

FOCUS ON EXCEPTIONAL CHILDREN

Word Recognition Development

Charles H. Hargis

In considering reading skills, teachers seldom recognize the distinction that should be made between *word recognition* and *word identification*. Yet, skills in these two areas are distinct and should receive separate instructional consideration.

The term *word recognition* as used here refers to the process of learning to instantly recognize printed words. This differs from terms that suggest word identification or the identification of words by decoding or analytic processes. This latter is often referred to by terms such as *word attack*, *word identification*, *phonic analysis*, and *decoding*.

Distinguishing between word recognition and word identification has to do with the familiarity of printed words. Word recognition implies familiarity. Word recognition development is the process of becoming familiar with specific printed words, in whatever context they may occur.

The more efficient reading becomes, the more efficient the word recognition process is. "Word calling" behavior is associated with poor word recognition skill. Word callers overly depend on the word identification process to figure out how to say (call) the word. Reading is a laborious word-by-word "sounding out" procedure, with the child calling the word only after being sure of a pronunciation. Overdependence, or an almost exclusive emphasis, on word identification skills causes word callers to attend to the spelling-sound constituents of printed words so that they don't gain sufficient familiarity with words themselves. Also fostering this "word-calling" behavior is the excessive use of oral reading as the main reading activity. Accuracy in pronunciation — rather than improved word recognition or comprehension — seems to be the criterion measure of success in oral reading activities.

Dr. Hargis is a Professor in the Department of Special Education, University of Tennessee. He has a new book, Teaching Reading to the Handicapped, just released by Love Publishing Company.

SIGHT WORDS

Often, word recognition activities are compartmentalized in a separate place in the reading curriculum. Certain sets of words are usually emphasized in these activities. The words are usually called sight words or service words. They are composed of a relatively small number of common high-frequency words. The Dolch Basic Sight Word List (1941), the one most commonly associated with sight word teaching, is subsumed in virtually all other such word lists. These words occur with high frequency in all spoken or printed discourse. They constitute over half the total number of different words used in primary level basal readers (Mangieri, 1977).

A great number of these words are phonically irregular (e.g., *are, were, some, said, their, have*). Others have complex letter-sound associations that will not be introduced until some time later — frequently after the first-grade level. Since the use of even rudimentary sentences is not possible without having to use some of these words, they are usually introduced as sight words so that students can begin doing some reading.

Children who have reading problems seem to have inordinate difficulty in learning to recognize these common sight words. They show inconsistency from day to day in recognizing these words, and confusion occurs between many of the words.

FOCUS ON EXCEPTIONAL CHILDREN (ISSN 0015-511X) (USPS 203-360) is published monthly except June, July, and August as a service to teachers, special educators, curriculum specialists, administrators, and those concerned with the special education of exceptional children. This journal is abstracted and indexed in *Exceptional Child Education Resources*, and is also available in microform from Xerox University Microfilms, Ann Arbor, Michigan. Subscription rates, \$15.00 per year. Copyright 1982, Love Publishing Company. All rights reserved. Reproduction in whole or part without written permission is prohibited. Printed in the United States of America. Second class postage is paid at Denver, Colorado. POSTMASTER: Send address changes to:

Love Publishing Company
Executive and Editorial Office
1777 South Bellaire Street
Denver, Colorado 80222
Telephone (303) 757-2579

EDITORIAL BOARD

Edward L. Meyen
University of Kansas

Glenn A. Vergason
Georgia State University

Richard J. Whelan
University of Kansas Medical Center

Carolyn Acheson
Senior Editor

Stanley F. Love
Publisher

IMAGERY LEVEL AND DIFFICULTY

Remarkably little research has been done on what characteristics of words pose obstacles to their recognition. Some research has been directed at the identification problems of words by their configuration, phonic characteristics, and length (Hargis & Gickling, 1978; Wolpert, 1972). But much more interest has been paid to skill deficits in the learner.

Only recently has interest been expressed in another characteristic of words that has turned out to be significantly related to learning recognition: the imagery level of words. Imagery level or concreteness of a word has to do with how readily a mental image can be formed of the referent the word represents. Concrete nouns can have the highest imagery level. They are words like *car, dog, house, and tree*. Low imagery nouns are words like *time, idea, fun, and belief*.

