EDUCATIONAL PROFESSIONALS' USE OF

WRITTEN LANGUAGE MATERIALS

By

JENNIFER LEIGH MCKAY

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Thesis Approved:

Connie E. Stout
Thesis Adviser

Cheryl M. Scott

_K. ut_

Wayne B. Powell
Dean of the Graduate College

PREFACE

Educational professionals often are faced with the dilemma of trying to find appropriate written language materials for students with poor reading ability with little clear guidelines available in the literature. The purpose of this study was to investigate what four groups of professionals in education, namely speech language pathologists, reading specialists, regular education teachers and teachers of students with learning disabilities are doing to determine the difficulty level of a text. Also, information was sought concerning what types of text modifications, instructional organization and/or modification, and adaptation to the requirements of the students, they make when forced to use difficult texts. A survey format was utilized with a follow-up interview with a same portion of the subjects. Descriptive statistics were utilized in order to analyze the data.

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CHAPTER I

INTRODUCTION

In the endeavor to educate children with specific language impairments or with poor reading ability, professionals in education are challenged to provide appropriate written language material that will best facilitate success in learning. Several factors have to be taken into consideration. The professional, whether it be the regular education teacher, a specialized teacher or a speech language pathologist, must strike a balance between challenging the students and overwhelming them. Also, when choosing a text or working with a mandated text, the professional has to not only determine if the text is too difficult for certain students with below grade level reading ability, but also has to consider how the requirements placed on these students in reading the text will affect their self-esteem, their enjoyment of school and learning, and also their future desire to pick up a book for fun. Discouraging students in learning and in reading by providing written language material that is substantially too difficult would seem to be directly opposed to the overall goal of education, which is not just to teach students by any means possible, but to develop an enjoyment and self-initiative for learning. The purpose of this study is to investigate what professionals, including regular education teachers, reading specialists, speech language pathologists, and teachers of students with learning disabilities, are doing in order to maximize text-student matches for either regular or remedial education purposes, for students with a specific language impairment or poor reading ability. For the purposes of this investigation, a text is defined as any written material of a few sentences or longer length.

Children with specific language impairments are particularly problematic due to the nature of their disorder. By definition, a child with a specific language impairment has normal intelligence, but presents significant difficulty with language, particularly syntax or grammar (Watkins, 1994). The student's language development is slower, especially in terms of the verb system and other grammatical morphemes. When attempting to accommodate a child with this disorder in a classroom or in therapy, educational professionals are presented with somewhat limited choices. They could select materials at the grade level of ability in reading, as opposed to grade level placement, which poses a problem in finding something interesting enough for the child to want to read. They could adapt the mandated materials by one of two methods. In the first method, changes would be made to decrease the sentence length and complexity and simplify the vocabulary. This option, however, raises several questions in terms of efficacy, namely, will this watered down material further hinder their language development, particularly of verbs? Also, as the richness of the language is lost, how will the student's enjoyment of reading be affected? In a second method of modifying the text, changes would be geared toward increasing the coherence of the material. This is also problematic as indications on how to go about this in the research literature are ambiguous. The third option, if the professional cannot choose the text for whatever reason, and decides not to modify the text, is to change the presentation and/or the requirements placed on the child. Following a review of the literature on how texts are evaluated for their difficulty level, each of these options will be discussed separately.

Assessing the Difficulty of Texts

The first obstacle faced by educational professionals needing to provide appropriate written language materials is finding an adequate method of determining the difficulty level of any particular text. Three choices are presented in the literature. These include using a readability formula, subjectively assessing the presence of factors that correlate with higher comprehension rates, and doing an actual trial reading of the text with students.

The first alternative, the use of readability formulas, will provide a rough grade-level estimate of the text. There are over 30 readability formulas available from which to choose (Meyer, Marsiske, & Willis, 1993). These formulas are based on the theory that generally shorter sentences and shorter, more frequently used words are easier to read (Sawyer, 1991). The formulas, therefore, typically consist of two variables, a word variable and a syntactic variable (Pearson, 1974-75). For example, one of the most frequently used readability formulas, the Dale-Chall readability formula, uses the average sentence length of the text and the percentage of words not contained on the Dale List of 3000 words, to determine grade level (Dale & Chall, 1948). Other formulas use the average number of syllables as the word variable (Pearson, 1974-75). The use of a two-variable formula has been explained in the statement. "…it may be that length and complexity are simply indices of complex semantic content; that is a long and complex sentence is long or complex because it represents a concept or principle that could not be communicated in simpler language" (Pearson, 1974-45, p. 160).

The difficulty with utilizing readability formulas stems from the considerable controversy that exists concerning both their validity and proper use (Scott, 1994). On

one side, readability advocates such as Klare (1974-75) state that a two-variable formula should be sufficient for determining the level of comprehensibility of a text. Furthermore, Dreher and Singer (1989) similarly support sentence length and word difficulty as indicative of readability, stating that these two measurements embody various other significant text features that make a text readable. Similarly, Bogert (1985) supports the indicated use of readability formulas for determining the grade level of a written text. Fry (1994) states that readability formulas are adequate for determining comprehension, amount of reading errors, and overall inclination to continue reading.

However, Fry (1994), who created one of the most widely used readability formulas to date, has qualified the use of these formulas stating that the validity of readability formulas is difficult to prove given the fact that grade levels of reading are subjective measurements at best. Rush (1985) maintains that readability formulas are accurate for such purposes as providing rough estimates for library books, but are inappropriate for matching a specific text with any particular reader. Maxwell (1978) similarly qualifies the use of readability formulas, stating that they are useful when followed by actual tests of comprehension with a sample of the reading audience.

At the opposite end of the spectrum, some authors unequivocally reject the use of readability formulas (Beals, 1989; Dreher, 1984; Shelby. 1992; Sawyer, 1991). Dreher (1984) states that "it does not seem possible that one formula will yield a 'true score' given the limitations of readability formulas" (p. 336). The limitations cited include the fact that applying one formula to different passages in a book will result in differing grade level estimates. In addition, it was mentioned that the level of comprehension used by such popular formulas as Dale-Chall (1948), which requires a reader to answer one-half to three-fourths of the comprehension questions correctly, is actually an unacceptable level of

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performance in a classroom and would result in a failing grade. Dreher also pointed out that the use of the word "formula" implies a scientific accuracy that is an incorrect implication, given the fact that different formulas will place the same material at different grade levels. Rush (1985) writes that readability formulas consistently predict that specialized texts, such as a biology book, are more difficult than they actually are due to the specialized vocabulary present which inflates the number of difficult words causing the readability level to be artificially heightened.

