of teaching situations observed preclude generalizations, the long-term observation of ABRs made it possible to suggest that given reading behaviors promote success or failure in learning to read. Specifically, ABRs who thought of reading as discovering meaning, were aware of when they were not gaining meaning, and had been exposed to syllabication and could manipulate vowels and syllables, tended to make progress. It was also found that ABRs learned more when teachers considered how they wanted to learn as well as what they wanted to learn. In addition, the way a teacher conducts a lesson provides a model for learning; when teachers proceeded reading with a discussion of concepts in the text, students tended to read for meaning. Students' beliefs about reading, perhaps guided by prior schooling, also influenced reading strategies. It was suggested that these findings, along with further research on ABRs' adult development, be considered in designing methods to teach reading to adults. (KC)

\*\*\*\*\*  
 \* Reproductions supplied by EDRS are the best that can be made \*  
 \* from the original document. \*  
 \*\*\*\*\*

ED213990

ETHNOGRAPHIC RESEARCH  
ON WORD RECOGNITION STRATEGIES  
OF ADULT BEGINNING READERS:  
SUMMARY REPORT

by Nancy Boraks, Ph.D.  
and Sally Numacher, Ph.D.

This ethnographic research project was funded under Section 310 of the Adult Education Act, P.L. 91-320 and amendments, as administered by the Adult Education Service, State Department of Education, Richmond, Virginia.

The research which is the subject of this report was supported in whole or in part by the U.S Department of Education and the Virginia Department of Education. However, the opinions expressed herein do not necessarily reflect the position or policy of the U.S. Department of Education or the Virginia Department of Education, and no official endorsement by the U. S. Department of Education or the Virginia Department of Education should be inferred.

As required by federal laws and regulations, the Virginia Department of Education does not discriminate on the basis of sex, color, race, religion, handicapping conditions, or national origin in employment or in its educational programs and activities.

SCHOOL OF EDUCATION  
VIRGINIA COMMONWEALTH UNIVERSITY  
RICHMOND, VIRGINIA 23284  
1981

U.S. DEPARTMENT OF EDUCATION  
NATIONAL INSTITUTE OF EDUCATION  
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 NIE position or policy

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

W. Morse

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

CE 031 855

Graduate Assistants: Merylyn Finn, Andrew Wainer

Project Secretary: Simone Worden

## CONTENTS

Acknowledgments	iii
I. Research on Word Recognition Skills of Adult Beginning Readers	1
Need for the Study	1
Framework of the Study	6
Summary	11
II. Ethnographic Methodology	13
Foreshadowed Problems	13
Ethnographic Procedures	14
Summary	19
III. Oral Reading Miscues of the Adult Beginning Reader	20
IV. Factors Influencing the Acquisition of ABRs' Reading Strategies	27
V. Adult Beginning Readers and Adult Development	35
VI. Summary and Conclusions	42
Bibliography	45
Appendix A: Sample QUIP (Quick Inventory of Progress) Guidelines, Paragraphs, and Word Lists	53
Appendix B: Reading Strategies of ABRs	57

ACKNOWLEDGMENTS

Grateful acknowledgment is extended to the many adult learners, teachers, and center directors throughout Virginia who helped with this study.

We are especially appreciative of the help extended by our consultants and teachers.

## I. Research on Word Recognition Strategies of Adult Beginning Readers

The purpose of this study is to describe factors influencing the acquisition of facilitating and inhibiting reading strategies by adult beginning readers in order to generate potential guidelines for instruction. This report is a summary of the final report on the project.

### Need for the Study

Learning differences between child and adult learners have been discussed (Zahn, 1967; Knowles, 1977); yet there are limited data clarifying these differences as they operate in the process of learning to read. This may be the reason for the lack of guidelines on how to adapt the teaching of reading to the needs of the adult beginning reader (ABR). Most instruction of ABRs is based on methods developed for the child beginning reader (CBR), or based on research on CBRs and adult proficient readers. Instructional program adaptations are made for adults, but these are designed to suit the adults' cultural, economic, or experiential characteristics. Adaptations are not made to match the learning-to-read behavior of ABRs, because little is known about that behavior. Neither the research on the reading behavior of ABRs nor research on reading programs for ABRs provides this needed information.

### Reading Behavior of ABRs

There are many ways to describe reading behavior. Yet, however it is described, there is evidence that the reading behavior of the ABR differs from that of the CBR. Reading behavior was once described in terms of accuracy of word recognition: how many words were omitted or substituted, what parts of a word the reader did not know, and so on. Today, reading behaviors or strategies are generally described in terms of the cues a student uses when dealing with text. The student has essentially four kinds of cues available: graphic (visual appearance); phonemic (sound/symbol association); syntactic (grammatical structure); and semantic (meaning).

Studies on the reading behavior of ABRs are rare. Some studies report on ABRs' use of substitutions, omissions, and so on (Monroe, 1932). However, only two studies providing more specific information on ABRs' use of cues could be found. These studies are discussed below.

When Monroe (1932) studied the reading behavior of children with reading difficulties and established norms or standards for the children's reading behavior (using such descriptive categories as omissions and substitutions), she also studied several adults. One adult described by Monroe was a college student reading on about a fourth-grade level. Monroe noted that this adult reader "showed marked variations from the standards for fourth-grade children" (p. 69). This adult reader did not demonstrate the same reading behavior as a child reading at the same level. Monroe's description of the adult reader would sound familiar to many adult education teachers. This adult, despite excessive errors, could

report surprisingly well the content of the paragraph read and had problems holding a pattern; that is, she would, when reading rhyming words, switch patterns--saying, for example, "mill, bill, boy, till." Raisner (1978) studied adult nonproficient readers enrolled at a State college. While the achievement levels of these readers were not clearly established, the pattern of reading behavior of these adults underachieving in reading studies differed from the pattern of underachieving children. For example, Raisner reported that these adults made greater use of graphic and phonemic cues and much more limited use of semantic/syntactic cues than children.

Boraks (1978) studied ABRs' use of graphic, phonemic, syntactic, and semantic cues, and concluded that ABRs tended to vary a great deal in the use of these cues; specifically, they used semantic cues less than children and did not have the same pattern of using graphic/phonemic cues found in children (p. 9).

Reading behaviors of ABRs and CBRs, then, appear to differ in important ways. Thus, the information base derived from research on CBRs may be inappropriate for developing instructional guidelines for ABRs. Moreover, data derived from research on proficient adult readers would also seem to offer limited guidance. As Shrankweiler and Liberman (1972) explain, "Analysis of a well-practiced skill does not automatically reveal the stages of its acquisition, their order and special difficulty" (p. 296).

#### Reading Program for ABRs

To gain insight into appropriate instructional strategies for ABRs, information both on how they learn to read and on the factors inhibiting



and facilitating this process is needed. There is little research on ABRs' reading behavior or on reading programs for ABRs. An analysis of successful ABR programs might be expected to provide information on factors influencing success. This is not the case because most writings on ABR programs, while they tend to provide descriptions of programs or compare the use of different approaches (Clason-Hook, 1977), do not make clear which elements of the program may account for success. In fact, analyzing program learning variables would be difficult because some of these approaches appear to provide only guided practice, not structured learning. The practice-versus-teaching orientation used with ABRs was also found to exist in actual practice by Mezirow, Darkenwald, and Knox (1975). These researchers had teams of observers collecting data on instruction in adult education centers in six cities in the United States. They concluded that adult education teachers tend to use the "present, recite, test, correct" approach to teaching.

Thus neither research on ABR programs nor actual programs offer specific instructional guidelines which account for success in learning to read. Reading programs for ABRs are not empirically justified (are not based on information on the reading behavior of ABRs). This, suggest Kavale and Lindsey (1977), may be why these programs so often fail.

There has been little emphasis in ABR research on developing better methods. Cook's (1977) history of adult literacy shows that the history of instruction of ABRs is a history of materials, not methods; and that the materials used with ABRs tend to be materials tried earlier with children. Again, the focus in teaching ABRs is on presenting and practicing

"skills." Even an analysis of taught skills would not seem to provide guidelines for instruction. It may be, as Otto states, that the skills needed to learn to read are the same for both CBRs and ABRs (1972, p. 299). Yet there is little agreement among reading researchers as to which skills are important, or in what sequence these skills should be taught, for either the child or the adult learner:

Despite this, the most popular programs for ABRs seem to be those stressing decoding (Laubach, Stechk-Vaughn). Yet instructors using these programs are honest in reporting that students started in these programs seldom progress beyond the initial steps in learning to read. The reasons for this may vary. Some students may be satisfied with learning just the basic skills; others may become discouraged by the amount of time it takes to achieve even this initial level. Perhaps the skill focus itself misleads the ABRs, who may come to think that they can read if they have learned specific (decoding) skills.

Current information on the reading behavior of ABRs and on reading programs for ABRs cannot provide an adequate basis for generating instructional guidelines. It is not known exactly which ABR teacher or learner behaviors make it easier or harder to learn to read. An empirical basis for instruction, however, can be found only in an understanding of these behaviors.

Research on how children who read well and children who read poorly learn to read indicates that different word recognition and comprehension strategies are used by these two groups. It is recommended that readers be taught the strategies of "good" readers (Stauffer, 1975; Goodman and Burke, 1972).

Boraks (1978) reported that ABRs at different levels of achievement used different reading strategies. However, she also described the reading behavior of ABRs as highly idiosyncratic; and she did not attempt to establish a relationship between an individual's evolving strategy and subsequent achievement. Information on such a relationship is needed if ABRs' facilitating and inhibiting behaviors in learning to read are to be identified.

