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ABSTRACT

Interviews with 19 adults participating in adult basic education or literacy programs were conducted to ascertain the strategies they used to compensate for reading and writing difficulties. Although the project intended to secure this information from adults diagnosed as learning disabled, it had to rely on self-reports and educational history to identify the learning-disabled adults, since fewer than half had been officially diagnosed. The research found that the adult learners used a variety of coping strategies for reading, such as guessing the word from context, sounding it out, and using picture clues. Some asked for help from supportive others. They ordered food in restaurants without difficulty by ordering standard items or asking for suggestions from the server or companions, and they read medicine bottles by the numbers and by memory of doctors' or pharmacists' instructions. Few strategies were used for spelling, although some students used dictionaries or carried lists of frequently used words. The research found that most of these persons were productive and good workers when tasks did not involve reading or writing. Many were good at building and mechanics. The study recommended that teachers capitalize on learners' interests and strengths to design learning experiences to lead them into more complicated reading, for example, using job-related materials. (Appendices include 14 references, the interview guides, and a participant profile.) (KC)

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**Learning and Coping Strategies Used By
Learning Disabled Students
Participating in Adult Basic Education
and Literacy Programs**

A Final Report

of the 310 Special Project 87-98-7014

to the

**Pennsylvania Department of Education
Division of Adult Basic Education
Harrisburg, PA 17126-0333**

by

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Introduction

Statement of the Problem

In recent years literature on adult basic education has indicated a growing awareness of the presence in adult basic education programs of adults with learning disabilities (Bowren, 1981; Gold, 1981; Thistlewaite, 1983). Adult educators involved with adult basic education programs and literacy councils seek both effective means of identifying such students and appropriate instructional strategies to utilize with this population.

The actual incidence of learning disabled adults in the adult basic education classroom is unknown, although it has been estimated to be as high as 80% (Travis, 1979). While this estimate may be high, follow-up studies of LD children provide sufficient evidence to suggest that learning disabilities are not outgrown, although they may be manifest in new ways during adulthood (Horn, O'Donnell & Vitulani, 1983; Kroll, 1984; Polloway, Smith & Patton, 1984). Thus we can expect the incidence of learning disabilities to be approximately as high as that among children. While estimates of the incidence of learning disabilities in children range from 1% to 30%, most common estimates do not exceed 15% (Belmont, 1980; Travis, 1979). Special education services for learning disabled children were actually provided in 1984 to 4.64% of school children nationally ("Special Education," 1985). The incidence of learning disabilities in adult basic education students could reasonably be expected to exceed this level. Special education services for learning disabled students were nonexistent prior to 1964, leaving a large pool of adults who

never received such services or who were identified late in their school careers. There is also evidence that even among learning disabled students receiving special education services the high school drop out rate is likely to be higher than for the general population (Levin, Zigmond & Birch, 1985). Thus it is reasonable to assume that the ABE instructor is more likely to encounter learning disabled students than adult educators working in other environments.

There is little research to guide the adult basic education instructor in his or her efforts to help the learning disabled adult. One of the difficulties complicating such research is the lack of a standard definition for the term learning disability.

Unfortunately, the term is often used generically to refer to learning problems associated with any of a number of physical, psychological and environmental causes. To delimit the scope of the term as it was used for the purposes of this project, one of the most commonly used definitions will be presented here. The definition currently used to provide a federal guideline for the states in placements of children into special education classrooms for the learning disabled is the one included in PL 94-142, the Education for All Handicapped Children Act of 1975. It states that:

The term "children with specific learning disabilities" means those children who have a disorder in one or more of the basic psychological processes involved in understanding or using language, spoken or written, which disorder may manifest itself in imperfect ability to listen, think, speak, read, write, spell or do mathematical calculations. Such disorders include such conditions as perceptual handicap, brain injury, minimal

brain dysfunction, dyslexia, and developmental aphasia. Such a term does not include children who have learning problems which are primarily the result of visual, hearing or motor handicaps, mental retardation, or economic disadvantages. (Hamilton, Leigh, McNutt & Larsen, 1981, p. 336)

While this definition refers to children, it is included here because it is likely to have served as the basis for identification of adults now in adult basic education programs who have been identified as learning disabled while in the public school system.

Although the diversity of the nature of learning difficulties exhibited by individuals with learning disabilities makes it impossible to identify any single set of teaching strategies that will be successful with all learning disabled adults, a number of instructional methods have been identified for use with particular learning difficulties (Gold, 1981; Thistlewaite, 1983). In the continued search for effective means of teaching adults with learning disabilities, one valuable resource remains largely untapped -- the learning disabled adults themselves. The experience of the author suggests that most learning disabled adults have developed sophisticated coping mechanisms both for concealing their learning disabilities and for acquiring needed information and skills. References in adult basic education literature to coping mechanisms used by handicapped learners often focus on the negative aspects, such as ways of hiding the disability (Peterson, 1981; Travis, 1985). Involving learning disabled adults in efforts intended to focus on coping mechanisms from a positive standpoint provides an alternative approach. Hamilton (1983) has described the need to involve learning

diagnostic histories and the expense, time delays and ethical issues associated with arranging appropriate evaluation of learners specifically to participate in this project, it was decided that self-report of a history of diagnostic and or educational services for learning disabilities would be accepted as the criterion for participation. Letters aimed at identifying eligible participants were sent to all administrators of adult basic education programs in the state (as determined by a current list of 135 programs receiving 306 funding) and to those individuals on a list of 63 literacy council coordinators. The letters indicated that face-to face interviews would be conducted with students and a brief interview would also be conducted with the individual's tutor or teacher. It was specified that participating students should be reading at or below an eighth grade level and should have already been identified as learning disabled by a public school system, Vocational Rehabilitation Services, or a psychoeducational clinic. A copy of the letter mailed to teachers is included in Appendix A along with other letters and forms used for communication with students and teachers.

This mailing elicited a return from 27 programs. The majority of administrators (19) who responded indicated that they could not identify students for participation in the project. Some cited confidentiality as a reason, while most indicated they did not know of any such students in their programs. Several added that they wished they could help and would be interested in results of the project. Two teachers expressed an interest in participating, but their students were excluded because of reservations that

disabled adults in the program planning process just as we do other adults.

Objectives

The general goal of this project was to provide adult basic education teachers and literacy program coordinators with a list of learning strategies used successfully by learning disabled adults to compensate for their specific learning difficulties. The objectives this project were designed to accomplish included:

1. Identification of factors which motivated a select group of LD adults to seek assistance from adult basic education programs of literacy councils.
2. Identification of perceived benefits of participation in adult basic education or literacy programs relative to previous learning experiences.
3. Identification of patterns in areas of learning perceived as strengths by such learners, realizing that individual differences must be considered for each learner.
4. Identification of strategies used by learning disabled adults reading at or below the eighth grade level when attempting to perform tasks which require reading and writing skills likely to be beyond their independent reading level. In addition to questions about general reading and spelling strategies, responses to the following reading/writing tasks were specifically elicited:
 - a. reading at work
 - b. completing a job application
 - c. reading household bills
 - d. ordering food from a menu

e. reading labels/directions for medicine

5. Identification of human resources (family, friends, co-workers, teachers) typically relied on for assistance with difficult reading/writing tasks.