Other critics suggest that readability formulas do not take into account important reader characteristics related to comprehension such as motivation (Klare, 1976; Dreher, 1984; Sawyer, 1991; Koenke, 1987), background knowledge (Sawyer, 1991), and maturity (Klare, 1963). In a study by McCabe (1993), texts that appeared too difficult for the fifth grade subjects in terms of readability formula calculations were actually shown to be comprehensible. McCabe explains the discrepancy by stating that while a textbook might have a level of readability that appears too high for a particular group of readers, factors in the text that aid in understanding, along with reader's interest, might be present in large enough amounts to result in a comprehensible text. Text traits affecting comprehension that are not represented in readability formulas include paragraph length (Bogert, 1985; Dreher, 1984; Fry, 1994; Koenke, 1987;), cohesion (Fry, 1994; Sawyer, 1991), coherence (Beck, McKeown, Omanson, & Pople, 1984; Dreher, 1984), signal words (Fry, 1994; McCabe 1993), active voice (Fry, 1994), illustrations (Dreher, 1984; Koenke, 1987; Fry, 1994), personalization of text (McCabe, 1993; Fry 1994), size of print (Bogert, 1985; McCabe, 1993), amount of white space (McCabe, 1993; Sawyer, 1991), type face (Sawyer, 1991), indention and blocking (Sawyer, 1991; Dreher, 1984), concept density (Koenke, 1987; Dreher, 1984), organization (McCabe 1993; Dreher 1984), word

concreteness (Sawyer. 1991; Dreher, 1984), and syntactic complexity (Koenke, 1987:
Dreher, 1984). Klare (1974-75) states that including additional variables does not add
significantly to the prediction of readability levels. The absence of these variables is a
major criticism of readability formulas.

An alternative to the use of readability formulas is to evaluate a text for the
presence or absence of features that have been shown to promote text comprehensibility.
Rush (1985) proposes that teachers consider the following text features: difficulty of
vocabulary, difficulty of concepts addressed, complexity of sentences, clarity of
connections between sentences and concepts, and the ease of interpretation of any
graphics. Dreher and Singer (1989) add that teachers should check for misleading text
headings, inclusion of explicit statements showing the significance of particular
information, amount of elaboration for new concepts, the spacing of concepts and the
prior knowledge needed to fill in gaps in the presented information. It has also been stated
that professionals need to be aware that overly simplistic syntax can increase difficulty as
the ideas are not tied together adequately and explicitly (Beals, 1989).

Other text features related to comprehensibility include explanations and explicit
connections between information and reader's knowledge (Loxterman, Beck, &
McKeown, 1994) and the use of transitions to link thoughts (Ornstein, 1994). Also, text
utilizing matrices, hierarchies, categories, and linear sequence are more coherent
(Ornstein, 1992). Texts which include certain features that make the presence of the
author known and involve human actions and reactions, called voiced texts, have also been
demonstrated to be more comprehensible to students (Beck, McKeown, & Worthy, 1995;
Slater, 1988). Therefore, professionals may want to identify if a text has the following
features that directly impact voice. These include dynamic and concrete verb choices,

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displaying immediacy of action, providing human reactions, utilizing a conversational tone, and making connections between the reader and the text.

Flesch (1951) maintains that the most important factor in text comprehensibility is the interest level it arouses in the reader. He states that "if a reader is generally interested in what he is reading, he may be able to work his way through long sentences and difficult words…" (p. 41).

When assessing text difficulty, professionals should be aware of several features with a demonstrated detrimental effect on the recall of important information. Wade, Schraw, Buxton, and Haynes (1993) found that interesting, but irrelevant tidbits added to text decrease readers' memory of the significant information. Texts containing sentences that are extremely information dense, using only a few words to communicate many concepts, are also more difficult to understand (Beck, McKeown, Sinatra, & Loxterman, 1991). Examining the text for these traits that reduce comprehensibility may aid professionals in coming closer to the mark in finding suitable reading material for students with specific language impairment or poor reading ability, yet they do not provide unequivocal guidelines. An assessment of a text, based on the text characteristics listed above, would be subjective at best. Unfortunately, even experts are not always adequate judges of whether or not a text is comprehensible (Graves, Prenn, Earle, Thompson, Johnson, & Slater, 1991).

Given the difficulty with readability formulas and comprehensibility trait evaluations, conducting an actual trial reading with students is a viable option (Rush, 1985). A trial reading involves providing a sample of students a portion of the text to read and then giving a brief test of comprehension. Involving the students in this manner alleviates the guesswork of text-based assessments and provides an objective assessment

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of students' ability to handle the text. However, conducting a trial reading may be impractical given the time constraints faced by professionals in the schools today.

Compensating For A Difficult Text

Other questions to be examined in this study stem from the next dilemma faced by professionals after determining the difficulty level of a text which is how to compensate for a text that is too difficult. Three broad categories of methods for addressing this problem emerge from the literature and will be reviewed individually. These include modifications to the text itself, modifications and/or organization to the presentation of the material (teacher-based instructional adjustments), and modifications to the requirements placed on the students (student-based adjustments).

Modification of Texts

The first category of methods for dealing with a text that is too difficult, text modifications, can be divided into two subcategories. These are modifications attempting to raise the readability level of the text and modifications made to increase the coherence of the text. Both involve actually rewriting the text in part.

Flesch (1951) outlines specific steps for raising readability. He suggests the use of more personal words, increasing personal sentences, breaking up sentences and paragraphs, finding simpler words, and rearranging the information for emphasis, with the most important facts located last. He also instructs writers to be brief and to use punctuation to increase readability, such as indicating connections between sentences using commas and semicolons.

Criticism of this method of text modification is widespread. One fault mentioned in the literature is that shortening sentences throughout a text can decrease comprehensibility due to the removal of important signaling words, such as temporal and causal connectives (Dreher & Singer, 1989). Pearson (1974-75) writes the following about reducing word and sentence length to increase readability:

> Such recommendations reveal a common error in interpreting correlational data by assuming that correlation means causality. The fact that sentence length, sentence complexity, or any other factor correlate with the difficulty people experience in answering questions does not imply that altering those correlates will reduce difficulty. (p. 160)

Klare (1963; 1974-75) agrees stating that altering the length of sentences and the complexity of words does not guarantee more readable writing and may in fact lead to mechanical writing and loss of stylistic components that add to individuality. Beck et al. (1995) reason that the failure of manipulating sentence and word length is a result of disrupting the connections between the sentences and concepts, thus reducing the relational coherence of the writing.

Beck et al. (1984) state that readability formulas are often used to guide text revisions, despite the fact that this was not their created purpose, due to a decided lack of alternatives presented through research. The current literature on reading instruction persists in offering few practical guidelines for improving the comprehensibility of texts. Further information is available, however, on text characteristics that enhance comprehensibility, which is the second option in text modification.

Texts modified to increase comprehensibility are often rated at a higher grade level using a readability index than the original texts. Therefore, from a readability standpoint

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these texts should be harder to read than the original text, yet researchers have consistently demonstrated the revised texts to be superior in comprehensibility (Beck et al., 1995; Beck et al., 1991; Beck et al., 1984; Loxterman, et al., 1994). The discrepancy between comprehensibility modifications and readability indications suggest that readability formulas are not entirely complete measures of the ease with which a student will read a text. In other studies, students were shown to prefer revised texts, although tests of comprehension and retention of information did not show differences between the two versions (Klare, 1976; Ramsey, O'Hear & Braden, 1993-94). Therefore, improving the comprehensibility of school texts through revisions in coherence appears to be of significant importance for increasing students' enjoyment of reading, though immediate gains in comprehension and recall may not be forthcoming.