#### Framework of the Study

To determine the productive and the nonproductive strategies of ABRs in learning to read, observation of the evolution of these behaviors over time in relation to achievement was planned. Observation frameworks were broad, because it was also considered important to learn about factors which promoted the use of certain reading strategies. This information on reading behavior and factors influencing this behavior would provide the empirical basis for developing guidelines for instruction.

The learning-to-read behaviors of ABRs, as noted above, were expected to vary. It was assumed that part of this diversity would be due to developmental or personological factors. As Bowen and Zintz (1977) point out, adults are less likely to try new approaches--because of long-standing habits, concern with failure, and a tendency to involve their self-esteem in learning. It was assumed also that the learning context would affect reading behaviors. To identify the impact of these factors on reading behavior, it was necessary to observe learners' behavior in naturalistic

settings.

### Objectives

Seven objectives related to the goal of learning about ABRs' reading behavior were outlined. These objectives clarify the steps taken to gather data needed to speculate on instructional strategies for ABRs. The objectives were:

1. To determine current reading strategies used by ABRs.
2. To determine the evolving pattern of specified reading strategies used by ABRs.
3. To determine the relationship between evolving patterns of use of specified adult reading strategies and reading achievement.
4. To relate productive and nonproductive patterns of reading strategies to instructional strategies (teacher behavior and materials).
5. To relate productive and nonproductive patterns of reading strategies to student characteristics (personological, developmental variables).
6. To derive potential guidelines for instruction of adult beginning readers from observed variables related to achievement.
7. To indicate where further research on the relationship among reading strategies, instructional strategies, and achievement is needed.

As these objectives indicate, oral reading behavior would be coded during observations. No further guidelines were established initially.

### Potential Theoretical Bases

A broad theoretical framework for determining variables influencing ABR achievement would lend credibility and focus to potential research. However, two major variables recognized as crucial to understanding the process of learning to read--the teacher/student and student/student interactions--have not been incorporated into theoretical models of reading (Entwisle, 1977). Moreover, the learning context seems especially crucial for ABRs (in view of the high drop-out and drop-in rates). As noted earlier, most reading theories are based on observation and research on the behavior of CBRs and proficient adult readers. Therefore, use of an existing theory could have resulted in overlooking variables unique to the reading process as it operates for the ABR. And several recent and ambitious attempts to catalogue and assess the status of theoretical models of reading (Davis, 1972; Singer and Ruddell, 1976) have clarified the exploratory nature of existing theories and supported the commitment here to avoid a single theoretical framework. Perhaps, as Gibson and Levin (1975) indicate, "if there is no single reading process, there can be no single theory of reading" (p. 148). If there is no accurate single theory or model of reading, adopting a single theory would prejudice the study of ABRs' behavior in learning to read. It was therefore decided to use an open ethnographic framework in observing adult reading behavior. (See Chapter II.)

### Participants

The ABRs who participated in this study included all ABRs who were

enrolled in the beginning learning-to-read classes at two adult basic education (ABE) sites in the Richmond, Virginia, metropolitan area. The sites were selected because of proximity and the large enrollment of ABRs. All ABE program directors and teachers contacted agreed to participate. Three classes were observed: one class used an individual approach, two an eclectic approach. A variety of tutoring situations at one site were also observed. These settings are described more fully in Chapters II and IV.

The ABRs presented a diverse group of learners. Their ages ranged from 18 to 60; approximately half were black, half white; about half were male, half female. Most ABRs, as identified by job (blue collar) and residential area, were from lower-class, inner-city areas. Some data on all of the 60 ABRs who at some time attended the classes involved in the study have been included. However, detailed analysis of only 14 adults' reading is reported. A full description of the ABRs is included in Chapter V.

Both the teaching and student populations represent nonrandom samples of convenience, and no attempt to generalize results to other populations is made. As Boraks (1979) points out, neither the ABR population nor its learning context lends itself to the study of a true random population. The goal of this study was to gather some initial data on ABRs' reading behavior. These data were to serve as an empirical basis for initial speculation about useful guidelines for teaching ABRs. A second phase of this study (1981-82) would involve the validation of these guidelines.

### Terminology

Data reported in this study include field observations by teachers and researchers with varying backgrounds in reading. Data reported include observations and comments made by these individuals as well as comments by ABRs. The terminology used by individual students, teachers, and researchers has not been changed to fit standard professional guidelines, because to have done this would have distorted potential understanding of the perspective of the speaker. Thus, terms such as decoding, phonics, phonetics, and sounding-out appear. Phrases such as saying the sounds and breaking up words likewise have not been edited. In some cases, especially in early field notes, a misunderstanding of observed behavior is indicated by observers' comments. These data were also not edited because to some extent they revealed not only initial observer pre- and misconceptions, but the value of repeated observations. The only changes made in field notes are to disguise the names of participants and to clarify phrases so as to increase the readability of the often cryptic field notes.

The terms reading behavior and reading strategy are used broadly here to reflect any oral response to the text, including oral reading and statements indicating comprehension of text. These terms are also used to refer to the students' use of specific semantic, syntactic, phonemic, or graphic cues. Learning behavior is used here as an inclusive term to refer to anything the student is observed to say or do in the learning situation.

### Audience

It is expected that this report will be most useful to adult educators with backgrounds in reading and to reading researchers who are seeking to understand more fully the reading behaviors of ABRs. In addition, these data were gathered to provide researchers with an information base to guide future ABR research.

### Summary

The goal has been to explore, describe, and hypothesize. The need for caution in drawing conclusions is pointed out repeatedly throughout this report. Implications suggested for future instruction are considered possibilities to be explored, not guidelines to be implemented. This research report represents an initial step in learning about ABRs. Further research related to implications drawn from this study is in progress. It is this subsequent research which can be used by adult education teachers. This report is for those seeking to gain insight into the right questions to ask; it is not for those seeking easy answers.

This chapter clarified the need for this study and discussed related background. Chapter II will describe the design of the study and present a rationale for ethnographic procedures. Chapter III will provide a description of the reading strategies of ABRs, relate the use of these strategies to achievement, and discuss instructional and research implications. Chapter IV will analyze factors influencing the ABR's acquisition of specific strategies, and present research implications. Chapter V will



address the question of the impact of ABRs' general development as adults on their behavior in learning to read. Chapter VI will briefly summarize the study.

## II. Ethnographic Methodology

Ethnography was selected as the methodology because of the purpose and context of the study. The purpose of this study was exploratory rather than verification research. Knowledge concerning adult learning-to-read behavior is at an embryonic stage. According to Boraks (1979), adult education is diverse in adult characteristics and in program characteristics, serves a fluid population, and is a complex learning situation with many variables. The context of this study contains elements difficult to match to the requirements for experimental design; if such an experiment were conducted, the results would be of limited internal and external validity.

### Foreshadowed Problems

The foreshadowed problems (Malinowski, 1922) for this study, specified in the project proposal (1980, p. 4), were equivalent to the first five objectives listed on p. 7 above.

The focus of this study is the learning-to-read behaviors of ABRs.

The initial conceptual frameworks relevant for this study were drawn from 1) reading theories (i.e., psycholinguistics, information processing, perceptual theories); 2) sociology (i.e., group processes, roles, norms); 3) anthropology (i.e., multicultural language, dialects, and customs); and 4) adult learning theories. Some of these frameworks (such as those from anthropology) provided inadequate explanatory power. Other frameworks (such

as adult development) were added as the data began to accumulate.

### Ethnographic Procedures

Ethnography in this study has three characteristics. The research design is that of a case study which focused on the learning-to-read process in adults in beginning reading instructional situations. Although there were numerous contrasting instructional situations, the design was noncomparative. Second, the analysis of the multiple sources of data and the multiple kinds of data is qualitative (in contrast to using statistical tests of significance). Third, field research allowed the ethnographer to observe more directly the complexity of reality without reactive effects (Webb et al., 1981) and threats to internal validity often associated with experimental control and manipulation of treatments.

Ethnographic procedures for this study involved 1) selecting and training a research team, 2) gaining access and acceptance in the field, 3) holding weekly staff meetings and seminars to identify multiple research roles and evolving foci, and 4) establishing a valid data base. Each of these procedures will be discussed below.

#### Selecting and Training a Research Team

The research team was selected to provide different experiential, training, and conceptual orientations. One senior investigator, a professor of reading, had tutored ABRs in centers and done previous research on adult reading. The other senior investigator was a professor of educational

research with an interdisciplinary orientation and specialization in ethnography. One research assistant had a B.A. in sociology and had taught special education. The other had a B.A. in political science and was "new" to the field of education. Thus, one team member lacked teaching experience; and two team members had only general knowledge of the teaching of reading and the process of learning to read.

The initial training of the research team stressed the mechanics of taking field notes and writing summary observations. Procedures were established to organize and file the data. All field notes were marked with the date and place of observation, name of observer, and the occasion of observation, i.e., "class instruction," "tutoring session," "interview," "testing."

#### Gaining Access and Acceptance in the Field

The cooperation of the centers was easily obtained. The directors of the centers recognized the study's immediate and long-range benefits.

Establishing and maintaining the trust of the ABRs was a continuous task (cf. Guba, 1980) and a team effort. Different procedures were used to gain acceptance in each class (Schumacher, 1981). Each researcher had to acquire the ABRs' trust in a manner which was a sincere expression of herself or himself as a person in a role the ABRs were familiar with. Official approval or rational explanations of the project and the observers were not enough. The ABRs could recognize and respond to the roles of tutor, teaching assistant, and tester, but not that of pure observer. As the research team became more accustomed to the centers, staff, classes,

and adults, acceptance in the field was established.