Other parts of speech can have various levels of imagery as well, but verbs, adjectives, or adverbs, do not have a mental image distinct from the things they operate with or modify. The verb *run*, though concrete for a verb, requires some animate nouns to illustrate its meaning. Adjectives also require nouns, and adverbs require verbs or adjectives.

Still other quite common words that make up sentences serve primarily syntactic functions. They are sometimes called structure words. Structure words include prepositions, articles, auxiliary verbs, relative pronouns, and conjunctions. These words have very low imagery. One simply does not form a mental image of *some, at, where, been, these*, and so on.

Several research projects have been conducted to determine any differences in the difficulty of learning to recognize words by levels of imagery (Hargis & Gickling, 1978; Gickling, Hargis, & Radford, 1982; Hargis, 1978). Groups of both handicapped and nonhandicapped children have been presented high imagery and low imagery nouns and some common structure words. All the students included for study were performing on a pre-reading level. None could read any of the words to be taught. All the words were taken from Stone's Revised Word List (Spache, 1964). Each of the words was placed on a 3" x 5" word card. These words were presented in the same way and received the same amount of teaching time. Findings of the research projects point out quite clearly that high imagery significantly enhances the development of word recognition. This is true for the nonhandicapped as well as the handicapped. The high imagery nouns were found to be almost three times

as easy to learn as the low imagery nouns and structure words.

In these experiments all the words were presented in isolation on cards, with no connected reading activities at the time. Subsequent research has demonstrated the facilitating effect that the context of a phrase or sentence has on learning lower imagery words. But much work on developing word recognition skill is done with isolated drill activity, often using flash card drills or games in which the words are isolated. Low imagery words are exceedingly difficult to learn without the context that discourse provides. Isolated word drill is an extremely inefficient, often frustrating, method of learning words other than high imagery nouns. Imagery level is truly an important consideration if words are presented in isolation. In observing more than occasional instances of children who received much of their remedial reading work through isolated drill activities with the Dolch words, seldom do these children make even modest progress in learning the words. And the teachers are invariably confused by the day-to-day inconsistency in performance toward mastering the words.

The meaning and concreteness of many of these words must be provided by their context in connected discourse, and in association with other words. The phrase *these apples* makes the use of *these* far more concrete, and each repetition in such an association represents a much larger step toward mastery.

For high imagery words, however, the child's realm of experience enables many isolated words to appear meaningfully. These images include stop signs, other traffic signs, names of familiar restaurants, stores, restroom signs, and so forth. Picture dictionaries capitalize on high imagery nouns and picture combinations. No child or adult, of course, would expect to find a sign saying *these, were, before, will, or some*. Unfortunately, children who have the greatest reading problems will likely receive less meaningful repetition in discourse and more repetition in isolated drill.

REPETITION IN CONTEXT

Gates (1931) did the primary work in studying the extent of repetition needed in learning to recognize words. This important but neglected work provides the general guidelines for supplying repetition of words by levels of intelligence. Table 1 illustrates the average minimum number of repetitions a child needs in printed discourse. Gates pointed out that this need for repetition was independent of any exposure to the words a

child might get in isolated drill, either as a part of word identification skill exercises or word recognition drill.

The number of repetitions required for mastery probably varies when considering individual words. Imagery level or concreteness may have a facilitating effect in context, and even exposure of high imagery words in isolation is beneficial. The old sight words or service words will get plenty of repetition almost unintentionally in discourse. Most of them have such utility in forming sentences that they have to appear with regularity. In fact, as was mentioned earlier, the Dolch words constitute over half the word occurrences in primary basal readers. Words occurring with low frequency, however, will require systematic attention in regard to repetition.

TABLE 1

Mean Number of Word Repetitions Required by IQ Levels

Repetitions	IQ
20	120-129
30	110-119
35	90-109
40	80-89
45	70-79
55	60-69

Adapted from Gates (1931).

INTRODUCTION RATE

In his early work Gates provided guidelines for the rate at which words could be successfully introduced, as well as the number of repetitions they would require. He found that one new word in 60 was a sufficiently manageable rate for most beginning readers to deal with. At that time (the 1920s), the available primary reading material introduced new words in the range of 1 in 10 to 1 in 17 running words. This range obviously had been too difficult, and teachers had to take rather heroic steps to provide enough supplementary teacher-made materials to aid students in reading their books at all.

