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READING AGAINST ALL ODDS: A PILOT STUDY OF TWO DEAF STUDENTS WITH DYSLEXIA

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LEARNING TO READ and write is a challenge for most deaf children due to their limited experiences with, and access to, spoken language. In the case of deaf students who have difficulty processing visual print, literacy becomes an even greater challenge. The study piloted an intervention procedure that incorporated the principles of automaticity, repetition, functional vocabulary, and a positive teacher-student relationship as recommended in programs for struggling readers and adapted them to the needs of two deaf high school students with dyslexia in an American Sign Language–English bilingual program. The findings reveal gains in reading ability on the formal measures, though not more than would be expected over a 6-month period simply due to development. The real improvements were noted in the students' attitudes toward literacy, improved social interaction, and increased self-confidence.

An Introduction to Some Key Concepts

The area of literacy development in deaf students involves an extensive and controversial body of research. Similarly, the study of dyslexia and struggling readers has also been well documented, and mired in a variety of perspectives and viewpoints. To provide the context for the present study, connections must be made between these two broad areas of knowledge. In this introductory section, we outline some of the key concepts with regard to literacy development in deaf students and dyslexia research in general, and discuss how this information was used to develop an intervention program for two deaf high school students diagnosed with dyslexia.

Literacy and Deaf Students

Deaf students' low level of reading success is a long-standing and well-documented fact in the field of deaf education (Johnson, Liddell, & Erting, 1989; Paul, 1998; Schirmer, 2000). Further, the question of how best to promote literacy in deaf children has long frustrated teachers. Traditionally, the process of teaching deaf students to read and write typically emphasized remediation and repair (Erting, 1992; Livingston, 1993). In a sense, most deaf students were taught as if they had dyslexia—language structures were

introduced systematically in a simple-to-complex order, through adapted readings and skill-and-drill practice. This approach was considered necessary because most deaf students came to the task of learning to read without an established language base, unlike most hearing children, for whom the decoding of print is mediated by speech because it represents a well-established, meaningful language system (Collins Block, 2003). In order for teachers of deaf children to tap into meaning-based and whole language teaching strategies, an emphasis on early language acquisition was necessary.

Reading approaches with deaf children frequently have been linked to different communication methods in an effort to find the best way to establish a language base and facilitate literacy development (Paul, 1998). Some methods emphasize amplification by means of hearing aids or cochlear implants to develop speech and listening skills. In this way, English skills are established verbally, then used to mediate language in written form. The difficulty for many deaf children is that even with amplification, speech is not accessible to them; therefore, they approach the task of mediating print with many gaps in their language system (Spencer, Erting, & Marschark, 2000). Other approaches emphasize early exposure to natural signed languages, such as American Sign Language (ASL), to establish deaf children's first-language skills. This provides them with an effective way to communicate and interact with the world around them and facilitates their cognitive and social development (Paul & Quigley, 1987).

Teachers continue to question if, and how, they can use their deaf students' knowledge of ASL to develop and promote their English literacy skills (Mayer & Wells, 1996; Ritter-Brinton, 1996). Hearing people have the advantage that the correspondence between the written pieces and the retrievable speech patterns follow the same linguistic structure. But additional translation steps are needed for the deaf learner (Livingston, 1997; Paul, 1998). Unless deaf students' knowledge of ASL extends to the metalinguistic level, where they are able to analyze the phonology and morphology, it cannot be applied to the task of acquiring English literacy (Bebko, 1998; Schley, 1992).

An ASL/English bilingual approach with deaf students may facilitate the development of a language base, allowing a more natural approach to teaching reading and writing skills, but modifications to teaching are still necessary. Regardless of whether oral, manual, or bilingual communication methods are used, the task of learning to read is for deaf children a "language learning" activity—they are learning English (the structures, grammar, and possibly even the pronunciation) at the same time that they are learning how to read. This becomes a complicated task.