### Weekly Staff Meetings and Seminars: Multiple Research Roles and Evolving Foci

Weekly staff meetings were necessary to data collection by a team as opposed to four separate investigators. Staff meetings identified initial conceptualizations and emerging foci based on the data, and continually adjusted the research roles to obtain a valid data base for the topic under study.

Multiple research roles were required because the instructional programs of each center differed in several respects from those of adult learning centers previously studied (cf. Mezirow, Darkenwald, and Knox, 1975). By mapping (Schatman and Strauss, 1973) each adult learning center, the team discovered that instruction was not limited to a one-hour class period, but also occurred in various learning niches (Barker and Gump, 1964) at various times from 8:45 a.m. to 9:00 p.m. Each learning niche required a different degree of participation, from pure participant to pure observer (Gold, 1958), and specific skills in the research role.

An inside/outside technique similar to Whyte and "Doc" (1955) and to Smith and Geoffrey (1968) was also used. An evening ABR class with the research assistant, who had no previous teaching experience, as the teacher and a senior investigator as the observer was established.

Another approach used to obtain oral indices of learning to read was the encouragement of teachers and tutors to try out various instructional techniques or materials and to analyze the results in terms of the evolving

research questions. This approach worked better with tutors than with teachers. Oral reading was more natural in a tutoring situation. Insights were gleaned from the tapes of weekly tutoring sessions and the discussions of the sessions by tutor and researcher.

Identifying the emerging foci of the study was a continuous process throughout the eight months of observation. Periodic lengthy seminar staff meetings were held. Each researcher scanned his or her summary observation notes and presented to the staff initial ideas and emerging research questions. Records of seminar discussions were kept.

For example, one focus was on the individual adult students. To establish a baseline, a reading profile synthesized all observations of reading behaviors collected at that point. The profile was periodically updated throughout the year. An adult profile which included physical appearance, family and peer relationships, reason for attending the center, academic attitude, and so on, was written for those students on whom sufficient data had been collected.

Seminar meetings identified variables and research questions beyond those initially proposed in the foreshadowed problems. Variables which influenced the miscues of these ABRs were peer behavior, textual constraints, teacher, prior instruction, perception of how one learns, previous teacher, text skills, experience with print outside the center, attitude toward risk-taking, view of reading, and language. However, a tentative taxonomy of variables was merely the first step in the search for deeper meanings. More questions arose regarding the interrelationships of variables which seem to influence reading behavior.

### Establishing the Validity of the Data Base: Standards of Adequacy

Standards of adequacy for a valid data base in an ethnographic study include on-site observation, use of "muted cues" and "unobtrusive measures," extensive field notes, and triangulation.

From September through December, two researchers observed the morning class; and one researcher observed weekly tutoring sessions. In addition, the inside/outside procedure was used in an evening class. The observation schedule changed in December with the addition of a second site to the study. One researcher observed two mornings a week in one site; a second researcher observed two mornings a week at a second site; and the inside/outside procedure continued through May. To cross-validate observations, the researchers switched morning observation sites in April and May. In essence, the research team covered the totality of the two sites.

The research team continually returned to the field during the eight months, noting the commonsense boundaries of the semesters. The single-spaced typed field notes and summary observations ultimately became over 850 pages which indicated what processes appeared at what times. In addition to the typed records, testing data were collected on a number of ABE students.

Triangulation is a procedure to ensure the validity of the data. Its essence lies in obtaining, over a period of time, different kinds of data from different persons in different organizational positions in different settings. As Denzin (1978) and House (1977) noted, triangulation is qualitative cross-validation among multiple data sources, research methods, and theoretical schemes.

In this study, triangulation was achieved through multiple methods, participants, situations, and organizations. Below is a summary of the sources of data used in corroborating the findings.

Multiple methods	observations; casual conversation; focused interviews; testing; active engagement in role of tutor, assistant, teacher
	documents: centers' newspapers and announcements, project proposal, attendance cards, enrollment forms, State ABE newsletters
Multiple participants	center directors, ABR teachers, ABR students, adult education teachers, adult education students, State Department of Education officials
Multiple situations	research team staff meetings, centers' administrative offices, centers' classrooms, centers' testing rooms
Multiple organizations	State Department of Education; university; public school systems

### Summary

Ethnographic procedures allowed multiple aspects of the complex learning environment of the adult beginning reader and the impact that this environment had on learning to be investigated.



### III. Oral Reading Miscues of the Adult Beginning Reader

The reading strategies that a beginning reader uses to recognize words appear to be related to level of reading proficiency (Biemiller, 1970; Boraks, 1978). One goal of this report is to provide an analysis of ABRs' evolving use of reading strategies. Changes in ABRs' use of these strategies will be related to subsequent achievement in order to gain insight into strategies which make learning easier.

There are many ways to analyze the reading strategies of readers. Analyses of oral reading errors have often been used to provide descriptions of reading behavior. The assumption is that a reader is using the same cues when a word is rendered incorrectly as when the word is read correctly. There are four main kinds of cues a student can use in identifying a word: graphic cues, phonemic cues, syntactic cues (grammatical structure), and semantic cues (meaning or context). Thus, when a student renders "I rode the horse" as "I rode the house," one can examine the horse/house miscue and note that the reader appears to be using graphic, not semantic, cues. Because a student is constantly using or misusing cues, the term miscue is preferred to error.

Taxonomies of reading behaviors have been developed to analyze children's use of cues. In addition to the cues noted above, these taxonomies provide for an analysis of other reading behaviors, such as the readers' tendency to self-correct. However, these taxonomies developed for children may not be appropriate for ABRs. For example, initial classroom observations of adult beginning readers indicated that for

adults (but not for children), graphic cues and successive attempts are very important. That is, these aspects of reading behavior can be related to subsequent progress or lack of progress. Thus, to provide an adequate description of ABRs' reading behavior, it was necessary to adapt available taxonomies to focus on ABRs' reading behavior. The adapted taxonomy included an analysis of use of beginning, middle, and final letters, number of similar letters, number of adjacent letters in the stimulus and rendered word, number of corrections, number of successive attempts, and use of syntactically and semantically acceptable cues.

As we have noted, the team observed adults in their reading classes over an eight-month period. Reading and learning behavior was discussed by the research team in weekly conferences. In addition, ABRs were tested, using a specially developed informal reading inventory for adults. Each form of this inventory, called the Quick Inventory of Progress (QUIP), consisted of five word lists (increasing in difficulty); each list had a related paragraph. Six forms of this test were developed, and adults (when possible) were tested each four to six weeks. Adults and their teachers were also interviewed about their reading strategies. Thus, data on class behavior and on the QUIP, and ABRs' own comments on how they learn to read as well as teachers' comments, were used to describe the reading behavior of ABRs.

Adults' reading behavior was described in relation to their level of reading achievement and subsequent progress. As Table 1 indicates, ABRs--whether at the beginning, intermediate, or final stage of learning to read as determined by performance on the QUIP--tended to make about the same

use of graphically similar beginning, middle, and ending letters when reading words in a list. It appears that better readers use more similar and adjacent letters; but that was expected, because they were reading longer words. What was interesting was that when reading text (as opposed to word lists), better readers used fewer adjacent letters as patterns and made a more "balanced" use of beginning, middle, and ending letters. They were not as graphically bound to specific parts of words as ABRs achieving less well. However, few ABRs made much use of semantic cues.

The reading behavior of ABRs did seem to evolve as they progressed. Because adult behavior is so variable, caution was used in speculating about a hierarchy of miscues; but it was recognized that such a hierarchy was potentially helpful in describing ABRs' behavior. Therefore, ABRs' miscues were organized to show how reading behavior, to some extent, changed with achievement. (See p. 57.)

This hierarchy confirmed the highly idiosyncratic behaviors of ABRs. For example, one ABR reading only three words used reading behaviors associated with ABRs at the intermediate stage of learning. A series of individual reading profiles on ABRs helped document that their reading behavior was idiosyncratic at all stages of beginning reading achievement. Yet for most ABRs, progress seemed inhibited by their inability to make increasingly better (as indicated by the chart on p. 57) use of cues or even of miscues. A closer examination of reasons why these ABRs did not use higher-level miscues made it possible to identify specific learning needs.