6. Identification of media resources other than print used for learning.

7. Identification of reading/writing tasks for which ineffective strategies have been employed or for which relatively few strategies appear to have been developed.

Procedures

The first task to be accomplished in this project was the identification of learning disabled adults participating in adult basic education or literacy programs. This task proved to be the most difficult part of the project and the one completed with least effectiveness. Despite the fact that teachers and tutors informally indicate their suspicions that a great number of their students may have learning disabilities, it proved to be extremely difficult to find learning disabled adults involved in ABE or literacy programs. While some colleges now offer programs to identify and support learning disabled adults, the same does not yet appear to be the case for adult basic education programs. Teachers and program coordinators who were interested in participating in the project usually could not say with any certainty that a given student had a learning disability.

Yet another factor complicating the initial stages of this project was the legal requirement for confidentiality of student records. To avoid the bureacratic delays involved in trying to trace

these students might represent too select a sub-group within the population of learning disabled basic education students. One adult had a recent history of head trauma as a verifiable cause of neurological damage. The second program was based in a correctional institution -- a setting which might affect the development and use of learning strategies as well as limit the frequency of occurrence of some of the reading tasks included in the interview guide. Only six administrators responded with what appeared to be appropriate participants. As interviewing proceeded, it later became evident that students at one of these sites could not be verified as appropriate participants since no estimates of reading level were available and most did not describe any history of learning disability. These five respondents were interviewed, but only two of the interview transcripts were included in the final analysis. These two were included on the basis of the history of reading and learning problems reported by the students.

The circumstances surrounding selection of participants make it difficult to say with any certainty that all the participants have specific learning disabilities. The assumption of reading disability is more certain since participants were recruited through teachers or literacy coordinators who had direct access to scores from reading tests. In the exceptional case where none of the students interviewed at a particular site could be verified by the teacher to be reading below the eighth grade level the data was excluded unless the student described a clear history of reading and probable learning disability. To assist the reader in interpreting

findings, a profile has been drawn of each participant including indication of the person's status with regard to identification of presumed learning disabilities. This information is found in Appendix B.

Interviews were conducted with nineteen students in all. Interviews were completed face-to-face, with the exception of one interview which was conducted by telephone. An explanation of the study, provided to participating teachers and coordinators earlier, was reviewed with students at the beginning of each interview. Each student was given a copy to look at as it was read orally. The form (see Appendix A-3) used to obtain informed consent (in accordance with University Human Subjects Review Procedures) was also read aloud to each participant before a signature was requested. Each interview was tape-recorded so that verbatim transcripts could be produced for content analysis. Interviews averaged approximately 45 minutes in length. Students were interviewed by either the project director or the project assistant. Interviews were conducted in one of two places familiar to the student -- either the site of instruction or the student's home.

Interview questions focused on motives for participation in an adult basic education or literacy program; perceived learning strengths and weaknesses; basic strategies for reading, writing and calculating; means of carrying out identified reading tasks; human and media resources utilized for assistance with reading or learning tasks; and identification of a recent self-planned learning project. A copy of the interview guide is included in Appendix C.

The interview guide was used to provide some standardization of questions, although questions were clarified at the discretion of the interviewer based on responses during the interview. This procedure was intended to provide consistency of information elicited without sacrificing clarity of meaning to individual respondents. Omission of questions was permitted when a previous response indicated that a later question was inappropriate to the experience of the participant or if an answer had already been given.

Once all interviews were completed the interview transcripts were read completely and responses to each question were coded in shortened form and grouped together for analysis. The responses to those questions focusing on coping and learning strategies have been included in Appendix D of this report. Since the tape-recording of one of the interviews was inadvertently destroyed it was not possible to reconstruct that interview in its entirety. Thus data are in some cases reported for only 15 participants.

Teachers or tutors were also interviewed where possible. These brief interviews, focusing primarily on strategies taught for reading and identification of other areas of emphasis, were conducted for 11 students. The interview guide used to conduct these interviews is included in Appendix E. These interviews were typically conducted by telephone and lasted approximately 15-20 minutes on average.

After data from teacher and students interviews were analyzed, five of the participating students were contacted to

confirm the interpretations of the data regarding learning strategies from their interviews. Lists of the strategies used by all students were mailed to eight participants; only five could be reached at the telephone numbers given at the time of the interview to determine whether they felt any information had been left out in reporting the strategies they used. None of those contacted wished to add any additional information.

Project Staff

The project director was Dr. Jovita M. Ross, assistant professor of education in the Adult Education Program at Penn State University. In addition to her doctorate in adult education she holds a master's degree in the field of learning disabilities and has experience teaching learning disabled adults and children. Dr. Ross has given conference presentations, conducted workshops, and written about the topic of learning disabled adults. The project assistant was Helena J. Hanson who was enrolled as a master's student in adult education during the time period covered by the project. Ms. Hanson completed her master's paper on the topic of educating learning disabled adults.

Time Frame of Project

The first letters of invitation to teachers for participation were mailed in February of 1987, directly following a conference presentation by Dr. Ross at the annual meeting of the Pennsylvania Association for Adult and Continuing Education. A letter explaining the project to potential student participants was mailed in March to those teachers who responded to the letter of invitation and phone calls were made to teachers during March

and April to set up possible interview times. Several students, identified through a professional hired to do testing for a literacy council consortium, were contacted directly during May to set up interviews after a preliminary call by that contact person to enlist their involvement in the project. Interviews were conducted between during the months of April, May and June in 1987. Data analysis was initiated in June and ended in August with the completion of this report.

Intended Audience

This project was conducted to collect information which should indirectly benefit learning disabled adults participating in adult basic education programs. The anticipated direct consumers for the information will be ABE teachers and administrators and literacy council coordinators. Some literacy tutors may also be able to make use of the information contained in the report, although the appendices listing learning strategies are more likely to be of interest to this group than the complete report.

Findings

Presented are the findings based on content analysis of the interview transcripts of those 15 participants for whom data were most complete and for whom there was reasonable evidence of an information-processing based learning disability.

Description of Respondents

The fifteen participants for whom data are consistently presented included 12 men and three women ranging in age from 20 to 56. At the time of the interview six were single (never married), six were married, one was divorced, and two were separated from their spouses. Of the six who remained single, four still lived at home with parents or grandparents. These were all young men under 25. The two remaining single participants were men over 40 who lived alone. Of the married, separated and divorced participants, six had two children each, two had four children and one had one child.

At the time of the interview most (9) participants were employed in unskilled or semi-skilled positions such as warehouse worker and hospital dietary technician. Two were self-employed with their own masonry and auto mechanic businesses. Of the seven unemployed participants, two were disabled and three had been recently laid off as steel workers.