Dyslexia and Deaf Students

Clearly, learning to read and write can be a challenge for deaf children and the teachers who work with them. If one adds to this the difficulties of dyslexia, the challenge is increased. Even the diagnosis of dyslexia in deaf students is not straightforward. Many variables associated with deafness (degree of hearing loss, age at onset, etiology, past educational experiences, language experience, parental hearing status) interact to complicate the diagnostic process (G. W. Mauk & P. P. Mauk, 1998). Although debate continues over the exact definition of dyslexia and the appropriate diagnostic criteria, it can be narrowly defined as difficulty with word identification, or an inability to read words correctly (Sanders, 2001). A broader definition of dyslexia, and one used by most educators, includes difficulties with word identification and reading comprehension, with associated difficulties with spelling, writing, and spoken language. Both definitions assume that such difficulties occur despite normal intelligence and adequate social, emotional, and intellectual capacity (Bellugi, Tzeng, Klima, & Fok, 1989). In a sense, application of this broad definition would result in most deaf children being classified as dyslexic—many of them struggle with basic word identification, reading comprehension, and writing. For this reason, diagnosis of a deaf student with dyslexia may occur at a later age, may rely on family history, or may consider the presence of other symptoms associated with learning disabilities, such as attending difficulties or problems with balance and fine motor skills.

The theories explaining what causes dyslexia are varied. In the past, it was thought to be a result of a visual-spatial deficit, whereas current theories emphasize deficits in auditory phonetic processing (Ellis, 1993) or a central linguistic deficit as the basis for the reading difficulties (Catts & Kamhi, 1999). Despite the varied beliefs regarding the causes of dyslexia, the approaches for the remediation of these difficulties tend to be similar, and to focus on teaching decoding skills (Sanders, 2001). This includes an emphasis on phonemic awareness (discriminating the sounds that make up words), sound-symbol associations (linking spoken speech sounds with printed letters), accuracy and automaticity (reading every word fluently), and an understanding of spelling rules. These programs systematically and explicitly teach children how letters relate to sounds: Students progress from simple to more complex letter-sound relationships, finally blending sounds

together to read words (Shaywitz, 2003). Clearly, this emphasis on letter-sound relationships and decoding skills presents a difficulty for deaf students with dyslexia, as they do not have experience with, or access to, the spoken language code. The key premise of most intervention programs for students with dyslexia is auditorily based teaching methods that emphasize linking print to speech. This makes sense for hearing children because their speech is already linked to meaning, and through mediation of print by speech, the print also becomes meaningful to them. However, with deaf children, linking print to speech is often meaningless—the speech code has not been established and, therefore, is not an appropriate mediator for print.

Development of an Intervention Strategy

Research on teaching deaf students with dyslexia to read is limited, and there are no teaching programs or methods designed specifically for this population. For this reason, we felt that the results of an intervention program developed for deaf high school students with dyslexia should be monitored and recorded.

In developing a program of intervention for deaf students with dyslexia, it was necessary to analyze available teaching methods and research and then modify these strategies to accommodate the needs of deaf students in general, as well as the particular needs of the two students in the present study.

One of the key skills readers need to develop is *automaticity*—they need to memorize printed words, which leads to greater reading fluency (Howell & Nolet, 2000; LaBerge & Samuels, 1974). Struggling readers may not have a very large reading vocabulary, but typically their knowledge of spoken words is much greater. A program that focuses on memorization of printed words takes advantage of meanings that are already established in spoken form (Freeze, 2001). This principle can be applied to deaf students in bilingual educational settings, as they, too, typically know more signs than printed words. The process of automaticity would simply involve memorizing the printed word in relation to the sign rather than the spoken word.

Another method that is emphasized in teaching strategies used with struggling readers or students diagnosed with dyslexia is repetition (Blum & Koskinen, 1991; Dowhower, 1994; Samuels & Farstrup, 1992). Repeatedly reading the same words or passage provides predictability and allows the students to have increasing success with their reading attempts. Building a mental lexicon of words is critical in learning to read (Moustafa, 1993), and even more important for deaf students, who do not have access to letter-sound correspondences to use in decoding print (Livingston, 1997). Repeated exposure to words in print is needed for deaf students to establish word-sign equivalents.