Again, despite individual differences, it appeared that ABRs who made

TABLE 1. MISCUES OF FOURTEEN ABRS ON FORM I OF THE QUIP

# of Words	List						Paragraph						SYN/ SEM
	B1/B	M	E	LET	ADJ	S/C	B1/B	M	E	LET	ADJ	S/C	
90	70/75	44	47	5.0	3.9	2/0	90/90	44	44	4.0	1.5	0/1	57/37
72	80/80	40	40	4.1	3.0	15/3	90/90	50	40	5.9	4.0	0/1	55/17
64	87/92	42	22	3.5	2.1	8/0	70/70	40	46	3.1	1.6	0/2	71/37
50	85/85	56	56	3.4	1.7	0/1	61/61	61	61	3.8	1.7	0/3	50/29
47	100	73	13	4.0	2.5	6/0	73/80	65	38	3.8	2.4	0/0	59/23
40	79/100	90	26	4.4	2.5	16/6	69/73	51	21	3.2	2.2	2/5	50/45
23	63/63	30	23	2.7	1.0	0/0	100	13	55	2.7	1.1	0/5	70/39
22	71/86	23	36	3.0	1.5	0/0	80/80	30	30	2.1	1.1	0/0	30/12
17	40/46	55	65	3.5	1.8	11/3	50/50	25	41	2.0	1.0	0/0	60/55
17	80/90	50	50	2.7	1.1	4/2	50/50	60	37	2.3	1.3	0/3	65/50
*9	*	*	*	*	*	*	*56/56	39	17	*	*	*	23/17
8	50/65	40	15	2.6	1.3	1/4	68/70	20	.05	2.6	.6	0/4	35/20
8	65/90	25	30	2.7	1.1	0/0	73/80	46	14	2.4	1.6	1/3	73/33
8	60/70	30	60	2.6	1.0	4/0	25/30	42	16	1.7	.6	3/2	50/0

# of Words: number of words rendered correctly

B1: percentage of beginning letters or letter correct

B: percentage of beginning (single) letter correct

M: percentage of medial vowel correct (first syllable)

E: percentage of ending letter correct (first syllable)

LET: number of letters common to stimulus and rendered words

ADJ: number of adjacent pairs common to stimulus and rendered words

S: number of successive attempts

C: number of corrections

SYN: percentage of syntactically correct miscues

SEM: percentage of semantically correct miscues

\*: too few miscues to code

progress preferred certain reading strategies. They would:

1. Identify what they knew (i.e., say "did, that's /id/ like in hid").
2. Make successive attempts.
3. Manipulate the vowel (i.e., read hide as "ho, here, hi, hide").
4. Segment the word into syllables or known parts.
5. Monitor meaning (i.e., render lip as "lipe, lap"--not settle for a meaningless rendering).
6. Focus more on meaning than on graphic features (i.e., read He had a big hand as "He had a big hike/face").
7. Correct in phrases.

Readers who made less progress tended to:

1. Note that one word looked like another word, but not use the information--e.g., look at trade and say, "If it were g it would be grade--I don't know."
2. Make successive attempts but be inflexible in switching associations, e.g., ship: "park, puck, stip, part."
3. Fail to persist.
4. Accept a meaningless word in lists (e.g., read lip as lipe and not correct).
5. Fail to monitor meaning in context (e.g., read Jim is five, he is a nice boy as "Jim is fire, he is a nice man").
6. Use the same strategies in reading words in lists as in reading texts.

Behaviors were again analyzed to determine why ABRs used productive

or nonproductive strategies. It appeared that ABRs who used strategies associated with success were more aware of the fact that they had to understand what they read. Also, they had been exposed to instruction in the use of syllables; this may have helped them segment words into syllables and syllables into phonemes. Their confidence in their own basic decoding ability may in turn have promoted a willingness to make successive attempts and a tendency to manipulate the vowel.

It was clear that most ABRs, even the more proficient ones, made little use of semantic cues. Field notes on classroom observations, however, indicated that all ABRs could use semantic cues if the oral reading had been preceded by discussion of the concepts in the story. Field notes on classroom behavior also suggested that while ABR teachers often focus on decoding skills, students who cannot discriminate or segment taught phonemes are using visual skills or graphic cues in responding to these lessons. Thus, instructional changes may be needed to verify that students are using taught cues.

Other behaviors which can be expected to interfere with the future success of ABRs were identified. For example, few ABRs integrated use of cues; and most ABRs personalized responses.

Analysis of the data led to speculation on instructional guidelines. Further research on these guidelines is needed, but essentially the plan is to teach the reading behaviors used by more proficient ABRs to less proficient ABRs--i.e., to teach ABRs to monitor meaning, make successive attempts, manipulate the vowel, and use syllables. More specific guidelines for teaching ABRs to segment words into phonemes and to switch strategies

(i.e., to move from the use of graphic to that of semantic cues) will also be evaluated.

At this point, such guidelines are speculative. Research on them is in progress, and its results will be highly useful to ABR teachers. The preceding discussion will be useful if it makes ABR teachers more sensitive to both the reading strategies of ABRs and the impact their teaching has on these strategies.

#### IV. Factors Influencing the Acquisition of ABRs' Reading Strategies

The description of oral reading strategies of ABRs helped in identifying behaviors which make learning to read easier or more difficult. However, designating these strategies is only the first step in developing effective reading instruction guidelines for ABRs. Factors influencing these strategies must also be considered. This chapter will present a summary of the discussion of factors in the learning-to-read situation which affect ABRs' acquisition of strategies. Implications for instruction will be considered.

To identify factors influencing adults' acquisition of useful strategies, data were taken from five sources: 1) field observations and related discussions on adults involved in learning to read, 2) interviews with ABRs, 3) interviews with ABR teachers and tutors, 4) input of two adult education consultants with a total of 40 years experience directing ABR programs, and 5) related research. Information here is not limited to that derived from the 14 ABRs whose reading profiles were singled out for analysis. Data on all the more than 60 ABRs who were observed or interviewed during any phase of the study are included.

Consultants, teachers, and ABRs tended to agree on factors influencing reading behavior: attendance and attending behavior. Observers identified specific factors operating in the learning-to-read situation: teaching behavior, constraints of text, prior teaching, prior schooling, peer behavior, students' views of reading, teachers' views of reading, thinking skills, and language performance. Each of these factors was examined for



its impact upon learning-to-read behavior. While not every factor affected behavior, all are discussed briefly below. Related instructional guidelines are suggested.

Attendance. Consultants and teachers stressed that ABRs would have learned taught strategies and skills better if they had attended class more. It was pointed out that changes in job schedule and family and transportation problems frequently interfered with ABRs' attendance. However, it was clear that attending ABRs also had these problems.

It was observed that ABRs soon dropped out after indicating that they were not being taught as they expected or felt they needed to be taught. Teachers were responsive to students' statements on what they wanted to learn; but when teachers could not accommodate students' suggestions on how they wanted to learn, students left. When teachers responded to these suggestions, students stayed.

Placement also seemed to influence students' attendance. ABRs seemed able to accommodate themselves to working with very difficult material, but they left if material appeared too easy. As one teacher pointed out, "students expect reading to be hard. If it is not hard, they may feel they are not learning."

In addition, peer behavior appeared to influence attendance. Peers monitored one another's attendance, reinforced one another for attending, and seemed to need a peer group with whom they could identify.

Students' concerns about method, placement, and peers suggest that great care is needed in the initial interviewing of ABRs to assess students' expectations and needs in these areas. Moreover, instructional guidelines

must accommodate student input. It appears that students should be asked, "how would you learn this?", or else great care should be taken to explain the method used.

Attending to instruction. Teachers pointed out that ABRs often came to classes after work and were exhausted. This made attending difficult. It was also noted that students' inattention increased when they did not understand the task or when they appeared wary of risking an incorrect response. In some cases students simply did not know what to attend to. For example, one student, when learning a set of words, stated and restated to himself the sequence of letters in the words, but never said the word. At the end of the session, when asked to give the word, all he could say was, "I know that"; he could not render the word. The teacher thought he had not been attending; in fact, he had been attending incorrectly.

It appears that great precision is required in presenting tasks to ABRs. While teachers try to make general directions clear, there is also a need to be sure students know what to attend to and are given clear, useful learning strategies.

Teacher behavior. Observers tried to identify factors influencing success by focusing on factors influencing the use of successful reading strategies. Teacher behavior did not influence use of these strategies as much as had been expected. There appeared to be five reasons for this: 1) students had limited opportunity to practice the taught skill; 2) they tended to use graphic cues even when other cues were being taught; 3) teachers did not consistently prompt students to use taught cues; 4) teachers used cues that were irrelevant to print; and 5) new words were

introduced in isolation and this may have promoted use of only one type of cue (graphic). Essentially, students learned strategies from how the teachers taught, not from what they taught. Thus, if a teacher preceded reading of text with a discussion, students used context cues. If the teacher preceded reading of text with a discussion of using context, then students used graphic cues. When teachers focused on meaning, students used semantic cues.

Because style of teaching, more than skills taught, influenced student behavior, it is obvious that instructional formats need to be carefully monitored for their effects on ABRs' actual use of strategies.

Constraints of text. Features of the text--type of content, story structure, proximity of graphically similar words, and frequency of referent words--influenced the types of miscues ABRs made. The more abstract the concept discussed in the text, the less the ABRs comprehended. As they comprehended less, they used fewer semantically and syntactically acceptable miscues.

Frequency of referent words and variations in story structure also inhibited comprehension--and, thus, use of meaningful miscues. In general, most students did not seem to have problems with syntax in text. This was unexpected, because ABRs make relatively little use of syntactic cues.

It appears that ABRs need more exposure to the structure and content of printed text. Some teachers read to students to promote print experience, and it appears that this technique should be used more systematically.

Prior teaching. ABRs' heavy use of graphic cues at all stages of beginning reading may result in part from early instruction. Most ABRs have

been exposed to a strong decoding program in which emphasis was on learning individual sounds or on learning words by association with pictures and spelling. Most ABRs tried to learn words by spelling them. Phonemic cues, while taught, were not often used, perhaps because many ABRs could not distinguish specific sounds in words. Beyond the initial phoneme, ABRs would rely on words' graphic features. It might be helpful if current decoding programs used with ABRs were adapted to promote greater use of taught skills by promoting skills which facilitate decoding (segmenting). (See Chapter III.)

Prior schooling (kindergarten through grade 12). Some ABRs never attended school; some attended erratically; some were present for 12 years, but never actively participated in schooling experiences. Many ABRs lacked expected schooling-related abilities such as posing questions, categorizing, and dealing with abstractions. This, in turn, apparently made it more difficult to learn and use specific reading behaviors. The lack of these abilities associated with prior schooling may also inhibit students' comprehension of abstract concepts in text, and thus inhibit subsequent use of semantic cues.