Despite current reading levels below the eighth grade level, six of the fifteen completed high school. While one man only went as far as the fourth grade and one woman only attended school until the sixth grade, the remaining participants attended school at least until completion of the 9th grade.

Only six of the fifteen were able to report precise information regarding the time and place of diagnosis of learning disabilities. Three of those five were diagnosed during their years in public school and reported attending special classes as early as fourth grade. One man had just been tested prior to entering his current literacy program at age 43. The last of the five was reportedly tested at hospital psychoeducational clinics at two points in his life, at age five and again at 32. He reported a history of receiving help as a child through a special program outside the school system. Three other participants reported being in special education classes while in school, while it was not clear from the information given if these were definitely classes for learning disabled students. The remaining participants described life and schooling histories which were suggestive of learning disabilities although the procedures used in this project did not permit absolute verification of their self-identification.

As noted earlier, data are occasionally reported for one participant whose tape-recorded interview was destroyed before being transcribed. This participant accounts for the *n* of 16 for selected data reported here. Where information about this participant was available from the notes taken during the interview it has been included with notes to indicate the change of sample size. This participant was a single male, 21 years of age who had completed high school and lived with his parents at the time of the interview. He was diagnosed as learning disabled while in elementary school and was placed in classes for learning disabled children for much of his school career.

Factors Motivating Enrollment in Program

A number of reasons were identified for enrollment in the current adult basic education or literacy program. The reasons reported by these program participants generally revolved around goals for improving work situations, performing family roles, and enhancing personal development. These areas are frequently reported as sources of motivation for adult learning in a variety of settings (Apps,1981; Aslanian & Brickell, 1980; Cross, 1981).

Job-related motivations were mentioned by the greatest proportion of respondents. These reasons were generally of four types. Three respondents focused specifically on their desire to get a better job. Jack, identified in elementary school as having a specific learning disability, noted that he "wants more out of life than a minimum wage job." Two respondents, one of whom was self-employed, found increasing demands for job-related learning. Being laid off from an existing job and being unable to find new work provided a strong incentive for new learning for at least two of the respondents. Additionally, while he did not talk about looking for a new job, Clark saw the free time he gained after being disabled from work as providing an excellent opportunity for new learning.

Some respondents chose to seek help because of their family situations. Three of them wanted to be able to read to their children or help them with homework. This included Louis, the father of a four-year old. William at 56 was in a slightly different

situation. After years of marriage, he now found himself alone for the first time following a marital separation and could no longer depend on his wife's assistance.

The encouragement of others was important to three of the respondents' decisions to seek help. One woman was encouraged by a friend who enrolled at a community college. Another participant was encouraged by his orthodontist who was aware of his learning disabilities and had seen information on television about literacy programs during a national campaign to reduce illiteracy (PLUS). A teacher of cosmetology influenced another young man's decision to seek his G.E.D.

Finally, personal goals for self-improvement were cited by two respondents as the major reasons for becoming involved in a literacy program. Lisa set a goal of obtaining her G.E.D., and when she missed passing the test by 44 points she decided a literacy program might help her run the last few yards in her personal race. As Ron described his reasons, he simply wanted to learn to read.

Perceived Benefits of Participation in ABE or Literacy Program

Several project participants had not yet been matched with a tutor although they had completed testing for placement. Thus they could not make comments on the benefits of a program. Other participants had been involved in their current programs anywhere from one month to five years. The amount of time spent weekly in the current program ranged from one hour to nine hours, with two hours per week being the modal response. Those participating in tutorial programs emphasized the benefits

of one-to-one instruction, while participants in both types of programs talked about the benefits of working at their own pace, an option not usually available during their previous educational careers. Examples of specific benefits attributed to involvement in the program included an increased interest in reading, improved general ability to read, being able to fill out job applications, being able to figure out longer words, having a better understanding of what is read, and having a better grasp of English language structure. A few students also talked about increased feelings of self-confidence and self-esteem. One woman emphasized the motivation gained from knowing that tutors and program administrators cared about the students; other students in that program seemed to confirm that the caring atmosphere made a difference for them.

Learning Strengths

A question about self-perceived learning strengths revealed the learning domains and styles with which respondents were most comfortable. Again and again these learners expressed preferences for learning by seeing a task demonstrated or learning by doing. Several were good mechanics and one young man had started his own car repair business. Two others found their strengths in working on houses rather than cars, with one paying a steep mortgage from his earnings in his own masonry business and another financing his ventures in real estate through money made in odd jobs including carpentry and electrical work. The respondents reported a wide array of learning projects. Louis built a garage from scratch, Chris built his own cabin, and Brian

built a hot rod truck which he sold for \$18,000 after spending only about \$1,000 on materials. The common threads in their reports of learning strengths emphasized abilities to "pick up things fast," to remember what has been seen or heard, and to "figure things out," based on previous demonstrations or performances.

To the extent that learning of new information and skills has been dependent on the abilities described, respondents have been able to function effectively. Several who had worked in the steel mills before being laid off, including one woman, reported learning quickly on the job. Chris reported picking up everything at his job in the mill, and loving it as long as it wasn't reading. Just as he learned from the older men in the mill, so too he was called upon to instruct new workers. Yet when his supervisory duties called for more reading, he found his work frustrating. He, like many of those interviewed, had more strategies for coping without reading than for confronting a reading task.

General Reading Strategies

Respondents reported a wide array of strategies for dealing with difficult reading material. All except two participants reported multiple strategies. Table 1 lists the strategies reported in order of frequency of occurrence.

Table 1
Reading Strategies

| Strategy | Frequency of report (n=16) |
|--|-------------------------------|
| Use context to guess word, get meaning | 7 |
| Seek help from someone else | 4 |
| Try to sound out word | 4 |
| Break word into parts | 3 |
| Depend on sight words | 3 |
| Use tapes, talking books | 3 |
| Use dictionary | 2 |
| Use picture cues | 2 |
| Read over again | 2 |
| Memorize(material presented orally while read) | 1 |
| Language experience | 1 |

As the table indicates the most commonly reported strategy was attempting to use the surrounding context to either get meaning without decoding a particular word, to make a reasonable word substitution, or to figure out the correct word. If reports of sounding out words and breaking words into parts are combined, it is evident that participants are just about as likely to attempt some form of word analysis as they are use context. Two of the strategies mentioned were clearly ones that must have

been introduced by teachers: use of talking books and the language experience approach. Appendix D-1 lists all reading strategies identified by individual participants. It also lists the strategies tutors reported having taught the respondents. A comparison of the corresponding lists indicates that in fact there is fairly consistent agreement between the strategies instructors and their students report, although in most cases instructors reported teaching a wider array of strategies. This suggests that students do select strategies which are most useful for them from an array of strategies presented by a teacher or tutor.