Disagreements exist regarding the kinds of reading materials that are most beneficial to students with dyslexia. Some approaches emphasize the importance of controlling vocabulary and grammar and systematically introducing these features to the reader (Shaywitz, 2003). This is reflected in basal readers and other structured reading programs. Other approaches suggest that it is important not to simplify the content, but, rather, to provide more support (Allington, 1998), or to change the format or amount of text (Freeze, 2001), so that the reader maintains confidence and self-esteem. In either case, there is agreement that what is essential is that the reading content be of interest to the reader (Sanders, 2001). Particularly with adolescent students, we felt that the vocabulary and passages that were selected or developed would need to be functional, relevant, and meaningful to them.

The final consideration in developing an intervention program for deaf students with dyslexia was that practice should occur frequently (i.e., daily) but for short periods of time. In this way, the students would receive regular exposure and practice without becoming frustrated or losing interest and motivation. The development of a reading program that focused on the key principles of automaticity; repetition; functional vocabulary; and short, daily practice was an adaptation of the "precision reading" method outlined by Freeze (2001). Several modifications were made to this method to accommodate the needs of deaf students, including the elimination of the timing element and changes to the "reading aloud" process, because for many deaf students, including the two in the present study, the process involves both decoding the text and translating it into signed language.

Methodology

The design of the research for the present study was a case study of two deaf high school students and their responses to an intervention program to improve their reading skills. The intervention strategy being used was part of the regular daily academic programming for these two students. The research element of the procedure was the monitoring and documentation of the students' progress. This involved videotaping three sessions (numbers 1, 6, and 10) out of every 10-session cycle, and conducting a brief assessment at the beginning of the study (October) and again after 6 months of intervention (May). The assessment involved administering the

Reading Attitude Survey (Campbell Hill & Ruptic, 1994), a sight word reading test (Diagnostic Learning Centre, 1998), and the Test of Early Reading Ability—Deaf/Hard of Hearing version (TERA–D/HH; Reid, Hresko, Hammill, & Wiltshire, 1991). The Reading Attitude Survey was selected to monitor changes in how students perceived and valued reading activities because attitude changes are necessary to improved behavior and skills. It was important to include a sight word test, since the emphasis of the intervention was on increasing the students' sight word vocabularies. The TERA–D/HH was used as a formal measure of reading ability because it has been adapted for deaf students using ASL.

Description of the Students

A brief history of each student is provided to establish the nature and diagnosis of the students' difficulties and the context for the intervention procedure. These descriptions also illustrate how the students acted as their own controls in the present study. Their limited gains in the previous 3 years of modified educational programming can be compared to the progress they made during the 6-month intervention period.

Bryan

Bryan's deafness was discovered at an early age, and even though he was the only deaf child in his family, his parents and siblings learned to use ASL in order to expose him to an accessible language during his preschool years. He began attending a school for deaf students in kindergarten. He started to have difficulty with printed language during his early school years—reversing letters, having problems with fingerspelling, and not retaining more than three or four letters in his long-term memory. Extended practice resulted in improvement, but after a school break (Christmas or summer holidays), very little of the information would be remembered. Over time, the vocabulary of content-area subjects became too difficult for him, and he missed a lot of information in the classroom. He frequently did not pay attention or participate in class.

Bryan was referred for a psychological and learning assessment during grade six, at age 12 years. At that time, he was diagnosed with dyslexia. This diagnosis was based on the finding that his nonverbal intelligence fell within the average range, as measured by the Test of Nonverbal Intelligence (3rd ed.), or TONI–3 (Brown, Sherbenou, & Johnsen, 1997), and his weak visual discrimination and scanning skills, as measured by the Beery Developmental Test of Visual-Motor Integration, fourth edition (K. E. Beery, Buktenica, & N. Beery, 1995) and the Bender Visual-Motor Gestalt Test (Bender, 1938).