Moreover, since ABRs often have trouble with abstractions, the teaching of phonemes (an abstract concept) might be reexamined. It is suggested that using the syllable as the smallest unit of analysis be considered.

ABRs might well profit from exposure to experiences which ordinarily promote skill in dealing with abstractions and categorizing. Discussions in which ABRs are encouraged to generalize from personal experiences and to discuss new situations may promote the ability to generalize. Use of

semantic mapping and teaching parts of speech may promote categorization.

Peer behavior. Peer behavior had a remarkable effect on both specific miscues and general reading behaviors of ABRs. For example, when an ABR corrected in phrases, peers would also do this. Modeled behavior, more than taught behavior, changed reading behaviors. Instructors may be able to capitalize upon this fact by using peer models.

Teachers' views of reading. The teachers' views of reading were reflected to some extent in teaching behaviors. Some teachers and tutors would consistently prompt an ABR to use grapheme-phoneme correspondence or context cues when unknown words were encountered. Only one teacher consistently prompted and modeled use of grapheme-phoneme correspondence cues. This teacher's students were the only ones to learn and use this strategy. Most ABR teachers teach students to use all cues; but when the ABR needs help, teacher promptings focus on the stimulus word, not the taught cue. If a teacher sees that the stimulus word can best be attacked by decoding (e.g., if the word is ladder), she or he will ask the student to "sound it out." If the teacher decides that the word can best be attacked through context (e.g., if the word is cough), she or he will say, "read on and guess." It may be best to encourage the student to try both strategies and see which one works. Most teachers stated in interviews that they believed reading involved meaning and decoding. But views of reading were translated into behavior which might have seemed inconsistent to ABRs; this may be why teachers' beliefs about reading generally did not influence students' behavior.

Student thinking skills. It was suggested that some ABRs relied on

graphic cues because they lacked the thinking skills necessary to use semantic cues. ABRs' comprehension of text, especially where abstract concepts were involved, was limited. ABRs at the beginning and intermediate stages of learning to read had limited ability to categorize words or to provide semantic category associations for words. An ABR asked to give a word associated with good might respond with "day" rather than with "bad" or "excellent." However, other research has suggested that one can increase ABRs' ability to generate associations related to a word category (synonyms, antonyms, superordinates, and so on). As noted earlier, some of the ABRs' thinking skills seem related mostly to schooling skills. Therefore, the teacher can promote use of semantic cues by enhancing schooling skills.

Language performance. When prior text is considered, ABRs do make great use of syntactic cues. When subsequent text is considered, use of syntactic cues drops off considerably. Because syntactically acceptable cues indicate that students expect certain language patterns, language patterns might be expected to influence use of cues. This, in fact, seemed not to be the case. While ABRs' language appeared limited in some situations, as in telling a story, ABRs demonstrated facility with complex sentence structures in general class discussions. The aspect of ABR language which may influence use of cues is the nature of the content of the language. ABRs tended to personalize content and to deal with concrete rather than abstract general aspects of an event.

If use of syntactic cues is limited among ABRs, this seems not to be because of lack of knowledge of certain sentence structures. But it may be that ABRs expect complex structures less because these structures appear

less often in their oral interactions. Facility, not ability, is of concern. Further examination of students' failure to monitor meaning as they read and of their potential unwillingness to self-correct when reading may yield more insight into the role of language and thinking in reading behavior.

Home support. Several ABRs indicated that they used certain reading strategies because of home help. However, it appeared that students controlled home help: they would ask someone at home to spell a word for them or ask for "the sound" of a letter. Thus, students influenced the type of reading behavior practiced at home.

The more home help a student had with given strategies or skills, the more the student practiced and learned them. Also, students with home help tended to be more aware of print in their general environment. They would point out that they often tried to figure out signs in the street or at work. It seems that instructional guidelines for ABRs might extend beyond the classroom; general guidelines might suggest ways to find support from a significant person in each ABR's environment.

This chapter has considered the factors affecting reading behavior as they were identified by teachers, consultants, tutors, observers, and ABRs. All factors considered gave rise to guidelines for instruction. It is suggested that guidelines for instructing ABRs should accommodate ABRs' ideas on how they should learn, provide for consistency of teaching goal with teaching activity, and develop the thinking skills that ABRs need to use semantic cues.

## V. Adult Beginning Readers and Adult Development

One of the most obvious features of ABR classes is the wide range of ages of the adult participant. The initial question was: Do differences in age indicate differences in adult development among ABRs? In this analysis of 14 adults, aged 18-43, the questions were these: What does this span of 25 years mean? How does the developmental phase of an adult affect the behavior patterns and attitudes the adult brings to the learning process? What does this imply for effective instruction and for research?

The conceptual basis for the analysis was the phases of adult consciousness found in R. L. Gould, Transformation: Growth and Changes in Adult Life (1978), and the ideas on adult development found in D. J. Levinson's The Seasons of a Man's Life (1978) and C. K. Tittle and E. R. Denker, Returning Women Students in Higher Education (1980). The analysis of the dominant motivation for learning to read used the concepts of growth-expansion and anxiety-frustration as hypothesized by R. G. Kuhlen in "Developmental Changes in Motivation During the Adult Years" (1968). General reading behaviors were categorized as inconsistent, minimal, regressive, and progressive.

The findings are summarized in the chart on p. 37. The 14 adults, as explained in Chapter II, were a nonrandomized group on which enough data were gathered from multiple sources during the eight-month study. These adults were in two adult learning centers and four different instructional situations. The chart is the reference point for this discussion.



### Discussion of Major Findings

1. Two distinct phases of adult consciousness (Gould, 1978) emerged among these 14 adults. In the second column, it is noted that both men and women, 18-25, were working on developmental tasks found in ages 16-22. With two exceptions, the older adults, 27-43, were working on tasks found in ages 28-34.

2. Following the phases of adult development in Levinson (1978) and Tittle and Denker (1980), we find that this group of adults, 18-43, was divided among three phases: Early Adult Transition, Entering the Adult World, and the Thirties Transition. Generally, there was more variation among the younger students.

3. Tittle and Denker's review and synthesis of research (1980) suggests that theories of adult development based on research on men do not account for the phases of adult development found in women. Our data on the younger students confirm Tittle and Denker's interpretation, but our data on the older women call it into question.

4. The phase of adult consciousness generally corresponds to the phase of adult development.

5. An important finding not shown in the chart is the complexity within the phases of adult conscious or adult development. In an effort to find patterns, the investigators analyzed the dominant developmental tasks of each adult within each phase. The three adults who were "Entering the Adult World" were working on different tasks, as were the five in the "Thirties Transition." This pattern was also found in using the components of the childhood assumptions to identify the phase of adult consciousness.

ADULT DEVELOPMENT AND GENERAL READING BEHAVIORS OF ABRS

Name & Age	Adult Consciousness (Gould, 1978)	Adult Development		Dominant Motivation (Kuhlen, 1968)	General Reading Behaviors
		Men (Levinson, 1978)	Women (Tittle & Denker, 1980)		
Jim, 18	16-22 tasks	Early Adult Transition	N.A. (not applicable)	Anxiety goal diffused	inconsistent
Betsy, 21	16-22 tasks	N.A.	Premarriage	Anxiety goal diffused	minimal
Lonnie, 22	16-22 tasks	Early Adult Transition	N.A.	Growth-expansion	regressive
Rick, 22	16-22 tasks	Entering the Adult World	N.A.	Growth-expansion	progressive
Mike, 23	16-22 tasks	Entering the Adult World	N.A.	Growth-expansion	progressive
Casey, 23	16-22 tasks	Early Adult Transition	N.A.	Anxiety	minimal
Joan, 25	16-22 tasks	N.A.	Premarriage	Anxiety	progressive
Carol, 27	22-28 tasks	N.A.	Multiple roles	Anxiety	minimal
Horace, 27	28-34 tasks	Thirties Transition	N.A.	Anxiety	minimal
Carl, 27	28-34 tasks	Thirties Transition	N.A.	Growth-expansion	minimal
Joy, 32	28-34 tasks	Thirties Transition	Multiple roles	Growth-expansion	progressive
Alice, 35	28-34 tasks	N.A.	Multiple roles	Anxiety	regressive
Patrick, 42	22-28 tasks	Thirties Transition	N.A.	Anxiety	minimal
Annie, 43	28-34 tasks	Thirties Transition	Multiple roles	Growth/Anxiety	inconsistent

6. There is no pattern in the relationship of age, adult consciousness, adult development, and dominant motivation for learning to read. The dominant motivation of anxiety and frustration occurred in all phases of adult consciousness and adult development; so did the dominant motivation of growth and expansion. Further, the dominant motivation changed during the year in two adults as the task of learning to read became more frustrating. This is not surprising; the longer the adult attended the class, the more realistic became his or her assessment of what it took to learn to read.

7. There was no pattern in the relationship of age, phases of adult consciousness, adult development, dominant motivation, and reading behaviors. These adults exhibited four kinds of general behavior in learning to read: inconsistent, minimal, progressive, and regressive. Inconsistent behavior occurred in two phases of adult consciousness and in two phases of adult development. Minimal behaviors occurred in two phases of adult consciousness and in three phases of adult development. Progressive behaviors occurred in two phases of adult consciousness and in three phases of adult development. Regressive behavior occurred in two phases of adult consciousness and in two phases of adult development.