The two strategies mentioned by students but not by teachers were using picture cues and asking for help. These two strategies can be seen as offering little help to the mature and independent reader since often no one will be present to ask for help and the availability of picture cues is limited with most adult reading materials. The reporting of these strategies suggests that students may continue to employ those strategies with which they are comfortable even if they are not included as part of instruction. It also leaves open for speculation the possibility that many of the strategies reported by learners may be ones they were already using successfully, although instruction may have reinforced their use or helped improve their effectiveness.

Spelling Strategies

Respondents were more restricted in the number of strategies relied on for spelling. Table 2 lists the strategies they reported using.

Table 2

Spelling Strategies

| Strategy | Frequency |
|---|-----------|
| | n = 15 |
| Copies words or stories to learn spelling | 4 |
| Attempts to spell as word sounds | 4 |
| Uses dictionary | 4 |
| Substitutes another word | 3 |
| Has no idea where to start | 3 |
| Avoids writing | 2 |
| Asks someone for help | 2 |
| Carries list of frequently needed words | 1 |
| Visualizes word in mind | 1 |
| Draws a picture of object | 1 |

Several respondents reported fairly sophisticated strategies, including using a dictionary and carrying a list of words in a checkbook. One of those who used a dictionary indicated he owned a phonetic dictionary which indexes words as they sound and gives the correct spelling. Less sophisticated were the non-strategies of those who simply gave up when called upon to spell and generally avoided writing tasks. As Walt put it, "I'm not good at putting things on paper." He has never written a business or

personal letter. Will, who has written very few letters in his lifetime, laments that he was never able to write to his mother who died recently at the age of 90. When Helen lived briefly in a different city from her family, she wrote letters which they had difficulty reading. But then, she adds, her sister's spelling isn't much better.

The consistency of individual learning styles was suggested by the response by the man who drew pictures to help him remember items he needed to work with on the job. This same gentleman relies heavily on picture cues for reading. He said he knows how "Chevy" is spelled but "messes it up," and can't spell Ford although he considers himself a Ford man. Lisa too reports lots of trouble spelling even small words, and has had a particularly difficult time distinguishing the spelling of word homonyms. Louis, who avoids writing, observes that he has trouble figuring out the meaning of his own notes to himself, while Bob reports he could figure out his own writing but no one else could. Difficulty with spelling and a scarcity of reliable strategies seem to be common for almost everyone interviewed. Clark, who indicated he was proud just to be able to sign his own name, may not be a rarity among ABE and literacy students with learning disabilities.

Reading and Writing Tasks for Everyday Living

Reading on the Job. Few respondents reported having to do reading as a part of their job requirements. Most held jobs with limited reading demands. Indeed, the nature of their jobs relative to their apparent expressive verbal abilities indicates

underemployment is a likely problem for this population. Several talked about learning from others on the job through demonstration. A couple find self-employment in jobs that capitalize on non-verbal strengths to be a way of getting around reading demands; at the same time these men must depend on others to help with reading requirements of their businesses. A few have had to meet challenges posed by having to acquire reading skills to stay in a job or advance within it. Ron was involved in a class on building construction at the time he was interviewed, but noted that his employer was understanding and the teacher suggested spelling as best he could. Will had to pick up some reading skills as he became a supervisor in the mill.

For the most part, the respondents have been able to learn the specific vocabulary demanded for the largely manual jobs they hold. They are nonetheless limited in their selection of jobs and in their ability to move up to positions requiring more reading.

Job Applications. Given the difficulty many of the respondents have with writing, it should come as no surprise that many of them find it a challenge to complete a job application. Only two of those interviewed indicated this task posed no problem for them (see Appendix D.03 for presentation of all responses). Three had not encountered this task requirement because they never had to fill out a job application. One woman indicated this task had been difficult for her before she got help from the literacy program, but she now felt competent in this area. One man reported partial success with completing applications, but admitted he often has to leave blanks. The remaining

respondents (nine) reported they had someone else complete their job applications. Most reported no difficulty getting prospective employers to give them an application "to complete at home." One young man recalled having his aunt complete a job application for him in the parking lot of a store.

Menus. Reading a menu was another reading task the participants were asked about (see Appendix D-4 for participant responses). Seven reported they had no trouble reading a menu. Several of these had worked in food services in one setting or another. Those who knew they would have trouble reading a menu were most likely to order some item of standard fare (three) or to ask the waitress for a suggestion (three). Walt indicated he was strictly a hamburger person and has never had a problem except in foreign restaurants. Two men reported they let everyone else order first so they can hear some of the items on the menu. One young man indicated he usually relied on his date to order. Thus respondents were fairly evenly split as to whether ordering food in a restaurant posed a problem. Those who experienced it as a problem seem to have worked out coping strategies. The limitations of these strategies became apparent to at least one of the respondents when he went into the hospital. He was expected to select one of several meal options from a printed menu, and found he was embarrassed to have to ask nurses or kitchen staff to read the options to him.

Medicine Labels. Almost no one encountered a problem reading medicine labels (see Appendix D-5). Most relied on remembering a doctor or druggist's directions and looking for the

numbers on the label which indicated frequency and timing. These strategies may be effective for prescription medications but could lead to problems with over-the-counter drugs if the individual is unable to read warnings about drug interactions, drowsiness caused by drugs, or medical conditions which could result in complications with the use of certain drugs.

Human Resources and Social Networks

While there was some variability in the nature of the relationship with trusted individuals, all except two participants identified select individuals from whom they had sought help over the years. Parents and spouses were most frequently identified in this capacity. When asked how he compensated for his reading difficulties, Jack observed that he typically had someone to help him. His parents typically help him complete estimates for his auto repair business. But he would prefer not to have this dependency:

It's very hard, and I always have to be asking someone -- my mom and dad. My mom and dad ain't gonna be around forever, and what am I gonna do when they pass away? What am I gonna do? You know, I'd be pretty, well -- . You know, if it wasn't for them, I wouldn't have nothing.

Chris likewise noted that he had compensated by depending on those he trusted, including his wife and his mother. The strain on a relationship that can be caused by such dependency appears to have taken its toll, however, as indicated by Chris's perception that his recent marital separation was precipitated by his problems.

Other relatives were also mentioned as a source of support by some participants. Bob was matched by the literacy council with his brother as his tutor, although he seemed to have some ambivalence about letting his brother do this. For Brian, it was his aunt, a teacher, who helped his mother negotiate with the school system to get him into an L.D. class; later the same aunt helped him prepare for the C.P.R. exam he needed to pass to advance in his hospital job. Clark, at 58, still depends a lot on his brothers who have taken on the role his parents served during the years they were alive.

Friends also were trusted to help with reading tasks by a few of the participants. Although he didn't feel he could go to his brother for help and he finds his wife does not have enough patience, Louis still remembers a "very, very smart" childhood friend who intentionally tried to keep himself down in the same classes to help Louis along. Lisa now depends on a neighbor who can help her read complex forms; it is the same neighbor with whom she exchanges babysitting time.