Bryan also demonstrated difficulty with complex and abstract language (including ASL), poor reading comprehension (mid–first-grade level), and a family history of dyslexia (both his father and brother had been diagnosed with dyslexia)—all factors that supported the diagnosis. Bryan was placed on a modified academic program emphasizing functional skills, hands-on activities, and visual learning methods. Socially, he began to isolate himself during the junior high years. At the beginning of the present study he was still reading at the first-grade level, was unable to recite the alphabet in order, and was 14 years old.

Curtis

Curtis attended his local public school in a special-needs classroom until age 9 years. At that time he transferred to a school for deaf students, but he lacked independence in his self-care skills, was functioning at a kindergarten level academically, and had already decided he was "stupid" and a "bad boy." Although he was a skilled artist, he had difficulty writing and copying letters and numbers. He was also distractible and impulsive, and had a short attention span. Socially, he became the class clown and frequently disturbed his classmates with his disruptive and immature behavior.

Curtis was diagnosed with dyslexia at age 13 years through a psychological and learning assessment conducted at the school for the deaf. The assessment indicated that Curtis was functioning within the low–average range of nonverbal intelligence (as measured by the TONI–3) and had weaknesses in reproducing symbols and visually discriminating and scanning information, which contributed to his underdeveloped reading and writing skills (which were at the beginning first-grade level). Connors's Continuous Performance Test (Connors, 1995) and Connors's Teacher Rating Scale–Revised (Connors, Sitarenios, Parker, & Epstein, 1998) indicated that Curtis had significant attention problems.

Curtis was placed in a functional academic program incorporating simple, structured, multimodal (visual and auditory) hands-on activities. At the beginning of the present study, his reading and mathematics skills had not improved from the first-grade level, and he was 15 years old.

Description of the Teaching Process

The overall procedure used with the two students in the present study was to implement short, repetitive teaching sessions using the same word list or reading passage over a 10-day period. Following completion of this period, a new list or passage was introduced and the process was repeated. The 1st, 6th, and 10th sessions in this process were "assessment" sessions and did not include any teaching. For

the purpose of monitoring their reading, the students were required to read the lists and passages "aloud" to the teacher. For these deaf students, this involved using the ASL sign associated with the meaning of the word on the list. With the word lists, a one-to-one correspondence between words and signs was possible, but when the students moved into reading passages, a literal translation or word-by-word signing was not expected to emphasize comprehension rather than simply decoding. Allowing for these conceptual translations ensured that the students were considering context and meaning in order to develop appropriate reading comprehension in addition to word identification skills.

Assessment modifications were also made when the longer reading passages were introduced. We felt that not only did the accuracy of decoding need to be monitored but that an evaluation of story comprehension was needed. For this reason, the students were also required to answer 10 comprehension questions during the assessment sessions involving reading passages. The comprehension questions were first presented to the students in ASL signed by the teacher. In the subsequent assessment session, the questions were presented to the students in written English, and they were required to sign them "out loud" before responding to them. In the final session, the students simply read the written questions silently. In all sessions, the students answered the questions in ASL.

In the other teaching sessions (2, 3, 4, 5, 7, 8, 9), groups of five words from the target list or passage were practiced through a variety of word recognition and spelling activities described below. As a way of reinforcing previously introduced words, old lists were reviewed during sessions 5 and 10, and each new list included at least one third of the same words from the previous list. Appendix A provides a detailed outline of the "10-Day Teaching Process"; samples of the reading lists and a sample reading passage can be found in Appendix B.

Description of the Teaching Activities

Each of the students had a binder for his reading program that was organized into three broad categories: test results, dictionary, and teaching activities. The test results section held progress charts that displayed in graph form both the number of words read and the number of words read correctly during each daily reading test. This provided the students with immediate feedback about their progress, and they were motivated to have the two lines (number of words and number of correct words) meet at the top of the chart each week.