In summary, the concepts of phases of adult consciousness, phases of adult development, and dominant motivation are not directly related to the general reading behaviors of this group of adults. It is hypothesized that the plans and tasks of adult consciousness and adult development are related to teacher decision-making about materials and teaching procedures,

which in turn may be directly related to reading achievement.

However, when the analysis is shifted from the group to the individual, then a relationship between the developmental tasks of a phase and reading behaviors provides more explanatory power. When learning to read was an integral part of a developmental task of an adult, the adult showed progressive reading behaviors. When learning to read was not a major focus of a developmental task, the adult exhibited inconsistent, minimal, or regressive reading behaviors. Further, in carrying out a developmental task in which reading was central, an adult might exhibit a growth-expansion or an anxiety-frustration motivation.

This study suggests that the age of an adult is insufficient for identifying the phase of adult development or adult consciousness. Adult beginning readers have more variability than was found by Gould (1978) or Levinson (1978), whose participants were adult readers. Women's adult development among these ABRs differs qualitatively from men's adult development as hypothesized by Tittle and Denker (1980). Further, this study supports Kuhlen's (1968) postulate that either growth-expansion or anxiety-frustration can serve as the dominant motivation in a developmental task related to reading.

Perhaps this analysis illustrates the conclusion of Robert C. Peck (1968) on the use of developmental criteria rather than age for the study of phases in later life:

There is a greater variability in the chronological age at which a given psychological crisis arises in later life, than is true of the crisis-points of youth. In studying children, at the pre-pubertal stage, we can almost take it for granted that they

are almost working on the same total set of developmental tasks. With adults, the pattern of developmental tasks can vary more greatly, from one individual to another. (P. 92.)

### Implications for Instruction

In view of the limitations of ethnographic research and the exploratory nature of the study, what are the implications for instruction?

1. Knowledge of the general phase of adult consciousness and adult development can provide the adult reading teacher with a deeper understanding of the behaviors a beginning adult reader exhibits in learning to read than can knowledge of the student's age alone. In addition, the developmental phases of women differ from those of men.

2. An understanding of the behaviors related to adult development may aid a teacher in making decisions related to materials and instructional procedures. A teacher decides which adult behaviors are responded to and reinforced and which behaviors are ignored. A teacher can relate the importance of learning to read to an individual's developmental task and recognize more easily the adult's "readiness to learn" and the "teachable moment" (Havinghurst, 1961). Through this approach, a teacher may foster attitudes and behaviors which promote attendance and achievement.

3. It is important to learn whether the dominant motivation for learning to read is anxiety and frustration or growth-expansion. A teacher's procedure with a student motivated by anxiety and frustration would differ from his or her procedure with a student motivated by growth and expansion of goals. The teacher needs to know how much frustration each student can handle.

4. Because of the wide variations in phases of adult development and adult consciousness, it seems beneficial for adults to experience both group instruction and individual instruction. However, many factors will influence the allocation of instructional time (Mezirow, Darkenwald, and Knox, 1975; Bowren and Zintz, 1977; Karnes, Ginn, and Maddox, 1980).

#### Implications for Further Research

1. There may be greater variability in adult consciousness among ABRs than was found in Gould's study (1978) of patients and non-patients, male and female. Because Gould's findings in patients were verified by survey research, the results are relevant to reading adults.

2. There may be greater variability in male adult development among ABRs than was found in Levinson's study (1978) of 40 men. (Although not all of the men in his study had graduated from high school, it is implied that all could read.)

3. Women's adult development differs qualitatively from men's adult development among beginning readers. This finding supports those of Tittle and Denker (1980). Further research in vocational development among women ABRs is needed.

4. This study supports Kuhlen's (1968) postulate that anxiety-frustration can serve as a dominant motivation in adult development.

5. With some exceptions, the phases of adult consciousness (Gould, 1978) among these ABRs parallel their phases of adult development (Levinson, 1978).

## VI. Summary and Conclusions

This study was undertaken to identify the reading strategies which facilitated or inhibited the progress of ABRs. An ethnographic approach was used so that factors influencing the ABRs' acquisition of these reading strategies could be identified.

Using an adapted form of the Goodman and Burke (1971) taxonomy of oral reading miscues as initial framework, the investigators described ABRs' reading behavior. In addition, field notes on classroom observations and on interviews with ABRs, teachers, and consultants were considered in discussing the pattern of reading behavior of ABRs. A detailed analysis of the reading and learning-to-read behavior of seven ABRs and general descriptions of the reading behavior of seven more ABRs provided a basis for identifying reading behaviors associated with success and failure. The highly idiosyncratic reading behavior of ABRs and the limited number of teaching situations observed preclude valid generalizations. However, the long-term observation of ABRs made it possible to suggest that given reading behaviors promote success or failure in learning to read. Specifically, ABRs who thought of reading as discovering meaning, were aware of when they were not gaining meaning, and had been exposed to syllabication and could manipulate vowels and syllables, tended to make progress. ABRs who thought of reading as word calling, did not make successive attempts on words, and had trouble reorganizing visual input, tended to make less progress. This provided a basis for speculating on guidelines for instruction which would promote the use of successful strategies and overcome

inhibiting strategies. Further testing of these guidelines is planned.

The instructional context was also analyzed to determine what variables influenced the ABRs' acquisition of given reading strategies. As expected, the ABRs' attendance and ability to pay attention during classes appeared to influence acquisition of strategies. Since all ABR teachers are concerned about dropouts, it is of special interest that ABRs who felt that their teacher considered how they wanted to learn as well as what they wanted to learn tended to stay longer. ABRs who felt that teachers did not consider how they wanted to learn tended to drop out. All ABR teachers are aware of the importance of determining what students want to learn. It now appears equally important to consider how they want to learn.

The way a teacher conducts a lesson provides a model for learning. When a teacher introduced words in isolation or focused on decoding words, students tended to try to recall these words by dealing with their graphic features, not by decoding. When teachers preceded reading with a discussion of concepts in the text, students tended to read for meaning and use context in identifying new words. Students' beliefs about reading, perhaps guided by prior schooling, also influenced reading strategies: regardless of the skills or strategies being taught, students tried to learn words by their own system (usually by spelling words).

It appears, then, that what teachers teach is less important than how they teach; and how teachers teach is more effective if the taught strategy is believed in by the ABRs and modeled by teachers and peers.

An examination of the life tasks ABRs face indicates that standard



literature on adults may not account for ABRs' behavior. ABRs within any given age range may not be dealing with the same tasks as their literate peers. This may have implications for studies on adult development where the effect of literacy on social interaction and growth should be analyzed, and this finding certainly underscores the importance of exploring a wide variety of social/cultural activities with ABRs.

This eight-month study, preceded by two months of training for observers and followed by two months of analysis of data, does provide some empirical basis for potential guidelines for instructing ABRs. Further research is needed before definitive guidelines can be established.

This study may assist others who, using different instructional concepts and different populations of ABRs, want to evaluate more closely the influence of personological variables and instructional context on the learning-to-read behaviors of ABRs.

It is recognized that descriptions can be "rich and not valid"; explanations can be "rational and wrong." Every attempt to validate data was made by comparing class observations, test data, and information from interviews with ABRs, teachers, tutors, and consultants. Where data were consistent, they were assumed to be valid. Where data were inconsistent, an attempt was made to identify the reasons. Although insight has been gained into ABRs' behavior in learning to read, the conclusions here are based on data gathered from a nonrandom sample of adults involved in limited learning contexts. As noted in the introduction, the goal was to raise questions, not to answer them. This study is only a first step in learning more about the reading behavior of ABRs.

## Bibliography

- Allington, R. "Diagnosis of reading ability: Word prediction abilities test." Academic Therapy, January 1979, 14 (3), 267-273.
- Amoroso, H. "A psycholinguistic analysis of the oral and silent reading performance of selected standard IV subjects." Trinidad and Tobago, West Indies/Madison, Wisconsin, 1978 (ERIC Document Reproduction Service No. ED 162 278).
- Anderson, L. Assessing affect in characteristics in the schools. Boston: Allyn and Bacon, 1981.
- Au, K. "Analyzing oral reading errors to improve instruction." The Reading Teacher, October 1977, 31 (1), 46-49.
- Barker, R. G., and Gump, P. V. Big school, small school. Stanford, California: Stanford University Press, 1964.
- Becker, H.S. Sociological work: Method and substance. Chicago: Aldine, 1970.
- Bennett, A. "An analysis of errors in word recognition made by retarded readers." The Journal of Educational Psychology, 1942, 33, 25-38.
- Bickley, A., Dinnan, J., and Bickley, K. "Language performance as a predictor of performance on intelligence tests." Journal of Reading Behavior, Fall 1970, 2, 291-294.
- , Bickley, R., and Cowart, H. "Oral language responses and predictors of reading performance in intermediate grades." December 1970, St. Petersburg, Florida. A paper presented at the National Reading Conference (ERIC Document Reproduction Service No. ED 048 997).
- Biemiller, A. "The development of the use of graphic and contextual information as children learn to read." Reading Research Quarterly, Fall 1970, 6 (1), 75-95.
- Boraks, N. "Decoding is not comprehension: Potential solutions." ABE Newsletter, 4 (6), November-December 1980, 9-11.
- , "Ethnography and adult literacy programs: Meeting information needs and context complexity." Paper presented at the Twenty-third Annual Meeting of the College Reading Association, Boston, November 1979 (ERIC Document Reproduction Service No. ED 182 73).
- , "Word recognition skills of adult beginning readers."

Williamsburg, Virginia. A paper presented at the First Annual Meeting of the Eastern Educational Research Association, March 1978 (ERIC Document Reproduction Service No. ED 157 048).