Lisa's experiences illustrate the extent to which the participants function as contributing members of social networks (Fingeret, 1983). She observed that when she was married, "he was good in math while I was good at spelling." While other respondents did not so spontaneously discuss their reciprocal contributions, most could identify favors they did for those who helped them. These favors generally matched their areas of strength, with many of the men working on cars or doing household repairs as a way of paying back those who assisted

them in other ways. Bob's description of a learning project which involved building a hotrod truck clearly illustrated the exchange system in a social network where skills have a trade value. The following passage from his interview transcript is shared with the reader for illustration:

Bob: I bought a truck for \$150.00. I put \$950.00 to \$1,000 into it, and I just sold this truck for \$18,000.

Helena: Wait a minute. Did you say \$13,000? And you paid \$150 for it and put \$900 worth --

Bob: Well, I have friends who are in the body business, and I just give[sic] it along to the body shop. I did his living room and his kitchen and his bathroom, and I supplied the materials to do that. So with that he put the custom paint jobs on it. And the whole engine was chromed. It was a show truck. It wasn't something you drove on the street. You ever see on television those big foot [sic]?

Helena: Oh yeah.

Bob: Well, that's what I done.

Helena: That was quite a profit you made there.

Bob: Well, if you consider what I paid in cash, but if you take into consideration what I donated in materials and labor and time, he got a \$4,000 house project done, and he did the paint work for me. And I had another friend who has a welding business, and I did construction work on his house for him, so he did the welding for me for free which, we swapped my trade for his trade. So that's basically how I did it.

Such examples make it clear that although individuals with reading disabilities may need the assistance of others to negotiate

life tasks, they are able to make valuable contributions in return by drawing on their abilities and talents in other areas.

Use of Media Resources

There were several opportunities in the interview for participants to talk about their use of non-print media for learning. Seven of those interviewed reported watching television to gain information. All except one of these respondents used educational broadcast stations to learn a variety of things. Three of those who were interviewed also made use of tape-recorded books. Interestingly, only one of these three had been introduced to this learning strategy through a school L.D. program. One respondent had been given a set of tapes on the Bible by a departing minister friend, while the other used tapes to supplement his reading about how to invest in real estate. One participant has had the opportunity to use a computer to work on reading skills and seemed quite comfortable with this method of learning.

Non-print resources have been utilized to some extent by the respondents but remain relatively untapped as an aide to learning. Beyond educational television, most participants had not had experiences using technology to enhance their learning.

Summary and Conclusions

Interviews with 19 adults participating in adult basic education or literacy programs were conducted to ascertain the strategies they used to compensate for reading and writing difficulties. While it was the intent of the project as planned that all participants would be adults identified as having specific learning disabilities, finding such adults within the types of programs specified proved to be the major challenge of the project. In the end, self-report of a history of learning disabilities identification was the criterion accepted for participation. Interview transcripts of three participants identified by teachers but demonstrating no self-identification or history of identification were eliminated from analysis. Although all participants saw themselves as learning disabled and all were reading below an eighth grade level (based on teacher report), only six participants described histories clearly indicating a time and place when they were diagnosed as learning disabled. Several others participated in special education programs, although programs were not necessarily for learning disabled students. Other participants described personal histories indicative of learning disabled individuals, although procedures used in the project precluded absolute verification.

Participants' reasons for seeking help through a basic education or literacy program were typical of reasons adults offer for seeking further learning. Many hoped to find a job or a better job, a number expressed reasons related to family role (reading to children) or transitions (marital separation), and a few

emphasized a desire for personal improvement without expressing any more utilitarian purpose. Friends and concerned professionals also played a key role in encouraging several of the adults to seek help.

While several of those interviewed had not yet begun intervention, those who had expressed unanimous satisfaction with the perceived benefits of participating in an individualized program. This is perhaps not totally unexpected, since it is likely only those satisfied with their programs would be likely to agree to participate in a project of this nature. The appreciation respondents felt for caring teachers and tutors was evident, with several making extra efforts to extol the praises of those they felt helped so much.

Much of the interview guide focused on strategies for coping with learning difficulties. Some of the more interesting information came, however, in response to questions about learning strengths and self-planned learning projects. The talent and creativity of most respondents in areas that did not depend on using print materials were evident in the responsible positions they attained in work settings emphasizing manual labor and in the elaborate building projects they planned. Teachers and tutors should be encouraged to investigate these areas of strength and build on them when possible. For instance, selecting reading vocabulary related to personal learning projects capitalizes on natural motivation.

When the line of questioning focused more specifically on learning strategies, participants' responses revealed that some of

the reading/writing tasks selected for inquiry posed little or no problem for them. Reading menus and medicine labels did not seem to be of concern to the group. While many participants felt no concern about performing these tasks, use compensatory strategies was likely to be the reason they felt no need for concern. Most had an idea of foods they could order in the kinds of restaurants they frequented, or they relied on other people for help -- the recommendation of a waitress or the requests made by others in their eating party. Such forms of compensation seemed to be adequate for the needs of most of the group in their current environment. Potential problems created by situational changes were suggested by the experience of one participant whose method of asking for a suggestion from the waitress was not as effective when he went into the hospital and had to choose his meals daily from a menu card. Likewise, potential problems may arise from the inability to thoroughly read medicine labels. Most respondents reported a strategy depended on reading figures (for frequency of administrations and dose) and remembering instructions from a pharmacist or physician. While these methods might work for relatively healthy and young individuals, poor health or aging may bring conditions where it becomes very important to be able to read complete directions for medicines. Thus, the lack of concern in this area on the part of respondents does not necessarily indicate that reading of this type should be totally neglected in teaching objectives. It is important to be sensitive to the personal life situation of literacy or basic education students with learning disabilities to help prepare them

first for immediate task demands. An intervention approach which also looks to the future and helps prepare them to deal with situations likely to arise is nonetheless important.

When asked about more general reading and spelling strategies respondents were clearly more able to identify reading strategies than those for spelling. Respondents were using a variety of strategies to read material beyond an easy reading level. Most frequently they used context to guess meaning. Whether a taught strategy or one that has been self-developed, this is clearly an effective strategy to obtain meaning from reading. Attempts to break a word into parts or sound it out were reported by a similar percentage of respondents. Still, less than half of the respondents used each of these strategies. Strategies reported by 25% or less of the respondents included seeking help from someone else, depending on sight words, using tapes or talking books, using a dictionary, using picture cues, and reading material again. These findings indicate that respondents use a wide range of strategies, but rarely did a single individual report a wide repertoire of strategies. This was interesting in light of the fact that teachers and tutors who were interviewed usually reported a wider array of strategies that were being taught. This implies we need to be very concerned with transfer of strategies across reading situations. It may be that unless time is spent specifically working on strategy choice and transfer across various situations, poor readers may tend to rely on a restricted set of strategies on which they have customarily drawn.