The dictionary section of the binder was developed by the students themselves. They drew pictures of each of the target words on their reading lists and matched them to the printed words. This section was used to reinforce the vocabulary and as a reference during the completion of other activities.

The teaching activities section included spelling reinforcement, functional skills, and drill and practice games. The students were required to write out the words repeatedly and to select the correct word in response to the teacher's sign. Functional activities included writing out daily routines, adding appointments to the calendar, using vocabulary words in written sentences, answering questions, and filling out job application forms. Numerous games requiring the students to fingerspell or sign words were played with flash cards. These games included Bingo, Memory, and Picture/Word Matching.

Findings

The results of the formal testing conducted before and approximately 6 months after the intervention program was initiated are presented in Table 1.

It should be noted that the TERA–D/HH has normative data up to the age of 13 years, 11 months, which is below the chronological ages of both Curtis and Bryan; therefore, only their raw scores are reported here. As noted in Table 1, Curtis increased his overall raw score by 3 items and Bryan increased his by 6 items over the 6-month intervention period. Test items in the TERA–D/HH are organized into the categories of Meaning, Alphabet, and Conventions. In the pretest, Bryan's errors were primarily related to Meaning (4) and Conventions (6); however, he demonstrated improvement in the posttest, with only 3 errors related to Conventions. Curtis also had the most errors in the Meaning (8) and Conventions (5) categories in his pretest, and showed a reduction in errors in both these categories in the posttest: Meaning (6) and Conventions (3). The students' word identification skills were

Table 1
Summary of Assessment Results

	TERA-D/HH[a] *(raw score out of 44 items)*		*240 Priority List*[b] *(words read correctly)*	
Student	*Pretest*	*Posttest*	*Pretest*	*Posttest*
Curtis	30	33	103	119
Bryan	29	35	122	133

[a] Test of Early Reading Ability—Deaf or Hard of Hearing (Reid et al., 1991).
[b] A list of words students use most frequently in daily schoolwork (Diagnostic Learning Centre, 1998).

assessed with the 240 Priority Word List (Diagnostic Learning Centre, 1998), which consists of words most frequently used in daily school work. The pretesting and posttesting indicated that both Bryan and Curtis were able to read more words correctly following the intervention, but they were also observed to attempt many more words rather than simply indicate "I don't know" during the posttest.

Both students clearly demonstrated gains on the formal measures, although by normal standards these gains would be expected over a 6-month period simply because of development and maturation. In the case of Bryan and Curtis, however, a 6-month gain within 6 months is significant because previously their progress was limited to one grade level over 9 years of schooling. Both students were still performing very significantly below grade level in terms of reading ability, so other improvements, beyond those formally assessed, will also be described.

The results from the Reading Attitude Survey showed some remarkable changes in the responses both Bryan and Curtis gave to the questions. Initially, they both indicated that they did not read at home, found reading to be boring and hard, considered themselves "lousy" readers, and used strategies such as "put the book back on the shelf" if they came across a word they could not read. Although following the intervention they still indicated that they would not like to receive a book for a present (they preferred money!), they were much more positive about reading and their own reading abilities. They both said that they were reading at home (mechanic and race car magazines), that their own reading skills were "getting better" and "pretty good," and that they were better at guessing at words they did not know. They did not use any negative words to describe themselves and their abilities during the final interviews.

The most notable improvements in Bryan and Curtis were not captured with formal measures. Both boys approached the daily reading tasks with increased willingness and confidence; they were also noted to be sitting taller in their seats, responding to questions, interacting more with others, and no longer referring to themselves as "stupid." Both boys felt more positive about their reading and writing. They were willing to move beyond classroom vocabulary and try to read books and magazines. Although they were still tentative about using a TTY, they were starting to leave written notes for their families and to use written communication to interact with hearing people.