Gates' research had considerable impact in regard to word introduction rates. Beginning in the 1930s, basal readers generally conformed to his guidelines for introduction. The provision for repetition he suggested,

however, has not been managed. Words do not consistently receive systematic minimum repetition, and the repetition is not adequate for slow and disabled readers. Some words receive more than adequate repetition simply because they are structure words with utility such that they must be used repeatedly. Systematic and informal tabulation of repeated use of words finds some with zero repetitions in the same story in which the word was introduced and only two repetitions in the same book. More repetitions of words is the mean figure, but at least 30 percent of the words receive inadequate repetition for slower students.

Too many words remain unfamiliar, thereby increasing the load of unknown words beyond the limits acceptable for instructional purposes. Many teachers with problem readers find themselves in the same predicament as teachers of the 1920s. To make a book readable for a child, they have to provide sufficient supplementary teacher-made material to reach the necessary rate of repetition for many words that have remained unfamiliar. Teachers of reading disabled students are annoyed and frustrated at the lack of materials these students can read.

Some beginning reading instructional materials provide for repetition based on repeating patterns of letter-sound associations. This is well and good, but it should not overshadow, as it seems to, the requirement for consistent repetition of the words themselves.

THE INSTRUCTIONAL LEVEL

Controlling the introduction of words in reading material is one thing, and providing repetition is still another. A word may remain unfamiliar long after too many new ones have been introduced. Betts (1946) addressed the question of how many strange words a child can deal with in a reading activity and still maintain sufficient on-task behavior and comprehension for instructional purposes. He described the idea of the instructional level and the independent level. He also described the level of difficulty to be avoided, which he called the frustration level. Generally speaking, at the instructional level a child can encounter from two to four percent new or unfamiliar words. With teaching assistance, material of this difficulty can permit a comprehension level of about 75 percent and sufficient on-task time. If the material exceeds the four-percent limitation, comprehension falls off dramatically, as does on-task behavior. For reading material that requires no teaching assistance and can be used independently or recreationally, the child should encounter fewer than two percent unknowns.

ASSESSMENT

Like Gates' work on introduction and repetition, Betts' work was of fundamental importance. The reader at this point might say, "Yes, I know all about the instructional level, but I can't *find* anything for my students at their instructional level, and when I do, it is so much below their age level that they reject it as babyish." Other teachers respond, "Yes, this is a good idea, but what if the child can't read or can hardly remember any word consistently — even his name?"

Finding out what the student does know is a fundamental requirement. This may be difficult. First, finding the words that the student recognizes will be helpful. The teacher should take the words the student has had some contact with, then make a word recognition test from books or from drill work the student has used. The words can be placed on flash cards or word lists. The student then is to look at the words and see if he or she can name them. The teacher should identify those that the student immediately recognizes and those identified with hesitancy. These words will form the basis for preparation of the instructional reading material.

The focus is on what the child *knows*. The reading material that will have to be provided must be composed largely of knowns. According to instructional level guidelines, this must be 96 percent knowns — which can seem like a formidable challenge if the child turns out to know only nine words or even fewer! The child does need to begin reading connected discourse. In some cases, the format has to be appropriate for a teenager.

Where does one find materials written in such a restricted vocabulary and also provide about 50 repetitions for each new word? Well, the fact is that you cannot. Teachers who have students like these will find that they have to make much of the material for these children themselves. Format can be handled by making type size, spacing, and paper similar to that generally used by age peers, but other considerations may pose more of a challenge.

PREPARATION OF READING MATERIALS

When a child knows only a few words, writing connected discourse can present problems. A large pool of words from which to draw makes writing a story or selection much easier. With only a few words, the only way the instructional level guidelines can be followed is to use repetition. Consider the following selection:

I see a Trans Am.
I see a motorcycle.

I see a bike.
 The Trans Am has four wheels.
 The motorcycle has *two* wheels.
 The bike has *two* wheels.
 I have a bike.
 I want a motorcycle.
 I want a Trans Am.