Spelling represented the one area where respondents clearly

indicated a problem but for which relatively few strategies were reported. Many felt hampered by their inability to write but avoided writing tasks because of their discomfort with them. Several did report using a dictionary, but as most pointed out it is hard to use a dictionary when you're looking in the wrong place for the word. One person did own a misspellers dictionary which lists words under the phonetic spelling. This would seem to be a very important tool for teachers and tutors to familiarize students with, since several other respondents indicated as their primary strategy that they spelled words as they sounded.

In compensating for their difficulties in reading and writing the respondents depended upon select people for assistance. These individuals were usually family members, although some friends were trusted in similar fashion. While these support systems are vital to those with limited reading skills, existing relationships can be strained by an ongoing dependency. At least two respondents alluded to marital problems that appeared to arise from or be aggravated by the learning problems. One young man expressed his concern about his continuing dependency on his parents, while it was the tutor of one of the older men who expressed her concern that he had simply transferred dependency from his parents to his surviving brother. One of the respondents was being tutored by his brother, yet a tutor interview did not seem to be appropriate given reports by the literacy council coordinator that the brothers were experiencing some conflict. The interview with the brother in the learner role validated our reluctance to talk with the brother who tutored. Such an

interview might have strained an already tenuous teacher-learner relationship. Thus, individuals providing assistance and emotional support to learning disabled adults can find the effectiveness of such a relationship has limits. As counseling programs are designed to work with learners concerned about literacy, it may be very important to consider also working with family members or significant others serving in a supportive role.

The relationship of the learning disabled adult with others should not be viewed, however, as a purely dependent one. Data from this project agree with Fingeret's (1983) findings that illiterate adults participate in social networks which they make valuable contributions to despite their limited reading skills. Those interviewed for this project cited examples of labor offered in exchange for assistance. Insightful teachers will help learning disabled adults recognize these contributions for their true value. This is important in helping them build self-esteem despite continuing events which may provide negative messages about the self.

Respondents were also asked about their use of non-print media for learning purposes. Television surfaced as a learning tool for nearly half of the respondents, while only a few used tape-recorded books. While the questions did not directly focus on computer usage, one respondent did describe the value he found in increasing his vocabulary through the use of a computer program. Use of non-print media provides a viable supplement for the acquisition of information by those who have difficulty reading. While it was reassuring to find that some participants

used television for learning as well as entertainment, the use of other forms of media was limited. Even most of those who had participated in special education programs had not been introduced to the use of the tape recorder. With the wide number of books commercially available on audiotape and the availability of books on tape through reading services for the blind (for those clearly diagnosed as learning disabled), this medium can be introduced to reading and learning disabled with little concern for difficulty of access. While computers may be less readily available, educational software appropriate for adults is becoming available and introduction of computer-assisted-instruction should be considered as part of the overall services for adequately funded basic education programs. Many of the adults using ABE and literacy services will not be able to afford their own computers, but as the cost of computer technology is moderating there will be some who can.

Recommendations

1. Create mechanisms for evaluation of individuals who wish to determine if their reading and learning problems are caused by learning disabilities. The difficulty in identifying participants for this project points to the scarcity of diagnostic services. Referral to such services should be used sparingly, however, since many people who have reading and learning problems do not have learning disabilities and the merits of identification must be considered in terms of possible negative effects of labeling. Referrals should come after teachers or tutors have done trial teaching with a variety of approaches to teaching reading. Often the need for extensive testing can be avoided if teacher and learner work together to identify those learning strategies which work best. When this approach has been used unsuccessfully, evaluation by properly trained professionals should be considered. Learning disabilities cannot be accurately diagnosed by any individual test or single procedure.

2. Determine the strategies each learner suspected of having learning disabilities is using to approach potentially difficult reading/writing tasks.

3. Work with the learner to identify the tasks which he or she is most concerned about accomplishing. These tasks will be the ones learners will be most motivated to develop strategies for.

4. Without discouraging coping strategies that enable the learner to avoid the task, focus on widening the repertoire of strategies that enable the learner to approach each task as

independently as possible.

5. Attempt, where possible, to build on existing strategies. Identify and utilize areas of learning strength.

6. As existing strategies are taught, discuss the situations where they will be used and the principles which apply across situations. Practice the strategies with different kinds of material.

7. Help the learner anticipate strategies that may be needed in the near future based on life situation.

8. Consider participation of selected family members or significant others in adaptive phases of strategy development; such involvement of course should be with the consent and involvement of the learner.

9. Introduce learners to available non-print media which can be used to supplement their learning while developing reading skills. These should be seen as aids, not crutches.

10. Above all, help the learner recognize existing capabilities as reasons for pride. A focus on disabilities alone is likely to perpetuate the discouragement and frustration that learning disabled adults have often felt in other learning environments.

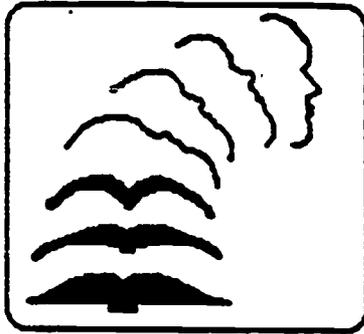
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**INSTITUTE
FOR THE STUDY
OF ADULT
LITERACY**

February 2, 1987.

Dear ABE or Literacy Instructors/Administrators:

You are invited to participate in an important educational project. I am currently conducting an investigation of learning strategies of learning disabled adults. This study is funded by PDE as a 310 project.

The beneficiaries of this research will be ABE instructors, literacy tutors, and learning disabled adults. This study offers opportunities to improve teaching strategies of ABE instructors and literacy tutors as well as identify effective learning strategies for ABE students.

Face-to-face open ended interviews will be conducted with learning disabled adults. They will be asked questions about techniques they use to compensate for their learning problems primarily in situations outside the classroom. The project will also include a brief interview with the instructor/administrator regarding teaching methodologies typically employed in the program:

I invite your assistance in designating individuals participating in your programs who have already been identified as learning disabled by public schools, the Bureau of Vocational Rehabilitation, or psychoeducational clinics. These individuals should be reading at or below an eighth grade level. Participating students and instructors will receive stipends for participation.

We thank you in advance for your help in identifying students to participate in this project. We would appreciate the return of the enclosed response form by February 18.

The Pennsylvania State University
College of Education
203 Rackley Building
University Park, PA 16802
(801) 863-3777

Sincerely,

Jovita M. Ross
Jovita M. Ross
(814) 863-1208 or 863-3781

An Equal Opportunity University

Appendix A-2

THE PENNSYLVANIA STATE UNIVERSITY

RACKLEY BUILDING
UNIVERSITY PARK, PENNSYLVANIA 16802College of Education
Division of Education Policy Studies
814-865-1487

February 20, 1987

Dear

Thank you for your interest in participating in our PDE-funded study of learning strategies used by ABE students identified as learning disabled. We hope the additional information provided here will be helpful in assisting you to make a final determination in whether you and your students participate.