An informal follow-up with Bryan and Curtis 1 year after the intervention revealed that both students were continuing to progress. Both boys were noted to fingerspell more frequently, particularly words that had been included on their reading lists, such as *water*, *time*, *pen*, and *paper*. Prior to starting the reading program and during the first few months of the program, both students had been very apprehensive about fingerspelling and would always choose to use a sign out of fear that they might spell a word wrong and appear "stupid" to staff, or especially to their peers.

Socially, some significant changes were also noticed. At the beginning of the reading program, both students tended to avoid social situations; however, by the end of the program they had begun to interact more frequently with their peers and would initiate conversation. They became more willing to get involved in unfamiliar activities and put themselves in situations they had previously avoided. For example, they gave a presentation to the elementary students at the school about recycling. In this presentation they were required to fingerspell many terms, such as *glass*, *blue box*, and *plastic*, as well as respond to questions from the audience. This reflected gains in their literacy skills, but also in their self-confidence.

Teachers in other subject areas noticed an improvement in the students' writing skills. Bryan and Curtis were able to use longer and more detailed sentences because their vocabularies of written words were so much larger. The students were more enthusiastic about library classes, expressing interest in borrowing more than the maximum of five books and even suggesting to the librarian that certain books be ordered. During reading time, both students started asking about words they did not understand, whereas previously they would have focused only on the pictures and ignored the text completely. These observations emphasize how an improvement in literacy skills can have a significant impact on self-confidence and social interaction.

Discussion

The pilot study we describe in the present article shows that a program involving short, daily practice with frequent repetition of text influenced the literacy and social skills of two deaf high school students who had made minimal gains in their reading and writing skills during their previous 9 years of schooling. More important, their attitude toward literacy was improved, and they developed self-confidence as learners and people. We feel that several key features of the intervention strategy contributed to this improvement. These include a focus on building automaticity through repeated practice; the use of individualized, functional vocabulary within meaningful contexts; and the strong,

positive relationship developed with their teacher.

Automaticity in reading is the ability to complete certain basic operations of reading, such as word recognition and syntactic analysis, with a minimum of mental effort. The best way to improve automaticity is through practice. It has been shown that deaf students experience problems with reading comprehension because of low automaticity in completing basic reading operations (Kelly, 2003). This may not be the only source of the problem, because low automaticity can be exacerbated or accompanied by other sources of reading difficulty, including limited memory, world knowledge, metacognitive skills, and linguistic knowledge. Therefore, although repeated readings have been effective in improving the automaticity of deaf readers (Ensor & Koller, 1997), the developmental readiness of the reader must be taken into consideration for this method to be effective. Readers should only be taught what they are capable of learning, because repeatedly drilling a skill that is not within their cognitive or linguistic repertoire will not work.

Kelly (2003) has outlined some general principles to follow in using practice to build automaticity skills in deaf readers. These include focusing on word recognition, making practice stimulating and engaging, balancing practice between isolated words and longer texts, and practicing in generous amounts. The present study implemented these guidelines throughout the intervention procedure.

The importance of carefully selecting vocabulary and linking it to other curricular topics also contributed to the effectiveness of the program. Clearly, the goal for Bryan and Curtis was not to have them reading at grade level, but rather to develop literacy skills that would be functional for them—literacy skills that would allow them to apply for jobs, function in the workplace, and communicate at a basic level with hearing people in their environment. For this reason, the word lists and passages were compiled specifically to meet their needs and to reflect words they would encounter in other classes throughout the school day. This provided more exposure and practice and built the students' confidence when they were able to successfully read a word in a different context. The point was to ensure that the students were aware of the powerful tool literacy could be for them—that they could see its benefits and uses in their lives, rather than regard its acquisition simply as a task they must complete.

The role of the teacher's relationship in regard to engaging and motivating the students to learn cannot be overemphasized. She believed in the students' abilities, made activities relevant and meaningful for them, provided an environment that was free of stress and anxiety, and through her genuine caring became someone the students respected and admired. These are important characteristics for engaging students in the learning process (Cambourne, 1995). This relationship had an impact beyond the classroom, as the students were more willing to get involved with schoolwide activities through the teacher's encouragement. This teacher initiated a garbage recycling program at the school, and Bryan and Curtis soon became active student leaders in the program. Toward the end of the school year, both students attended the school dance—the first time in years they had participated in a schoolwide social activity.