-----, and Schumacher, S. Ethnographic research on basic reading skills. A 310 Project Proposal. Richmond: Virginia Department of Education, Adult Education Service, 1980.

Bowren, R. R., and Zintz, M. V. Teaching reading in adult basic education. Dubuque, Iowa: William C. Brown Co., 1977.

Brown, R., and Berko, J. "Word association and the acquisition of grammar." Child Development, 1960, 31, 1-14.

Bruyn, S. T. The human perspective in sociology: The methodology of participant-observation. Englewood Cliffs, New Jersey: Prentice-Hall, 1966.

Clason-Hook, C. Teaching reading and writing to adults. Tehran, Iran: International Institute for Adult Literacy Methods, 1977.

Colheart, V. "Recognition errors after incidental learning as a function of different levels of processing." Journal of Experimental Psychology: Human Learning Memory, 1977, 3 (4), 437-444.

Cook, W. Adult literacy in the United States. Newark, Delaware: International Reading Association, 1977.

Cox, J. R. "A study of syntactic competence of adult beginning readers." A paper presented at the annual International Reading Association meeting, Anaheim, California, 1976.

Cunningham, P. "Investigating a synthesized theory of mediated word identification." Reading Research Quarterly, 1975-76, 9 (2), 127-143.

Dale, E., and O'Rourke, H. The living world vocabulary: A national vocabulary inventory. New York: Field Enterprises Educational Corporation, 1976.

Danseraeau, D. "The development of a learning strategies curriculum," in H. O'Neil, ed., Learning Strategies. New York: Academic Press, 1978.

Davis, F. The literature of research on reading with emphasis on models. New Jersey: Iris Corporation, 1972.

Denzin, N. K. The research act: A theoretical introduction to sociological methods. New York: McGraw-Hill, 1978.

- Downing, J. "Children developing concepts of spoken and written language." Journal of Reading Behavior, Winter 1972 (4), 1-19.
- Entwistle, D. "Implications of language socialization for reading models and for learning to read," in F. Davis (ed.), The literature of research on reading with emphasis on models (see above), 6-101.
- Freedle, R., and Durar, R. "Sociological approaches to dialogue with suggested application to cognitive sciences," in R. Freedle (ed.), New directions in discourse processing. New Jersey: Ablex Publishing Co., 1979.
- Frenkel-Brunswick, Else. "Adjustments and reorientation in the course of the life span." In B. L. Newgarten (ed.), Middle age and aging. Chicago: University of Chicago Press, 1968.
- Gaboriski, S. Research and investigation in adult education. Syracuse, New York: Education Resources Information Center, 1971.
- Geer, Blanche. "First days in the field: A chronicle of research in progress." In P. E. Hammond (ed.), Sociologists at work. New York: Basic Books, 1964.
- Gibson, E., and Levin, H. The psychology of reading. Cambridge: MIT Press, 1976.
- Glaser, B., and Strauss, A. The discovery of grounded theory: Strategies for qualitative research. Chicago: Aldine Publishing Co., 1967.
- Gold, R. "Roles in sociological field observation." Social Forces, 1958, 36, 217-223.
- Goodman, K. "A linguistic study of cues and miscues in reading." Elementary English, 1965, 6, 39-43.
- , and Burke, C. "Theoretically based studies of patterns of miscues in oral reading performance." Detroit: Wayne State University, April 1973 (ERIC Document Reproduction Service No. ED 079 708).
- Grotelueschen, A., Gooler, D., and Knox, A. Evaluation in adult basic education: How and why. Illinois: Interstate Printers and Publishers, 1976.
- Guba, E. "Startup, gaining entry, and getting established." A paper presented at the Annual Meeting of the American Educational Research Association, Boston, 1980.
- , Toward a methodology of naturalistic inquiry in educational evaluation. CSE Monograph Series in Evaluation. Los Angeles:

UCLA, 1978,

Gould, R. L. Transformation: Growth and change in adult life. New York: Simon and Schuster, 1978.

Hall, E. T. The silent language. New York: Doubleday, 1959.

-----, Beyond culture. New York: Doubleday/Anchor, 1976.

Haplin, A. W. Theory and research in administration. New York: MacMillan, 1966.

Havinghurst, R. J. Developmental tasks and education. New York: David McKay, 1961.

Henry, N. (ed.). Adult reading. The fifty-fifth yearbook of the National Society for the Study of Education. Illinois: University of Chicago Press, 1956.

Hill, M. "Experimental procedures in the study of the process of word discrimination in reading." The Journal of Educational Research, 1936, 29 (6), 473-481.

House, E. The logic of evaluation argument. CSE Monograph Series in Evaluation, No. 7. Los Angeles: University of California, 1977.

Howe, M. J. (ed.). Adult learning: Psychological research and application. London and New York: Wiley, 1977.

Innaccione, L., and Lutz, F. W. Politics, power and policy: The governing of local school districts. Columbia, Ohio: Charles E. Merrill, 1970.

Juel, C. "Comparison of word identification strategies with varying context, word type, and reader skill." Reading Research Quarterly, 1980, 15 (3), 358-376.

-----, and Holmes, B. "Oral and silent reading of sentences." Reading Research Quarterly, 1981, 16 (4), 545-568.

Karnes, F. A., Ginn, G. H., and Maddox, B. B. Issues and trends in adult basic education: Focus on reading. Jackson, Mississippi: University Press of Mississippi, 1980.

Kavale, K., and Lindsey, J. "Adult basic education: Has it worked?" Journal of Reading, February 1977, 20 (5), 368-376.

Kingston, A. (ed.). Toward a psychology of reading and language: Selected writings of Wendell W. Weaver. Athens: University of Georgia Press, 1977.

- Klausmeier, H. "Conceptual development during the school years." In J. Levin and V. Allen (eds.), Cognitive learning in children: Theories and strategies. New York: Academic Press, 1976.
- Knowles, M. The modern practice of adult education. New York: Association Press, 1977.
- Knox, A. Adult development and learning. San Francisco: Jossey Bass, Publisher, 1977.
- Kolers, P. "Three stages of reading." In H. Levin and J. Williams (eds.), Basic studies on reading. New York: Basic Books, Inc., 1970.
- Kuhlen, R. G. "Developmental changes in motivation during the adult years." In B. L. Newgarten (ed.), Middle age and aging. Chicago: University of Chicago Press, 1968.
- Laborvie-Vief, G. "Intellectual abilities and learning: Retrospect and prospect." In J. Levin and V. Allen (eds.), Cognitive learning in children: Theories and strategies. New York: Academic Press, 1976.
- Labov, W. "The reading of the -ed suffix." In H. Levin and J. Williams (eds.), Basic studies on reading. London: Basic Books, 1970.
- Levin, H. "What we have learned about maximizing what children learn." In J. Levin and V. Allen (eds.), Cognitive learning in children: Theories and strategies. New York: Academic Press, 1976.
- Levinson, D. J. The seasons of a man's life. New York: Knopf, 1978.
- MacLean, M. "QASOR: A framework for qualitatively analyzing silent and oral reading." San Antonio, Texas. A paper presented at the Annual Meeting of the National Reading Conference, 1979 (ERIC Document Reproduction Service No. ED 184 103).
- Malinowski, Bronislaw. Argonauts of the western Pacific. New York: Dulton, 1922.
- Merton, Robert K. Social theory and social structure. Revised. Glencoe, Illinois: The Free Press, 1968.
- Mezirow, J., Darkenwald, G. G., and Knox, A. B. Last gamble on education: Dynamics of adult basic education. Washington, D.C.: Adult Education Association of the U.S.A., 1975.
- Monroe, M. Children who cannot read. Chicago: University of Chicago Press, 1932.
- Murry, F. "Two models of human behavior and reading instruction." In

- J. Gallgher and J. Easley (eds.), Knowledge and development, vol. 2. New York: Phehum Press, 1978.
- Newgarten, B. L., and Moore, J. W. "The changing age-status system." In B. L. Newgarten (ed.), Middle age and aging. Chicago: University of Chicago Press, 1968.
- , Moore, J. W., and Lowe, J. C. "Age norms, age constraints, and adult socialization." In B. L. Newgarten (ed.), Middle age and aging. Chicago: University of Chicago Press, 1968.
- . "Adult personality: Toward a psychology of the life cycle." In B. L. Newgarten (ed.), Middle age and aging. Chicago: University of Chicago Press, 1968.
- O'Neil, H. (ed.). Learning strategies. New York: Academic Press, 1978.
- Otto, W. "Teaching reading to adults: The research base and development needs." In W. Brooker (ed.), Adult basic education. Canada: Algers Press, 1962.
- Peck, R. C. "Psychological development in the second half of life." In B. L. Newgarten (ed.), Middle age and aging. Chicago: University of Chicago Press, 1968.
- Raisner, B. "Adult reading strategies--do they differ from the strategies of children?" Reading World, October 1979, 18 (1), 37-47.
- Rozin, P., Poritsky, S., and Sotsky, R. "American children with reading problems can easily learn to read English represented by Chinese characters." Science, March 1971, 171, 264-267.
- Sanders, D. P. "Educational inquiry as developmental research." Educational Researcher, 1981, 10 (3), 8-13.
- Shankweiler, D., and Liberman, I. "Misreading: A search for causes." In J. Kavaragh and I. Mattingly (eds.), Language by eye and by ear. Massachusetts: MIT Press, 1972.
- Shatzman, L., and Strass, A. Field research: Strategies for a natural science. Englewood Cliffs, New Jersey: Prentice-Hall, 1973.
- Schumacher, S. ESEA interagency policy-making as "realistic opportunism": A case study of a national laboratory's curriculum diffusion project. Urbana and Champaign, Illinois: University of Illinois, 1974 (ERIC Document Reproduction Service No. ED 114 981, 1976).
- . Ethnographic inquiry: Theory and application in educational research and evaluation. Richmond: Virginia Commonwealth University,

1979 (ERIC Document Reproduction Service No. ED 184 108).