Although some authors suggest concentrating on the improvement of comprehensibility over readability (Ornstein, 1994), the task of increasing comprehensibility of text has been shown to be subjective and often inaccurate (Sawyer, 1991; Graves et al., 1991). Graves et al. (1991) found that expert teams were inconsistent in making improvements in comprehensibility and often were unaware of how they improved the text. Other researchers have attempted to increase comprehensibility indirectly by focusing on improvements in coherence. Ornstein (1992) supports this connection between comprehensibility and coherence. He states that comprehensibility is directly affected by coherence, as well as sequencing, matching, and transitions. Coherence is defined as "... the extent to which the sequencing of ideas in a text makes sense and the extent to which the language used to represent those ideas makes the nature of the ideas and their relationships apparent" (McKeown, Beck, & Sinatra, 1992, p. 79). Beck et al. (1991) used a cognitive processing perspective to increase coherence of text.

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The goal was to aid readers in making connections between the different information presented in the text and their background knowledge. The following specific procedures were used: clarifying the content by highlighting the main ideas, adding cohesive ties, providing background information, deleting irrelevant information, and clarifying structure. Beck's modifications were effective, as seen in increased comprehension scores from the original text to the revised text. A similar procedure was utilized by Loxterman et al. (1994) in revising texts for sixth grade subjects. The researchers identified points in the text that the readers might have difficulty with based on their background knowledge and altered the text by clarifying, elaborating, explaining content and making connections explicit. Unfortunately for professionals, generalization of text revisions procedures outlined in these two studies is limited to the specific texts used in the studies.

The lack of available information on acceptable text revisions raises the question of what professionals are actually doing when presented with a text that is too difficult for a particular reader. Instructions for modifying text according to readability formulas are accessible; alternatives are not as apparent. Therefore, given the present status of research supported options, it is possible that professionals are misusing readability formulas in the absence of viable alternatives for effective means of adapting texts.

Instructional Practices

Alternatives to text revision, however, when presented with a text that is too difficult for a given student or group of students, have been widely reported in the professional literature. Organization and/or modification of instruction and adaptations to the requirements of the student are seemingly infinite. In general, however, three types of instructional approaches can be identified. One approach to instruction that has received

much attention in research is manipulating the engagement of the reader or increasing interaction with the text. The think-aloud procedure in which the student pauses and talks about the text aims at increasing the interaction of the reader with what is read. Loxterman et al. (1994) found that students using this strategy had better comprehension and recall of text. This finding was attributed to the available opportunities for students to reflect and think through the information while reading. It was noted that analysis of the readers' answers to comprehension questions revealed that the think-aloud model led to recognition of the connection between events. Davey (1983) described a slightly different think-aloud procedure in which the teacher first reads a text aloud while talking about what strategies she is using to comprehend or interact with the text, such as asking questions and making predictions. The teacher also models strategies for dealing with comprehension problems. Additional means of helping students become more interactive with the text is through the creation of visuals such as graphs, charts or maps (Berkowitz, 1986; Rakes, Rakes, and Smith, 1995) and through listening exercises, in which students read along with a tape (Shany & Beimiller, 1995).

The second approach, advocated by Ornstein (1994), involves teaching self-monitoring strategies to students in order to increase comprehension. Ornstein states that if students do not self-monitor by changing their approach as needed to increase comprehension or by seeking help when necessary, they will have minimal comprehension of the text. Ornstein suggests that teachers help students specifically by teaching them good readers' strategies such as what to do when first given a text, when presented with an unfamiliar word, or when faced with a difficult to understand sentence. Furthermore, he advises the provision of structural signals such as outlines, instructional objectives and focus questions. Also, pointing out headings, key words, margin notes, overview tables,

illustrations, summaries and other reading aids was recommended.

A third approach to instruction is explicitly teaching text structure to students. Research has demonstrated that students who are aware of text structure tend to recall more information than students who are not (Berkowitz, 1986). It is possible for students as young as fifth grade to benefit from instruction in text structure (Armbruster, Anderson, & Ostertag, 1989). In a study by Armbruster et al., students benefited from eleven days of direct instruction on problem-solution text structures, including learning how to recognize this type of text structure, how to take notes and how to write a summary from this text structure.

Purpose of the Study

With all these options available and conflicting research reports on each, professionals in education are in a quandary as to how to deal with students for whom the regular text is too difficult. In examining how professionals are dealing with this issue, the intent of this study is threefold. It will be determined through a survey format of educational professionals concerned with literacy, first, what these professionals are presently doing to determine if a given text is suitable for a certain child in terms of difficulty and secondly, what text modifications, if any, these professionals are utilizing in order to have more readable texts. Third, it will be investigated how these professionals organize and/or adjust their instructional methods and requirements of the students, when they are forced to utilize a difficult text. In order to answer these questions, a survey will be given to 30-50 professionals in each of the following categories: speech language pathologists, reading specialists, regular education teachers, and teachers of students with

learning disabilities. A follow-up interview of twenty professionals (five per group) will be

utilized to supply additional information.

CHAPTER II

METHOD

Subjects

Subjects were one hundred and sixty-seven professionals in education, specifically 47 speech language pathologists, 46 regular education teachers, 33 reading specialists, and 41 teachers of children with learning disabilities. A comprehensive summary of the subjects' demographic information is located in Table I. The number of female subjects was 164. There were 3 male subjects. One hundred subjects had 11 years or more of experience in their profession; 30 subjects had 6 to 10 years of experience; 25 had 3 to 5 years of experience; and 12 had 0 to 2 years of experience.

Additional demographic information was attained through optional questions on the survey. As not all subjects answered each of these questions, the following description of subjects pertains to the majority, but is not all inclusive. The ages of the subjects varied from the 22 to 60 years, with the mean age being 35 years. The subjects represented five races. The Caucasian/white, nonhispanic group held 151 subjects. Five subjects reported American Indian/Alaskan Native as their race, while four reported being African American/nonhispanic. One subject was Mexican American/Chicano and one was Asian American/Pacific Islander.

Subjects reported the following as the size of school in which they were working: 6 subjects worked in a school of 50-200 students; 31 subjects worked in schools of 201-400 students; 42 subjects worked in schools of 401-600 students; 25 subjects worked in

Table I
Demographic Information of Subjects

	GROUPS				
	SP n=47	RS n=33	RE n=46	LD n=41	ALL GROUPS N=167
Gender					
Female	47	32	44	41	164
Male	0	1	2	0	3
Years of Experience					
0-2 years	4	4	0	4	12
3-5 years	6	2	9	8	25
6-10 years	11	5	7	7	30
11 or more	26	22	30	22	100
Grades work with					
K-2	38	26	19	21	104
3-5	41	21	23	28	113
6-8	19	9	8	14	50
9-12	12	4	2	7	25
Age	n=36	n=22	n=33	n=29	N=120
20-25 years	0	0	0	4	4
26-30 years	4	3	5	5	17
31-35 years	1	3	5	4	13
36-40 years	9	2	6	3	20
41-45 years	8	5	5	3	21
46-50 years	10	6	3	8	27
51-55 years	4	2	6	1	13
56-60 years	0	1	3	1	5
Race	n=45	n=32	n=44	n=41	N=162
Caucasian/white	42	30	42	37	151
American Indian/Alaskan Native	2	1	0	2	5
African American/nonhispanic	0	0	2	2	4
Mexican American/Chicano	1	0	0	0	1
Asian American/ Pacific Islander	0	1	0	0	1
Size of school	n=37	n=22	n=31	n=35	N=125
50-200 students	1	2	1	2	6
201-400 students	7	7	10	7	31
401-600 students	12	6	12	11	42
601-800 students	10	4	4	7	25
800 or more	7	2	4	8	21

schools of 601-800 students; and 21 subjects worked in schools with 801 and greater

number of students. Forty-two subjects did not answer this question.