Enclosed is a copy of an explanation of the study which can be shared with students. You also may be interested in knowing more about the types of questions we will be asking. We will primarily be asking questions on coping with problems concerning reading, writing, math, or spelling. Questions will focus on the learning strategies used by learning disabled adults with limited reading skills as they attempt to acquire information in various situations. Participants will be asked about techniques they use to compensate for their reading difficulties at home, at work, and in other situations where reading is required. They will also be asked about human and other resources upon which they rely to acquire information. A small set of questions will focus on the factors motivating them to seek help with learning and on their perceived learning strengths.

We will be back in touch with you by mid-March to discuss the possible participation of your students. Thank you for your help and support.

Sincerely,

Jovita M. Ross
Jovita M. Ross
Assistant ProfessorH. Jacqueline Hanson
Project AssistantJMR:jld
Enclosure

THE PENNSYLVANIA STATE UNIVERSITY
220 Rackley Building
University Park, PA 16802
(814) 863-1208 or 863-3781

Explanation of Study

We are conducting a study which consists of interviewing adults who are participating in some sort of educational improvement program. We are interested in knowing ways they have devised on their own to improve their learning in various situations. We believe this information will be helpful to other learning disabled adults and to teachers who wish to help them.

Your participation will involve an interview which should not last more than one hour. You will be asked questions about strategies you use for learning at home, at work, and other places. With your permission the interview will be tape-recorded so that the person interviewing you can devote full attention to you instead of taking notes. Your identity will remain confidential. You will receive \$10.00 in appreciation for your time. Some of you who participate will be contacted later to help us check our interpretation of your responses.

Your participation will be appreciated very much.

Appendix A-3

INFORMED CONSENT FORM

The Pennsylvania State University

Title of Investigation: A Study of Learning Strategies Used
by Adult Basic Education Students
Identified as Learning Disabled

Investigator(s): Dr. Jovita Ross
Helena J. Hanson

Date: Spring 1987

This is to certify that I, _____, hereby agree to participate as a volunteer in a study as an authorized part of the education and research program of The Pennsylvania State University under the supervision of Dr. Jovita Ross.

The investigation and my part in the investigation have been defined and fully explained to me by Dr. Ross (or Mrs. Hanson), and I understand the explanation. A copy of the procedures of this investigation and a description of any risks and discomforts has been provided to me and has been discussed in detail with me.

I have been given an opportunity to ask whatever questions I may have had and all such questions and inquiries have been answered to my satisfaction.

I understand that I am free to deny any answers to specific items or questions in interviews or questionnaires.

I understand that any data or answers to questions will remain confidential with regard to my identify.

I FURTHER UNDERSTAND THAT I AM FREE TO WITHDRAW MY CONSENT AND TERMINATE MY PARTICIPATION AT ANY TIME.

Date Date of Birth Subject's Signature

I, the undersigned, have defined and fully explained the investigation to the above subject.

Date Investigator's Signature

Explanation of the Study

We are conducting a study which consists of interviewing adults who are participating in some sort of educational improvement program. We are interested in knowing ways they have devised on their own to improve their learning in various situations. We believe this information will be helpful to other learning disabled adults and to teachers who wish to help them.

Your participation will involve an interview which should not last more than one hour. You will be asked questions about strategies you use for learning at home, at work, and other places. With your permission the interview will be taped-recorded so that the person interviewing you can devote full attention to you instead of taking notes. Your identity will remain confidential. You will receive \$10.00 in appreciation for your time. Some of you who participate will be contacted later to help us check our interpretation of your responses.

Your participation will be appreciated very much.

Appendix B

Profile of Participants

| <u>Name</u> | <u>Age</u> <u>Status</u> | <u>Sex</u> | <u>Highest</u> <u>Grade</u> | <u>Marital</u> <u>Grade</u> | <u>Employment</u> <u>Status^a</u> | <u>Identification</u> <u>Status</u> |
|-------------|-----------------------------|------------|--------------------------------|--------------------------------|--|--|
| Bob. | 38 | M | 12 | M | Self-Employed in Masonry | Diagnosed at 5 and 32 |
| Brian | 24 | M | 12 | S | Full-Time Hospital Dietary Staff | Diagnosed 7th grade LD class |
| Jack | 23 | M | 12 | S | Self-Employed Mechanic | Diagnosed LD class middle school |
| Ron | 20 | M | 12 | S | Full-Time Conservation Corps | Diagnosed Dyslexic (4th grade) Special Classes |
| Skip | 21 | M | 12 | S | Warehouse | Diagnosed L. D. Class |
| Ted | 43 | M | 8 | S | Unemployed | Diagnosed by DVR |
| David | 30 | M | 12 | M | Full-Time Dishwasher | DVR testing Sp. Ed. Class |
| Helen | 34 | F | 9 | M | Unemployed | Sp. Ed. Class |
| Lisa | 37 | F | 6 | D | Laid Off | Sp. Ed. Class Steel Mill |

| | | | | | | |
|-------|------|---|----|----|-------------------|--|
| Mike | 21 | M | 10 | S | Unemployed | ? Eye-hand Coordination Problem (Grade School) |
| Louis | 27 | M | 9 | M | Full-Time | History Delivery |
| | Only | | | | | |
| Will | 56 | M | 4 | M | Laid Off Steel | History Only |
| Chris | 48 | M | 10 | SE | Disability | History Only |
| Walt | 48 | M | 9 | M | Laid-Off Steel | History Only |
| Deb | 50 | F | 5 | SE | Kitchen Worker | History Only |
| Clark | 56 | M | 12 | S | Disabled | Severe reading problem after 5 years tutoring |

^a M denotes married; S denotes single, never married; D denotes divorced; and SE denotes separated from spouse.

14. Describe what you do when those people are unavailable to help you.
15. Describe what you do when you have difficulty reading a bill.
16. Describe what you do when filling out a job application.
17. When reading directions on medicine labels, how do you decide how much to take?
18. Describe what steps you take when you don't know how to spell certain words.
19. How has the dictionary been helpful to you?
20. How have you been able to use media such as TV or radio to improve your learning?
21. How have you used equipment such as tape recorders to compensate for your problem?
22. Do you have a system to limit the number of times you must ask for help with reading from other people?
23. What methods or rules do you use that have increased your performance in reading? (e.g., memorization, listening, or studying word parts)
24. What methods or rules do you use that have increased your performance in writing? (e.g., keeping daily or weekly diaries or journals, use of a thesaurus, grammar book, or list of capitalization rules)
25. What techniques or rules do you use that have increased your performance in math? (e.g., using a calculator, fingers, cash registers, or rereading a math problem to get important facts)
26. What techniques or rules do you use that have increased your performance in spelling? (e.g., spelling out aloud, write the word several times, use of a dictionary)

27. When you have to do writing at work or around others who do not know about your reading problem, how do you handle it?
28. Can you think of any situations where you have given-up because you did not know how to read, write, spell or do math?
29. When you are at work, on the average, how often in a day do you seek assistance for a difficult area or problem?
30. In what ways has your employer helped you to compensate for difficult learning areas?
31. How have fellow employees helped you to compensate for difficult learning areas?
32. What do you provide to family members, friends and co-workers in return for their help?
33. What kinds of problems have you encountered in getting along with people at work because of your learning problems?
34. How have you handled these?
35. What do you do if you must order food in a restaurant and cannot read the menu?
36. What kinds of problems have you encountered at home or with family members because of your learning problems?
37. How have you handled these?
38. Think of something you have spent some time learning in the last year. It should be something you made a conscious effort to learn and at which you spent seven or more hours. (It could be a hobby like woodcarving or sewing or it may involve learning a new procedure at work or improving your reading skills.) What examples can you think of where you have done this?