The progress made by the students in this pilot study represents a positive start in the development of intervention procedures for signing deaf students with dyslexia. Clearly, further research is needed to explore the limitations of this case study and to verify the effectiveness of specific teaching strategies. The students in the present study essentially acted as their own controls, if one compares the lack of progress made during the previous 3 years of modified programming with the improvement noted during the 6-month intervention period. However, a more systematic application of the intervention with a greater number of students, and including a control group, would allow for a stronger statement regarding the efficacy of these teaching methods.

The methods used in the present study are not new or revolutionary—they reflect standard drill, practice, and vocabulary reinforcement strategies. Further testing and exploration of the key features that contribute to a successful intervention program are needed. This study suggests that these features include brief, daily, repeated reading of the same text to establish an initial vocabulary and give students confidence as readers; using vocabulary that is of interest to students and reinforcing these concepts in a variety of contexts; and working with a teacher who believes in students' abilities and genuinely cares about them as individuals.

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Appendix A

Deaf Students With Dyslexia: Ten-Day Teaching Process

Summary of Procedure:

Days 1, 6, and 10: Assessment days (no teaching, and sessions are videotaped)

Days 2 and 7: Teaching is focused on context, background information, and story content (only for cycles involving reading passages, not lists).

Days 3, 4, 8, and 9: Teaching is focused on specific vocabulary.

Days 5 and 10: Also incorporate a review of the previous cycle's word list or reading passage.

DAY 1 **(also Days 6, 10)**	(1) READING (videotaped) Read the target list or passage prior to any teaching, introduction, discussion, vocabulary work, etc. (2) RECORDING Mark errors on the teacher copy of the list or passage during reading. Record results (both total number of words read and total number of errors). Make a list of problem words.
DAY 2 **(also Day 7)**	(1) TEACHING Select the first five words each student had difficulty reading and teach the meaning and spelling of these words. Make sure the students record these words in their "dictionary" with a picture and/or explanation and/or example. Teach the words in a variety of ways, including discussion, graphic web, sentence contexts, etc. (2) READING (as above) (3) RECORDING (as above)
DAY 3 **(also Days 4, 8, 9)**	(1) TEACHING Select the next five problem words from the list and teach these, making sure the students record these words in their "dictionary." (2) READING (3) RECORDING
DAY 5 **(also Day 10)**	(1) TEACHING Select another five words (or review previous words) and teach. (2) READING (3) RECORDING (4) REVIEW PREVIOUS WORD LIST (begin in the second cycle)

Appendix B

Word Lists and Reading Passages

	List 1	*List 2*	*List 3*
1.	work	read	drive to work
2.	address	country	meet family
3.	name	drink	play game
4.	birthday	meet	dirty bathroom
5.	day	street	study for school
6.	bathroom	talk	talk on phone
7.	year	province	weird people
8.	phone	sign	name and address
9.	family	eat	my birthday
10.	people	dirty	write number
11.	man	sleep	brother laugh
12.	brother	number	eat slow
13.	province	slow	sleep all day
14.	school	weir	dread the sign
15.	country	brother	man drink
16.	game	throw	drink and drive
17.	month	write	our country
18.	drive	study	street number
19.	street	laugh	throw the ball
20.	number	play	day, month, year

Reading Passage (List 6)

Every morning I drive my car to school. Some days I want to stay in bed and sleep all day. When I get to school, I check the calendar. I look for my appointments. Some days I forget what month, or day, or year it is! I write my name, address, and telephone number. I go to the meeting. I say "Good morning" to my teacher. We read and write. Sometimes, we play games. I eat my lunch and get a drink. We study and do more work. I'm happy when I can drive back to my house.