- , Political processes for an interagency project renewal policy: A case study of a Federal agency's negotiations to influence State and local policies. Richmond: Virginia Commonwealth University, 1975 (ERIC Document Reproduction Service No. ED 111 024).
- , and Boraks, N. "1980 culture shock: Evolving ethnographic procedures to study adult learning-to-read behaviors." A paper presented at the Second Annual Ethnography in Education Research Forum, University of Pennsylvania, Philadelphia, March 1981.
- Sheehy, G. Passages: Predictable crises of adult life. New York: E. P. Dutton, 1974.
- Singer, H., and Ruddell, R. Theoretical models and processes of reading. Delaware: International Reading Association, 1970.
- Smith, F. Comprehension and learning. New York: Holt, Rinehart, and Winston, 1975.
- , Understanding reading. New York: Holt, Rinehart, and Winston, 1963.
- Smith, L. M. "An evolving logic of participant-observation." In L. S. Schulman (ed.), Review of research in education. Itasca, Illinois: F. E. Peacock, 1978.
- , and Geoffrey, W. The complexities of an urban classroom. New York: Holt, Rinehart, and Winston, 1968.
- , and Keith, P. Anatomy of educational innovation. New York: John Wiley, 1971.
- , and Schumacher, S. Extended pilot trials of the Aesthetic Education Program: A qualitative description, analysis, and evaluation. St. Ann, Missouri: CEMREL, Inc., 1972.
- Stake, R. E. "The case study method of social inquiry." Educational Researcher, 1978, 7 (2), 5-8.
- Stanovich, K. "Toward an interactive-compensatory model of individual differences in the development of reading fluency." Reading Research Quarterly, 16 (1), 1980.
- Stauffer, R. Directing the reading-thinking process. New York: Harper and Row, 1975.
- Stevens-Long, J. Adult life developmental processes. Los Angeles,



California: Mayfield Publishing Co., 1979.

Super, D. E. Career development: Self-concept theory. College Entrance Examination Board Monograph No. 4. New York: College Entrance Examination Board, 1963.

Tittle, C. K., and Denker, E. R. Returning women students in higher education. New York: Praeger, 1980.

Webb, E. J., Campbell, D. T., Schwartz, R. D., Sechrist, L., and Grove, J. B. Nonreactive measures in the social sciences. Second edition. Boston: Houghton Mifflin, 1981.

Weber, Rose-Marie. "The study of oral reading errors: A survey of the literature." Reading Research Quarterly, 1968, 4, 96-119.

----- . "A linguistic analysis of first-grade reading errors." Reading Research Quarterly, 1970, 5, 427-451.

Whyte, W. F. Street-corner society: The social structure of an Italian slum. Second edition. Chicago: University of Chicago Press, 1955.

Winer, B. Statistical principles and experimental designs. New York: McGraw-Hill, 1962.

Wilson, S. "The use of ethnographic techniques in educational research." Review of Educational Research, 1977, 47, 245-265.

Wixson, K. "Miscue analysis: A critical review." Journal of Reading Behavior, 1979 (2), 163-175.

Zahn, J. "Differences between adults and youth affecting learning." Adult Education Journal, Winter 1967, 17, 67-76.

Zetterberg, H. L. On theory and verification in sociology. New Jersey: Bedminster Press, 1965.

## Appendix A

## Sample QUIP (Quick Inventory of Progress)

## Guidelines, Paragraphs, and Word Lists

## GUIDELINES FOR ADMINISTERING WORD LISTS AND PARAGRAPHS (Forms 1-4)

1. Establish rapport.
2. Say, "I need your help. Would you read these to me? I am using the tape recorder because I have to write down what you say and I can't remember everything. This will only take a few minutes."
3. Show the adult the first word list and say: "I have a list of words I'd like you to read to me. Start here." Show only three words at a time.  
After seven miscues in a row, stop and ask, "Do you know any more on the list?"
4. In using paragraphs:
  - a. Say, "Here is a story I'd like you to read to yourself. When you finish, I'll ask you to tell it to me. It's about . . ."
  - b. If the student makes more than seven miscues in one paragraph, give an earlier-level paragraph. If the student makes fewer than seven miscues, go to a higher level.
  - c. After silent reading, say, "Please read it aloud."
  - d. Ask the student to tell the story.
  - e. Ask questions appearing on the back of the story card.

Note: The silent reading was not practiced, because most adults consistently read aloud regardless of the teachers' instructions.

## TOO SICK TO WORK\*

Joe was sick. He worked at a plant. He put wax in boxes. Today he did not want to go to work. He wanted to stay home. He had not done this before.

He called his boss and said, "I hate to let you down, but I am sick. I will miss work today."

His boss said, "You stay home. I saw you in the park pool yesterday and you looked sick. It looked like you would drown."

"Yes," said Joe, "I think I ate too much corn. I tried to play ball at the end of the day. I was so sick, I could not pick up the bat."

"OK," said Joe's boss, "I will see you later."

Step 1

This is a story about a man who was too sick to work.

1. Retell the story in your own words.
2. Why did Joe stay home?
3. What makes you think Joe's boss believed him?
4. Why would he put wax in boxes?
5. Do you think Joe is dependable? Why?

\* These paragraphs have been adapted. Further changes are planned.

NAME: \_\_\_\_\_ FORM 1  
 DATE: \_\_\_\_\_ INSTRUCTOR: \_\_\_\_\_  
 CENTER: \_\_\_\_\_ ORDER GIVEN: \_\_\_\_\_  
 NOTES: \_\_\_\_\_

- |                 |                      |                       |
|-----------------|----------------------|-----------------------|
| 1) down _____   | 21) flash _____      | 41) bucket _____      |
| 2) yes _____    | 22) barn _____       | 42) lung _____        |
| 3) bat _____    | 23) post _____       | 43) different _____   |
| 4) home _____   | 24) trail _____      | 44) windmill _____    |
| 5) work _____   | 25) story _____      | 45) litterbug _____   |
| 6) end _____    | 26) free _____       | 46) lace _____        |
| 7) plant _____  | 27) listen _____     | 47) timer _____       |
| 8) wax _____    | 28) jackpot _____    | 48) screw _____       |
| 9) sick _____   | 29) spy _____        | 49) it's _____        |
| 10) park _____  | 30) birdhouse _____  | 50) build _____       |
| 11) lid _____   | 31) hitch _____      | 51) checkbook _____   |
| 12) boss _____  | 32) candle _____     | 52) knit _____        |
| 13) pool _____  | 33) mailbox _____    | 53) major _____       |
| 14) done _____  | 34) icebox _____     | 54) lantern _____     |
| 15) drown _____ | 35) donkey _____     | 55) subtraction _____ |
| 16) corn _____  | 36) footstep _____   | 56) view _____        |
| 17) bar _____   | 37) finish _____     | 57) disobey _____     |
| 18) meet _____  | 38) chief _____      | 58) tortoise _____    |
| 19) roll _____  | 39) arithmetic _____ | 59) remarriage _____  |
| 20) space _____ | 40) comfort _____    | 60) misprint _____    |

NAME: \_\_\_\_\_ FORM 1 (continued)

DATE: \_\_\_\_\_ INSTRUCTOR: \_\_\_\_\_

CENTER: \_\_\_\_\_ ORDER GIVEN: \_\_\_\_\_

NOTES: \_\_\_\_\_

- |                      |                        |
|----------------------|------------------------|
| 61) runaway _____    | 81) miner _____        |
| 62) dusk _____       | 82) starchy _____      |
| 63) scold _____      | 83) southerly _____    |
| 64) capture _____    | 84) fertilizer _____   |
| 65) among _____      | 85) impassable _____   |
| 66) trader _____     | 86) nozzle _____       |
| 67) badge _____      | 87) dandruff _____     |
| 68) confuse _____    | 88) believer _____     |
| 69) sundae _____     | 89) basin _____        |
| 70) smelly _____     | 90) ornament _____     |
| 71) tombstone _____  | 91) cosmetics _____    |
| 72) siren _____      | 92) wreckage _____     |
| 73) Yankee _____     | 93) whittle _____      |
| 74) principal _____  | 94) miserable _____    |
| 75) platter _____    | 95) dishonor _____     |
| 76) confusedly _____ | 96) matinee _____      |
| 77) disqualify _____ | 97) callus _____       |
| 78) spiritual _____  | 98) sanitation _____   |
| 79) circular _____   | 99) architecture _____ |
| 80) allowance _____  | 100) demonstrate _____ |

Appendix B  
Reading Strategies of ABRs

READING STRATEGY	RENDERED	STIMULUS WORD
1. initial sound/symbol association	/c/-/c/-/c/	crane
2. word pattern	cane	
3. prominent consonants	car	
4. segment sounds	/cra/, /ane/, /cra/, crane	
5. maintain blend	c.r.a., cra., crash	
6. manipulate vowel	crisk, /cru/, crash	
7. vowel pattern	grower	flower
8. initial syllable	cus, cus, cuser, custard	customer
9. multi-syllable	cus.tom/cuser	
10. manipulate syllables	custima-customer	
11. suffixes	democracy/is	democratic
12. use of context	a democratic society	a democratic society