The grades that the subjects worked with ranged from kindergarten to twelfth grade. Specifically, 104 subjects worked with kindergarten through second grade; 113 subjects worked with third through fifth grade, 50 subjects worked with sixth through eighth grade, and 25 subjects worked with ninth through twelfth grade. Many subjects worked with more than one of the four groups of students and thus the numbers reported here exceed the total number of subjects. Only one subject failed to answer this question.

Subjects were identified in one of two methods. The first method involved contacting the specific professionals individually and asking them to participate by filling out a survey themself and passing out surveys to other professionals at their school. The second method of identifying subjects consisted of asking supervisors and administrators at particular school districts in Oklahoma to distribute the surveys to their employees. For the second stage of the survey, which consisted of an interview, five subjects were selected from each of the four original groups, on a volunteer basis. Information concerning the subjects' willingness to participate in the second part of this study was gleaned from the initial survey, on which the subject was asked to provide his/her name and telephone number on a detachable piece of paper if he/she was willing to participate in an interview.

Instrumentation

The survey consisted of three parts. The first two sections contained objective closed questions addressing the research questions. The specific questions to be answered were as follows: (a) how the different professionals determine the suitability of texts for children with specific language impairments or poor reading ability, (b) what modifications

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they make to the text after determining that it is indeed too difficult, and (c) what type of organization and/or modification they make to the instruction or student requirements when presented with a text that is too difficult. Part one concentrated on how the subjects determine if a text is too difficult for a particular student. It addressed the subjects' knowledge and use of readability formulas and also other measures of text difficulty. Part two dealt specifically with how the professionals adapt text, organize and/or modify their instruction, and adapt the requirements of the student when working with a text that they have determined is too difficult for a student.

The third section of the survey was devoted solely to significant demographic information. Specifically, information regarding age, gender, ethnicity, and years of professional experience was requested. The subjects were asked for information regarding the size of the school in which they work and the particular grades that they work with regularly. The survey is attached as Appendix A.

A set of open-ended questions was used for the interview portion of the study. These questions were designed to address the same issues as the objective survey, yet in more detail. For instance, to expand upon the information in the initial survey regarding text modification practices, in the interview the question of whether the subject has attempted to modify a text for a particular student and an explanation for this choice was asked. Specific interview questions are included in Appendix B.

Procedures

A pre-test survey was conducted in order to check that the survey format was adequate and questions were direct and not confusing. Ten professionals were chosen at

random for the pre-test survey. Participants were asked to fill out the survey and then report to the investigator how they interpreted each question and any confusion that was present (Weisberg, 1996). Slight modifications in wording and format were made as necessary. based on difficulty present within the pilot group.

After subjects agreed to participate or the administrators/supervisors had agreed to distribute the surveys. copies of the survey were sent to the respective persons along with a self-addressed stamped return envelope for each survey. Surveys were then collected by having the subjects mail the sheets directly to the investigator. Twenty subjects who indicated that they were willing to participate in an interview were randomly selected and contacted by phone to set up an appointment for a one on one interview at their convenience.

CHAPTER III

RESULTS

The major focus of this study pertained to what educational professionals actually do in their practices relative to providing appropriate written language materials for students. Professionals in the following fields were surveyed: speech language pathologists (n= 47), reading specialists (n= 33), regular education teachers (n= 46), and teachers of students with learning disabilities (n=41). Descriptive statistics were utilized to summarize the data obtained. These data are reported in percentages. Information from the survey was divided into six categories for organizational purposes. These categories are awareness/training in text assessment; typical methods of assessment; frequency of text modification; typical text modifications; instructional organization/modification; and adaptations to student requirements.

Awareness/Training in Text Assessment

Table 2 displays the percent of individuals in each group who answered awareness questions related to readability formulas and alternate methods of assessing text difficulty affirmatively. The results indicate that the percentage of speech language pathologists who are aware of possible text assessment methods, particularly readability formulas, was 48.9%, whereas 91.3% of the regular education teachers and 100% of the reading specialists and teachers of students with learning disabilities expressed awareness. Similarly 55.3% of the speech language pathologists reported an awareness of other

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established methods of assessing text difficulty, as compared to 87.9% of the reading

specialists, 91.3% of the regular education teachers, and 92.7% of the teachers of students

with learning disabilities.

TABLE 2
Subjects' Awareness of Methods of Assessing Text Difficulty

QUESTION	SP $\underline{n}$=47	RS $\underline{n}$=33	RE $\underline{n}$=41	LD $\underline{n}$=46	All Groups $\underline{N}$=167
Aware that it is possible to determine text's difficulty level by using a readability formula.	48.9	100.0	91.3	100.0	83.2
Aware that it is possible to determine text's difficulty level by using other methods	55.3	87.9	91.3	92.7	80.8
Received training in assessing text using a readability formula	14.9	87.9	65.2	80.5	59.3
Received training in assessing text using other established methods	12.8	75.8	39.1	51.2	41.9
Interested in being trained in measuring text readability	51.1	57.6	58.7	43.9	52.7
Believe that readability formulas are useful for assessing text difficulty	76.6	87.9	87.0	85.4	83.8

Note. SP=speech language pathologist; RS= reading specialist; RE=regular education teacher;
LD=teacher of students' with learning disabilities in all tables. Subjects responded either "yes" or "no"
for each question.

When questioned about their training in the use of readability formulas, only

14.9% of the speech language pathologists stated that they had received training, while

87.9% of reading specialists, 65.2% of regular education teachers, and 80.5% of the

teachers of students with learning disabilities reported training. Training in the assessment

of texts using other established methods was also less prevalent among the speech

language pathologists with only 12.9% answering affirmatively, compared to 75.8% of the

reading specialists, 39.1% of the regular education teachers, and 51.2% of the teachers of

children with learning disabilities.

In comparing the other groups surveyed, it appears that more reading specialists had received training in readability formulas than regular education teachers and teachers of children with learning disabilities. Each group had less members report receiving training in alternate methods of text assessment than in readability formulas. During the interview portion of the study, all but one of the professionals stated that they learned what text features to assess in determining if a text is appropriate through experience or trial and error. Only three of the twenty subjects interviewed mentioned training as an additional means of learning what specific characteristics to look for in a text.

Typical Methods of Assessment

The actual practices of the professionals surveyed in terms of assessment of the difficulty level of a text are summarized in Table 3. As the percentages indicate, nearly all of the professionals reported use of more than one method of determining if a text is appropriate. However, only 27.5% of them use a readability formula as one of the methods. This is despite the fact that more professionals noted being trained in readability (59.3%) than alternative methods (41.9%). Furthermore, 83.8% of those surveyed expressed the belief that readability formulas are useful for assessing text difficulty.