Now think back to how you went about learning.

39. What kind of materials did you use?
40. Who, if anyone, did you seek assistance from?

Appendix D-1

Reading Strategies

| <u>Learner</u> | <u>Tutor/Teacher Has Taught</u> | <u>Self-Identified Strategies</u> |
|----------------|--|---|
| Bob | Sight words Read between lines | Context first Phonics back-up Coding and comprehension important |
| Brian | Talking books Language Experience | Whole word emphasis (Sight, Context) |
| Jack | Mom and dad help Use memory to compensate | Not yet matched with tutor |
| Ron | Memorize | Repetition Phonics (60%) Context |
| Ted | Key words (with pictures) Put aside till later | Phonics Structural analysis Language experience Run fingers along words |
| David | Break words down Use tapes to get info Ask someone | Word analysis Whole word recognition Language experience Contextual analysis |
| Helen | Sound out | Not yet matched with tutor |
| Lisa | Use rules to sound out Divide into syllables | Word analysis (75%) Whole word (15%) Phonics (10%) |
| Mike | Dictionary Read for meaning Use tape recorder | No tutor |

| | | |
|-------|---|--|
| Louis | Sight -- recognizes many words Uses context | No tutor |
| Will | Skip words, get idea Get help on job Shopping - learned labels | Language experience (40%) Context (40%) Writing and copying(10%) Word analysis (10%) |
| Chris | Reads newspaper Uses context | Phonics Structural analysis Language experience Use dictionary |
| Walt | Uses dictionary Asks for help Read context-substitute word Break words down | Context (40%) Language experience (20%) Phonics (20%) Whole word analysis (20%) Much work on comprehension |
| Deb | Re-read Use dictionary for meaning | Context (33%) Language Experience (33%) Phonics Listening |
| Clark | Sight words related to life skills Try to sound out Uses computer to build vocabulary | Whole Word Language Experience Context (Above comprise 90%) Phonics (10%) |

Appendix D-2

Spelling Strategies

- Bob Spells phonetically
 Uses phonetic dictionary
- Brian Has number words written out on card in checkbook
 Visualizes word in mind
 Copies
- Jack Sometimes doesn't know where to start
 Gets help from parents with writing car parts for
 business
- Ron Spells words as they sound
 Writes words over and over
- Ted Draws picture to depict object
- David Uses dictionary
 Writes words
- Helen Has lots of difficulty - no strategy on own
 Asks for help
- Lisa Substitutes words she can spell
- Mike Uses dictionary occasionally
- Louis Avoids writing
- Will Works around it
 Use a book that gives other words
 Copies stories
- Chris Pronounces word
 Tries to break it down
- Walt Asks someone
 Uses dictionary (though still difficult)
- Deb Hasn't worked on spelling

Clark Does very little writing; can write name

Appendix D-3

Strategies for Completing Job Applications

- Bob No problem with task
- Brian Aunt completes them
- Jack Never has to -- couldn't do it
- Ron Gets help
- Skip Gets help from someone else
- Ted Gets help from someone there. In past, could only put name and social security number, now can do more
- David Gets help from wife or does best possible on own
- Helen Does not fill out
- Lisa In past, neighbor friend helped. Now able to do alone.
- Mike No problem with task
- Louis Takes them home (to wife).
- Will Has not had to
- Chris Father filled out last one -- in 1959.
- Walt Have to omit some things. Reading directions carefully helps.
- Deb No problem anymore. Feel confident now that its done right.
- Clark Has other people do it.

Appendix D-4

Strategies for Ordering Food (Reading Menus)

- Bob Task presents no difficulty.
- Brian Asks waitress what they serve.
- Jack Counts on person he is dating. Remembers basic menu.
- Ron Can read menus without trouble
- Ted Lets everybody else order first, listens to what they discuss, then orders. Can read many menus
- David Asks, "What is the item of the day?"
- Helen Orders what comes to mind
- Lisa Worked in kitchen on hot line, never has problems
- Mike Task not a problem.
- Louis Has no trouble with task.
- Will Orders items that appear on most basic menus (beef, chicken, seafood platter in seafood restaurant, etc.)
- Chris Freeze. Let somebody else pick it up, or ask for something they're likely to have.
- Walt Strictly a hamburger person. Has no trouble except in foreign restaurants.
- Deb Works at hospital with patient menus -- no problem.
- Clark Usually knows what he wants, or asks waitress. Had a problem with ordering meals in hospital.

Appendix D-5

Strategies for Reading Prescriptions and Medicine Labels

- Bob No problem with task.
- Brian Mother reads them.
- Jack Knows by looking at bottle
- Ted Can usually read; If not, calls friend who is nurse.
- Helen No problem.
- Lisa No problem.
- Mike Usually doctor's prescription; Listens to doctor, looks at prescription on bottle.
- Louis No problem.
- Will No problem.
- Walt Looks at numbers and figure stuff out.
- Deb No problem.
- Clark Asks druggist to explain.

Appendix E

Teacher Interview Guide

1. What principal methods do you use to teach reading?
2. Which of these methods have been used with _____ ?
3. What methods for teaching reading have you used with that you do not routinely use?
4. What do you think _____ 's learning strengths are?
5. What do you think _____ 's learning weaknesses are?
6. Of the time _____ spends working on learning to recognize words, what proportion of the time is spent with classroom instruction materials based on the following methods (1st read list, then get responses).

_____ phonics (sounding out words by letter sounds)

_____ structural word analysis (analyzing word endings, prefixes, suffixes etc.)

_____ whole word approaches (readers, word lists)

_____ language experience or similar approaches (using vocabulary and stories generated by the learner)

_____ contextual analysis (using context around word)

_____ other

7. What strategies do you think _____ uses when he/she is unable recognize a word. (eg. waiting for help, sounding out, using context to make a guess, etc.)

8. What strategies have you specifically taught _____ to use for reading when help is not available?

9. What proportion of the time that _____ spends on reading is devoted to developing comprehension skills?

10. What skills does _____ work on aside from reading?

11. Please estimate the proportion of time _____ spends working on each of the following skills.
 - a. _____ writing (composition)
 - b. _____ writing (mechanics, grammar)
 - c. _____ mathematics
 - d. _____ life skills (check-writing, reading and completing forms, etc.)
 - e. _____ interpersonal skills (getting along with people)
 - f. _____ job-related skills