In this selection, the student could recognize all but the word *two*. The context in the selection, however, was powerful enough that he was able to identify *two* with no assistance.

At a much simpler level, selections like the following may be necessary:

I see a *chair*.
 I see a *table*.
 I see a *car*.
 I see a *bike*.
 I see a *dog*.

If a child doesn't know any words with consistency, the use of repetition will have to be even more vigorously applied. In the selection above, even the vertical alignment of the words is used to provide visual context to help identify the words. The words *I* and *a* were selected because the letter names are also the words. The word *see* was not known, but it was introduced to the student, and vertical alignment assisted in its subsequent identification. The high imagery nouns were still unfamiliar, but the student had access to word cards with the item pictured, and the other items were labeled in the room. Thus, the known context was not provided entirely by words.

In any case, the meaningful repetition of words is an effective step toward subsequent selections that can rely more on internal context and be a little more varied. Success is critically important to working with children with chronic reading problems, and the material itself is directly related to success or failure.

The words to be identified for introduction in these selections should serve specific purposes. The words should have real utility. They should appear with high frequency so that their acquisition makes the child more independent. Another purpose is to help the student get ready to read in a specific book or series.

Teachers will have a hard time continuing to make all the student's reading material. Therefore, when possible, the words introduced in teacher-made material should be the same as those used in the commercial material the child is to begin reading. The student can be placed in the book when he or she has a sufficient stock of words to read it. Additional words can be included in

the teacher-made materials to spark interest. For instance, *Trans Am* was included in the selection illustrated earlier because of the child's specific interests. It points out a case of a child who was basically a nonreader learning a word because of his interest in a particular automobile.

WORD IDENTIFICATION

Experience has shown that the most important word identification skill is the use of context. Other word identification skills are most beneficial when coupled with the use of context in predicting what an unknown or unfamiliar word is. A child may be getting only word analysis skill work during reading instruction (primarily letter-sound association at this level). If the child is not yet reading connected discourse, he or she cannot apply the skill with context. A teacher working with children like this is often heard to say, "He knows his sounds, but he still can't read!"

Children must have the opportunity to read at an instructional level or they cannot effectively apply word identification skills. Too many hard words decrease the likelihood of efficient use of word identification skills. Consequently, *effective word identification development is contingent upon word recognition development.*

Often, unfortunately, if children have pronounced reading difficulties, they are more likely to receive isolated word identification skill work and virtually no opportunity to read in connected discourse. As a consequence, the word identification skills do not generalize to real reading and they remain only fragmented items with little utility. Far too many students reach adolescence without significant reading skills because of this.

CATCHING UP

If a student is beyond the primary grades and still has had little achievement in reading, the problem or deficiency may seem to constitute an insurmountable obstacle. One procedure, however, can provide at least a partial solution to the problem. This strategy involves a fairly rapid way (relatively speaking) of increasing the stock of words in a student's word recognition vocabulary. Another important feature of this procedure is that it is a reading activity that need not cause further failure and frustration.

The first step is to identify a book or selection that is both comprehensible and short. What is meant by comprehensible is that it is understood when read to the student. The passage should be within the student's listening

capacity. Short, in this instance, means no more than 15 minutes of teacher time to read it. Listening capacity of a student for a given selection can be determined by reading a portion of it to him or her (approximately 250 words) and then asking the student questions that generally reflect its content. If comprehension is at least 70 percent, the passage is at or within the student's capacity level. Helpful, but not critical, is that his activity be interesting to the student.

The next step is to tape record the selection. During the taping, the teacher should provide cues on the recording to indicate from what page the recording is being read and when the pages are being turned.

In actual procedure, the student simultaneously listens to the recording and follows the printed text. The student is permitted to "read" and listen to the tape as many times as necessary to learn to recognize all the words in the selection. The reason for using a relatively short selection is to allow listening to it with sufficient repetition to learn to recognize all the words.

The Gates' (1931) guidelines for word repetition in connected discourse provide a good rule of thumb for the number of times the student will have to listen to the tape before he or she can read it independently. These guidelines, however, must be used with due consideration to the number of repetitions words may receive within the selection itself. If a word were repeated five times within the selection, the average student would require about seven repetitions of the tape to learn to recognize that word. Of course, the number of repetitions of individual words within any selection varies enormously. High utility structure words are repeated quite naturally. *A, an, some, or the*, for example, appear in a majority of sentences in any selection.