A reason for low use of readability formulas provided by professionals interviewed was that the grade level is frequently provided by the publisher and therefore, it is not necessary to perform the task of determining the readability level. Also, some of the reading specialists interviewed stated that through experience they can now scan a text and determine the readability informally without applying an actual formula. Time

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constraints were a common theme during the interviews as to why a particular method was chosen. Of those who did mention applying a readability formula, the Fry Readability Index was the one chosen because of the ease of application.

TABLE 3
Subjects' Methods of Determining if Text is Appropriate

METHOD	PERCENTAGE OF GROUP				
	SP n=47	RS n=33	RE n=41	LD n=46	ALL N=167
Assess difficulty level of words	78.7	97.0	100.0	95.1	92.2
Assess the complexity of the sentence structure	78.7	81.8	78.3	82.9	80.2
Review published grade level	63.8	87.9	84.8	80.5	78.4
Assess the interest level	59.6	84.8	89.1	75.6	76.6
Use a readability formula	6.4	51.5	26.1	34.1	27.5
Other	6.4	24.2	15.2	9.8	13.2

Answers written in the "other" option on the survey and/or mentioned in the interviews, included such things as having the student read as the professional listens for the number of errors or asks comprehension questions. For older students, some professionals mentioned having the students self-evaluate to determine if the text is too difficult. Other methods listed were utilizing a library's leveling system and consulting with the regular education teacher or a reading specialist. Also, several text features were added as things that the professional scans for such as size of type, amount of print on a page, illustrations, clarity of definitions of key words, and complexity of graphs and charts.

Five professionals surveyed do not do any type of assessment of the written language materials given to student. All of these were speech language pathologists.

When discussing text assessment practices with speech language pathologists during the interview portion of the study, four of the five stated that the vast majority of their practice emphasizes oral language. They did not give a great deal of time to assessing a text, as reading was not the emphasis. One of the speech language pathologists interviewed stated that she used grade level texts as determined by the publisher, because that is what the students are expected to use in the classroom.

Frequency of Text Modification

The subjects' reported practices of text modification in terms of frequency are seen in Tables 4a, 4b, and 4c. Table 4a displays the subjects' responses as to their ability

TABLE 4a
Professionals' Ability to Adapt Texts

Able to adapt written language materials depending on my students' reading level, interest, and needs.

| | PERCENTAGE OF GROUP | | | | |
	SP n=47	RS n=33	RE n=41	LD n=46	All N=167
Always	6.4	54.5	10.9	31.7	23.4
Frequently	38.3	15.2	60.9	41.5	40.7
Sometimes	27.7	27.3	26.1	24.4	26.3
Rarely	8.5	3.0	2.2	2.4	4.2
Never	19.1	0.0	0.0	0.0	5.4

to adapt text according to the students' reading ability, interests, and needs. Slightly over 90% of the professionals surveyed reported being able to adapt materials at least some of the time. The only group that included some (19.1%) who were never able to modify was the speech language pathologists. The group with the largest percentage of professionals

(54.5%) who were always able to modify was the reading specialists.

The second question related to frequency of modification practices was how often the educational professional used readability formulas when adapting texts. Responses are shown in Table 4b. Only 1.2% of the professionals always used a readability formula, none of which were speech language pathologists or regular education teachers. The majority of the speech language pathologists (85.1%) and a large portion of the teachers of students with learning disabilities (31.7%) never use a readability formula when adapting texts. The greatest number of reading specialists (54.5%) and regular education teachers (39.1%) used readability formulas sometimes when adapting texts.

TABLE 4b
Use of Readability Formula in Adapting Texts

Use readability formulas in my professional practice when adapting written language materials for my students.

| | PERCENTAGE OF GROUP | | | | |
	SP n=47	RS n=33	RE n=41	LD n=46	All N=167
Always	0.0	3.0	0.0	2.4	1.2
Frequently	4.3	18.2	17.4	12.2	12.6
Sometimes	4.3	54.5	39.1	26.8	29.3
Rarely	6.4	12.1	34.8	26.8	20.4
Never	85.1	12.1	8.7	31.7	36.5

The third frequency of practice question examined the use of alternate methods of assessing the difficulty level when adapting written language materials. Table 4c shows that the majority of professionals surveyed reported "frequently" or "sometimes" using alternative methods. A large portion of speech language pathologists, 38.3%, reported never using alternate assessment methods when adapting texts, while no reading specialists marked the "never" category.

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TABLE 4c
Use of Alternative Methods of Assessment in Adapting
Texts

Use other methods of measuring text difficulty when
adapting written language materials for my students.

	PERCENTAGE OF GROUP				
	SP $n=47$	RS $n=33$	RE $n=41$	LD $n=46$	All $N=167$
Always	4.3	18.2	4.3	9.8	8.4
Frequently	27.7	33.3	45.7	34.1	35.3
Sometimes	25.5	30.3	34.8	31.7	30.5
Rarely	4.3	18.2	13.0	17.1	12.6
Never	38.3	0.0	2.2	7.3	13.2

Typical Text Modifications

A separate set of questions related to text adaptation asked for information
concerning the educational professionals' actual practices. Questions and results are
shown in Table 5. Most of the professionals who modify texts marked more than one
choice, indicating that they change several aspects of a text. Simplifying the vocabulary
within a text was the most frequently marked option. Over 60% of the professionals in
each group reported this practice. Highlighting text was the next most frequently reported
practice including slightly over 50% of all professionals. Eleven percent of the
professionals surveyed indicated that they made no modifications to the text. Specifically,
21.3% of the speech language pathologists, 6.1% of the reading specialists, 8.7% of the
regular education teachers, and 7.3% of the teachers of children with learning disabilities
reported never modifying a text. Information gained during the interviews suggested that

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often when a professional chooses not to modify the text, they feel that choosing a different text with similar material is a better course of action. Time constraints and lack of training were also mentioned as reasons for not modifying a mandated text.

Examining this data within each group revealed that the two most common practices of the speech language pathologists surveyed were to simplify vocabulary and shorten sentences, both of which are indicated when using a readability formula for modification of written language materials. However, of the speech language pathologists interviewed, only one did any text modifications. She indicated that she decided upon the modification method through experience and not due to any particular training.

The two most frequently marked options for the reading specialists were adding background information and highlighting key information. Of the reading specialists interviewed, two did not modify their materials at all but instead chose appropriate materials for each student's reading ability. The other three interviewed stated that they rarely modified the text, apart from highlighting, due to time constraints, but preferred to do modifications in instruction and requirements.

Regular education teachers surveyed reported the greatest percentages in the practices of adding background information and simplifying the vocabulary. However, none of the regular education teachers interviewed reported utilizing these adaptation methods. They also did not report regularly modifying a text. In fact, two of the five teachers reported never modifying a text due to a lack of training and time. The three who do modify on an infrequent basis stated that they learned how to modify through experience and from other professionals on the job.

Within the teachers of students with learning disabilities who completed the survey, over 80% report highlighting texts. Two of five teachers interviewed stated that

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highlighting was the only method of text modification with which they were familiar. Furthermore, only one of the teachers of students with learning disabilities who does some text modification mentioned training as one means of learning how to adapt materials.

TABLE 5
Typical Types of Text Modifications

MODIFICATION	PERCENTAGE OF GROUP				
	SP $n=47$	RS $n=33$	RE $n=41$	LD $n=46$	ALL $N=167$
Simplify vocabulary by using shorter words	66.0	60.6	69.6	68.3	66.5
Highlight key ideas	53.2	69.7	47.8	82.9	62.3
Add background information	38.3	72.7	65.2	36.6	52.1
Shorten sentences	55.3	33.3	50.0	53.7	49.1
Provide explicit connections between ideas	38.3	54.5	45.7	51.2	46.7
Delete irrelevant information	31.9	42.4	21.7	61.0	38.3
Add cohesive ties to connect ideas	10.6	45.5	10.9	14.6	18.6
No modifications done to text	21.3	6.1	8.7	7.3	11.4

Instructional Practices

Instructional organization and/or modification practices was the next area examined on the survey. Results are compiled in Table 6. The two most prevalent practices for all four groups were reading the text aloud as a group and teaching background information prior to reading. Reading specialists, regular education teachers, and teachers of children with learning disabilities also had a third most frequent practice of providing focus questions prior to reading. The majority of those interviewed (13/20)

reported learning their instructional organization and/or modification methods from experience or other professionals. Of the speech language pathologists interviewed only one reported training in instructional modifications. Even this training was not received in conjunction with her training in speech pathology, but was taught in some supplemental classes she took in teaching children with learning disabilities.

TABLE 6
Practices in Organizing and/or Modifying Instruction

MODIFICATION	PERCENT OF GROUP				
	SP n=47	RS n=33	RE n=46	LD n=41	ALL N=167
Read the text aloud as a group	74.5	97.0	100.0	90.2	89.8
Teach background information prior to reading	61.7	97.0	80.4	80.5	78.4
Provide focusing questions prior to reading	36.2	93.9	78.3	63.4	65.9
Increase the reader's interaction with the text through a think-aloud procedure	40.4	72.7	58.7	48.8	53.9
Provide summaries	44.7	27.3	54.3	53.7	46.1
Teach the student about text structure	12.8	30.3	32.6	19.5	23.4
Have the student read the chapter with his parents prior to class	6.4	24.2	17.4	14.6	15.0
Provide outlines	6.4	9.1	8.7	22.0	11.4
Other	14.9	42.4	13.0	34.1	24.6
No modifications made to instruction	10.6	0.0	0.0	2.4	3.6

Many of the professionals surveyed (24.6%) provided an additional method of instructional organization or modification that they commonly do. These included such things as using peer tutors, utilizing an audiotaped version of the text, reading to the students, and providing one on one instruction. All of the reading specialists or regular

education teachers reported using some type of instructional organization or modification. Only 2.4% of learning disabilities teachers stated that they did not use instructional organization or modification, while 10.6% of speech pathologists were in this category.

Adaptations to Student Requirements

The last area of modifications investigated was in the requirements of the student. Percentages of affirmative responses to each type of modification surveyed are shown in Table 7. Compiling the data from all groups revealed that the two most prevalent requirement modifications were to have the student read less overall and to provide more time for homework. Many professionals, however, entered additional modifications under the "other" category on the survey. These adaptations included having the student read an easier text, having the student read with a tutor or classmate, doing repetitive readings, and having students summarize or act out the material.

During the interview portion many professionals mentioned requiring the student to read the same material and amount as other students, but providing support to do this. Again, many of the professionals interviewed reported deciding upon their modification methods through trial and error in their teaching experience, as opposed to being trained in how to make modifications.

TABLE 7

Professionals' Modifications in the Requirements of the Student

MODIFICATION	PERCENT OF GROUP				
	SP n=47	RS n=33	RE n=46	LD n=41	ALL N=167
Read less overall	46.8	33.3	50.0	56.1	47.3
Provide more time for homework	21.3	36.4	63.0	58.5	44.9
Have the students create their own outlines, graphs, or charts from text	10.6	21.2	26.1	24.4	20.4
Other	23.4	57.6	30.4	36.6	35.3
I do not modify the requirements for the student	34.4	9.1	8.7	4.9	15.0

CHAPTER IV

DISCUSSION

The purpose of this study was to investigate what four groups of professionals in education do in their actual practices in dealing with students who are poor readers or have a specific language impairment in terms of assessing the difficulty of written language materials, adapting these materials, and organizing or modifying instruction, and adapting the requirements of the student. The results indicate that the methods that educational professionals participating in this study employ when facing this dilemma are as varied as the literature on this subject. Furthermore, for the majority of those surveyed, their professional training did not address this issue in any practical manner that could be translated into effective practices. For speech language pathologists this appeared to be particularly true.

It should be noted that generalization of these results is limited due to the sampling method. First, all subjects were residents of Oklahoma. Second, as a comprehensive list of all appropriate professionals in Oklahoma could not be obtained, a true randomized sample could not be utilized. Therefore, the results cannot be generalized to all educational professionals, nationally or in the state of Oklahoma.

Also, it is important to recognize that the different groups of educational professionals approach the use of a text with different intents. For reading specialists the main intent would be to teach reading comprehension, whereas a regular education teacher would be focusing on teaching the content of the text. Speech language pathologists and teachers of students with learning disabilities may demonstrate either of these intentions at

different times. Therefore, the type of modifications to the text, the organization and/or modification of the instruction, and the adaptations in the requirements of the student may vary among the groups due to their reasons for having the student read the material.

It is possible, however, to do a comparison between the subjects' practices and the suggestions seen in the literature to determine how these professionals are surmounting some of the confusion in the research described earlier. As the practices of the subjects that were investigated were threefold, the comparison will also need to address three areas. These are (a) assessment of written language materials, (b) methods of text adaptations, and (c) organization and/or modification of instruction and adaptations in the requirements of the students.

Assessment of Texts

Within the topic of assessment of written language materials, the literature indicates that professionals can use readability formulas, subjectively assess factors that affect comprehensibility, or do a trial reading with students. The majority of subjects indicated that they typically did an informal assessment of the text. However, many of the factors said to affect comprehensibility were not mentioned by any of the subjects such as amount of elaboration on a new topic (Dreher & Singer, 1989), coherence (Beck et al., 1984; Dreher, 1984), and cohesion (Fry, 1994; Sawyer, 1991). A possible explanation for the absence of these factors in the results may be due to their absence on the checklist provided for the subjects. This seems somewhat unlikely, however, because other factors were not specifically listed, but added under the "other" category by the subjects. These include size of print, amount of print on a page, illustrations, and presence of visual aids. It

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appears that many of the subjects look solely at the text features that can be easily seen in a brief scan of the material, described by many of the those interviewed as "eyeballing the text", such as length of sentences and words, as well as the text features mentioned above. This could be related to the time constraints that were also referred to in the majority of the interviews. These same constraints may account for the fact that many professionals rely almost entirely on the grade levels indicated by the publishers of the text in identifying the reading level of the text. This may be somewhat problematic in that the readability of a text often varies from passage to passage within a text (Dreher, 1984) and it is not always clear what actions the publishers took to determine the reading level of the text.

Adaptation of Texts

In the area of text adaptation practices, the literature primarily contains two options, modifications for increasing readability and those for increasing comprehensibility. Flesch (1951) outlines means for increasing the readability of a text through six main methods. The professionals surveyed reported using only two of these methods, those related to decreasing word and sentence length. These same two factors are the variables in most readability formulas. Thus, it may be that some professionals are actually misusing readability formulas for adapting texts as many researchers warn against (Beck et al, 1989; Beck et al., 1984; Klare, 1963, 1974-75; Pearson, 1974-75). This occurs when professionals use the same variables used in the assessment of texts (i.e. sentence and word length) for the adaptation of text by shortening sentences and replacing long words. Subjects also listed several of the factors that are related to increasing comprehensibility such as highlighting main ideas, providing background information, and

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deleting irrelevant information. However, they ignored, for the most part, adding

cohesive ties, inclusion of specific statements showing the significance of particular

information, and elaborating and clarifying content. All of these were also ignored in the

assessment of the text as well. Therefore, there does seem to be some relationship

between text assessment and adaptation practices for the subjects in that what they

generally look for in terms of text features that make material more easily read during the

assessment of a text are the same text features that they modify in difficult texts.

Organization and/or Modification to Instruction and Requirements

An additional topic of investigation was what the professionals do after assessing a

text and possibly making modifications to the text. In this third area of organizing and/or

modifying the instruction and requirements of the students, the literature contains a

plethora of suggestions. As stated earlier these suggestions can be categorized into three

categories, increasing the interaction with the text, teaching self-monitoring strategies, and

explicitly teaching text structure. Over 50% of the professionals utilized focus questions

prior to reading and/or a think-aloud procedure to increase reader's interaction with the

text. Other strategies to increase the interaction with the text mentioned by the subjects

were reading with a tape, creating visuals and acting out the material. None of these were

reported by over 10% of the professionals in any group however. A quarter of those

surveyed reported teaching text structure. Professionals appeared to typically modify the

students' requirements by having them do less reading and homework, rather than

supplying additional resources.

In each of these three areas, speech language pathologists consistently appeared to

be at a disadvantage in terms of knowledge of how to provide appropriate written language materials for students with poor reading ability. They had the lowest reported training and awareness, the least frequent practice of adaptations, and the least practice of modifying their instruction or requirements of the students. Many wrote that they felt these topics were not applicable to them as speech language pathologists, as they emphasize oral language and not reading. Perhaps when working with a student whose primary problem is with speech, such as a fluency or articulation disorder, the use of any written language materials is infrequent. However, it would seem that even in these types of cases, the speech language pathologist needs to be cognizant of other related areas of weakness that the student may possess, as the literature supports a strong connection between phonological development and language (Catts, 1991; Bailet, 1991). Also, for those students whose primary difficulty is with language, such as with specific language impairments, it would seem ineffective to treat the students as if having solely an oral language problem.

From these results, it cannot be said that all speech language pathologists lack certain training in the assessment and modification of written language materials. Further research, involving a randomized sample taken nationally would be necessary to confirm or deny this. As efficacious therapy is the primary goal of speech language pathologists, this area would appear to be one that does require further investigation and perhaps needs to be incorporated into training programs. From the educational professionals in this study, it would seem that speech pathology is not the only discipline that needs to investigate this matter further.

CHAPTER V

SUMMARY

Professionals in education face a dilemma of how to provide age-appropriate and ability-appropriate texts for students who have poor reading ability or specific language impairments. Controversy exists within the literature on how to address this problem. The purpose of this study was to determine what four groups of educational professionals do to resolve the issue of providing appropriate written language materials for these students. Specifically, this study addressed how educational professionals determine the difficulty level of texts and then what types of adaptation they make to the text, to their instructional organization or to the requirements of the students, when faced with a text that is too difficult.

The subjects in this study were 167 educational professionals belonging to one of four groups. These groups were speech language pathologists, reading specialists, regular education teachers, and teachers of students with learning disabilities. Twenty subjects participated in an additional follow-up interview to provide supplemental information.

The first issue addressed in this study was the typical method for determining the difficulty level of written language materials. When questioned about their knowledge of assessment methods for determining the difficulty level of a text, over 40% of those surveyed reported a lack of training in the use of readability formulas and 58% in the use of alternative methods. Most of the subjects reported doing an informal assessment of the difficulty text features that particular professionals looked for depends upon what they had determined to be important for reading ease. A majority of subjects reported checking for

the length of words and the complexity of sentences within the text. They also used the grade level provided by the publisher. Only reading specialists had a majority, slightly over 50%, who regularly use a readability formula. Speech language pathologists were the only group who lacked training in the assessment of a text's difficulty, with less than 15% who had received training.

The second area of investigation was in the text adaptation practices of educational professionals. Many of the professionals appeared to change the text features that they had previously assessed to determine the difficulty level of the material. This resulted in many of the speech language pathologists surveyed doing text modifications by replacing long words and shortening sentences. Reading specialists, on the other hand, tended to change more global aspects of the text, such as adding background information, deleting irrelevant information, and highlighting key ideas, although they also reported simplifying the vocabulary. Over 80% of the teachers of students with learning disabilities used highlighting of main ideas as their primary form of text modification. Regular education teachers surveyed also simplify vocabulary and highlight key ideas. Reading specialists were the only group that contained a majority who stated they are always able to adapt texts for their students' needs.

The third issue was what the four groups of educational professionals do in terms of organizing and/or modifying their instruction. The three most prevalent practices found were to read the text aloud as a group, teach background information prior to reading, and provide focus questions prior to reading. Over 50% of those surveyed also reported using a think-aloud procedure to increase the readers' interaction with the text. Although the different professionals have varied purposes for using a text, whether it be to teach the content or teach reading comprehension, there seemed to be very similar practices in

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instruction between the groups.

Finally, the practices of adapting the requirements of the student were explored in the survey. The two main adaptations seen were to have the student read less overall and to provide more time for homework. A large percentage of the subjects marked the "other" option on the survey for this question. Some of the modifications included were having the student read an easier text, using peer tutors, having the student summarize the material, and doing repetitive readings. Fifteen percent of the subjects do not do any type of modification to the requirements of the students.

In each of these areas that were investigated, it seems that many professionals practice in an eclectic manner, taking bits and pieces of methods learned in school, through others, and by trial and error. Of those interviewed, few mentioned training as a means of discovering the practices they used in dealing with difficult written language materials. This brings up the question of adequacy of training for all four groups in this area, although particularly for speech language pathologists. The issue itself seems to warrant further study in that it has a direct impact upon the effectiveness of the education system. For students with poor reading ability or with a specific language impairment, constantly being given written language material that is too difficult could lead to extreme frustration, poor self-esteem, and a dislike of school. Professionals in education, thus, need to be very certain that their methods of determining the difficulty level of a text and modifying that text and/or their instruction and requirements of the student are the most effective methods. Further investigation is needed to determine if the findings of this study are representative of other educational professionals in the nation and their training.

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APPENDIXES

APPENDIX A

SURVEY

Thank you for completing this short survey. The information you are asked to provide is confidential and will be used for statistical purposes only. The purpose of this study is to better understand how teachers and other professionals adapt written language materials for their students in the classroom, resource room, etc. Please do not identify yourself by name.

PART ONE: *The following set of questions are designed to find out how you feel about the use of readability formulas and other methods of measuring text difficulty in your professional practice. Text is defined as written material of a few sentences or longer. This would include textbooks, children's literature, paragraphs in a workbook, etc. Please circle yes/no unless otherwise indicated.*

1. I am aware that one can determine a text's difficulty   yes   no
   level by using a readability formula.

2. I am aware that one can determine a text's difficulty   yes   no
   level by using other established methods.

3. I have had training in measuring text readability using   yes   no
   readability formulas.

4. I have had training in assessing text readability using   yes   no
   other established methods.

5. I would be interested in being trained in measuring   yes   no
   text readability.

6. I believe readability formulas are useful in assessing   yes   no
   text readability.

7. I am familiar with the following readability formulas: Fry   Dale-Chall   Raygor
   (Check all that apply.)   Spache Fog   Flesch   Other

PART TWO: *The following set of questions are designed to find out what your actually do in your professionals practice in relation to adapting written language materials for your students*

I am able to adapt written language materials depending
on my students' reading level, interests, and needs.   Always Frequently Sometimes Rarely Never

I use readability formulas in my professional practice
when adapting texts for my students.   Always Frequently Sometimes Rarely Never

I use other established methods of measuring text
Difficulty when adapting texts for my students.   Always Frequently Sometimes Rarely Never

To determine whether a particular text if appropriate   _ Use a readability formula
for my students. I use the following methods: _ Look at the grade level provided by the publisher
                                                        _ Look at the difficulty level of the vocabulary
                                                        _ Look at the complexity of the sentence structure
                                                        _ Look at the interest level of the text
                                                        _ Other (please specify) _____

When working with a student for whom the text is too difficult, I usually make the following types of modifications to the text: (Check all that apply).
_ Highlight key ideas
_ Delete irrelevant information
_ Simplify the vocabulary by using shorter words
_ Shorten sentences
_ Add background information directly to the text
_ Provide explicit connections between ideas
_ Add cohesive ties to connect ideas (i.e. but. however, therefore, etc.)
_ Other (please specify)_____
_ I do not modify the text.

When working with a student for whom the text is too difficult, I usually make the following types of modifications to my instruction: (Check all that apply).
_ Teach background information prior to reading
_ Provide outlines
_ Read the text aloud as a group
_ Provide focus questions before students read
_ Teach the student about text structure before reading
_ Provide summaries
_ Have the student read the chapter with his parents prior to any class discussion or use of text
_ Increase the reader's interaction with the text through a think-aloud procedure
_ Other (please specify)_____
_ I do not modify my instruction.

When working with a student for whom the text is too difficult, I usually make the following types of modifications to the requirements of the student: (Check all that apply).
_ Read less overall
_ Provide more time for homework
_ Have the students create their own outlines, graphs, or charts from the text
_ Other (please specify)_____
_ I do not modify the student's requirements.

PART THREE: *Demographics*
Please place a check mark in the appropriate blank or fill in the appropriate number.

My profession is: _ speech language pathologist _ regular education teacher
                    _ reading specialist   _ teacher of children with learning disabilities

I have been practicing in   _ 0-2 years   _3-5 years
my field for: _ 6-10 years   _ 11 years or more

Size of School: ___   My age is ___ (optional).
Grade(s) that I work with: ___   Particular subjects taught if applicable: _____.

I am: (optional)   _ Male   _ Female

I am: (optional)   _American Indian/Alaskan Native _ African-American/black-nonhispanic
                      _ Mexican American/Chicano   _ Caucasian/white-nonhispanic
                      _ Asian American/ Pacific Islander _ Other- Hispanic/Latino

Thank you for participating. It is very much appreciated.

APPENDIX B

INTERVIEW QUESTIONS

1a How do you typically determine the appropriateness of a text for a particular student?

1b. How did you decide upon that method?

2a. What other methods have you used?

2b. What were the problems with these?

3a. Have you attempted modifying a text that was too difficult for a particular student? Why or why not?

3b. If yes, do you typically adapt the text when a mismatch arises?

4a. What types of text modifications do you typically make after determining that the text is too difficult for a particular student?

4b. How did you choose those?

5a. What types of modifications do you typically make in your instruction?

5b. How did you choose those?

6a. What types of modifications do you typically make in your requirements of the child?

6b. How did you decide upon those?

7. Where did you receive instruction on the use of readability formulas?

7b. What type of instruction did you receive on the use of readability formulas?

8. What types of alternate methods of assessing the difficulty level of texts are you aware of?

8b. What types of alternate methods of modifying texts are you aware of?

9. Where did you receive instruction on the use of alternate methods assessing text difficulty?

10. Where did you receive instruction on the use of alternate methods of modifying texts?

APPENDIX C

IRB APPROVAL

OKLAHOMA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD
HUMAN SUBJECTS REVIEW

Date: 11-06-97   IRB#: AS-98-029

Proposal Title: EDUCATIONAL PROFESSIONALS USE OF WRITTEN LANGUAGE MATERIALS

Principal Investigator(s): Connie Stout, Jennifer McKay

Reviewed and Processed as: Exempt
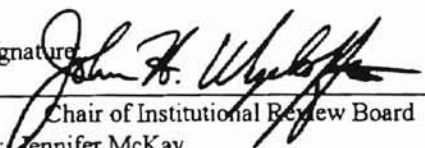
Approval Status Recommended by Reviewer(s): Approved

ALL APPROVALS MAY BE SUBJECT TO REVIEW BY FULL INSTITUTIONAL REVIEW BOARD AT
NEXT MEETING, AS WELL AS ARE SUBJECT TO MONITORING AT ANY TIME DURING THE
APPROVAL PERIOD.
APPROVAL STATUS PERIOD VALID FOR DATA COLLECTION FOR A ONE CALENDAR YEAR
PERIOD AFTER WHICH A CONTINUATION OR RENEWAL REQUEST IS REQUIRED TO BE
SUBMITTED FOR BOARD APPROVAL.
ANY MODIFICATIONS TO APPROVED PROJECT MUST ALSO BE SUBMITTED FOR APPROVAL.

Comments, Modifications/Conditions for Approval or Disapproval are as follows:

Signature   Date: November 7, 1997

Chair of Institutional Review Board
cc: Jennifer McKay

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VITA

Jennifer Leigh McKay

Candidate for the Degree of

Masters of Arts

Thesis: EDUCATIONAL PROFESSIONALS' USE OF WRITTEN LANGUAGE
MATERIALS

Major Field: Speech Pathology

Biographical:

Education: Graduated from Edmond Memorial High School, Edmond, Oklahoma
in May 1992; received a Bachelor of Science degree in Speech-Language
Pathology from Oklahoma State University, Stillwater, Oklahoma in
December 1995. Completed the requirements for the Master of Arts degree with
a major in Communication Sciences and Disorders at Oklahoma State University in
May, 1998.

Experience: Internship at Scottish Rite Childhood Language Disorders Clinic,
Guthrie, OK, Spring Semester 1997; Internship at Jim Thorpe
Rehabilitation Center in Oklahoma City, OK, Summer Semester 1997;
Internship at John Glenn Elementary in Oklahoma City, OK in Fall 1997.

Professional Memberships: National Student Speech-Language Hearing
Association