Also, one can only guess how helpful initial listening/reading of the selection may be if the selection is of considerably greater difficulty than the student's instructional level. Much time during the first repetitions will be devoted to keeping the place, being lost, or trying to not get lost. In contrast, without any pressure the student is permitted to spend reading time in this activity until he or she feels comfortable about mastering the selection.

Mastery is demonstrated by the student's ability to read the passage aloud to the teacher without the aid of the tape. Carol Chomsky (1978) mentioned cases that took 20 repetitions covering about a month's time. Limiting the tape to only 15 minutes still requires quite a large number of reading periods to get enough repetition to learn troublesome, infrequently occurring words.

When the student attempts to read the material aloud without the tape, the teacher should listen with complete sympathy and no correction. The procedure, after

all, is to be used with children who are chronic failures in reading, and they need to gain confidence so they will stay with the task.

In regular reading activities, known context, teacher assistance, and word identification skills will help the child cope with new and unfamiliar words. In the activity just outlined, the tape provides the necessary aid in dealing with the large load of unfamiliar words. The tape almost represents a teacher or tutor at hand to provide the word when one is not recognized. It does this far more efficiently than choral reading or the reading circle does, especially since the student is in control as he or she pushes the levers on the tape recorder. Also, the student listens to one efficient reader at a normal oral reading rate. The student can also repeat as many times as needed.

One of the best features of this system is that it assures success in a reading activity when only failure has been known before. Success and the ability to complete a task are greatly reinforcing.

The number of new words the child can learn to recognize through this procedure will provide a substantial resource in gaining access to more reading material. The number of different words that can appear in a 10- or 15-minute selection varies enormously, of course, but by the third grade level several hundred different words may be used, including most of the Dolch words.

With this activity, the potential for catching up is very good for older students who are rather far behind their potential for reading achievement. Nevertheless, this activity should be considered as only an interim or supplementary activity. In spite of how much it may help problem readers at first, it does nothing to help the student use context in identifying unfamiliar printed words. This kind of prediction will be the most important word identification skill for further growth in reading. Also, reading with tapes is paced by oral reading. Silent reading rate is held down to that of oral. This is all right at beginning reading levels, but it is not a practice to be maintained for long. Initially, children who have experienced chronic failure find this failure-free activity quite reinforcing. But the feelings of success and confidence that it initially inspires may well turn to boredom with continued use.

SUMMING UP

Increased fluency in word recognition marks the real improvement in reading skill. Several conditions for improving word recognition skill have been presented to this point. The first had to do with imagery level of words and their mode of presentation. Students are unlikely to

benefit from the isolated presentation of low imagery words. The only words likely to be learned with reasonable facility in isolated presentation are high imagery nouns. These are the concrete nouns that can be pictured. Other, lower imagery words can be learned with more facility if they are presented in connected discourse. The words *some, these, that, is, happy, are,* and *big*, for example, take on considerable meaning from the association with high imagery nouns in connected discourse.

These dogs are happy.
That dog is big.
Some dogs are brown.
Some dogs are white.

Pictures that clearly illustrate the discourse have further facilitating effect on learning the words, because concreteness and meaning are enhanced.

The second condition for improving word recognition is adequate repetition in context. Gates' (1931) guidelines for repeating words still provide important objectives for minimum repetition of words in connected discourse. About 25 percent of the school-age population will not be served adequately by the amount of repetition provided by available reading programs.

The third condition is the appropriate rate of introduction of new words. Gates found that one new word in 60 was appropriate for most students. But an interaction between repetition rates and introduction rates must be considered. New words will be about as strange in a good many of their subsequent appearances as they were when they were first introduced.

How can this problem be managed? The question was addressed by Betts when he formulated the notion of the instructional level. Preparing or finding material at the instructional level is the fourth condition for improving word recognition development. With the instructional level, the student should encounter new or still unfamiliar words within the range of two to four percent in connected discourse. In other words, 96 to 98 percent of the connected discourse must be composed of familiar words. This ratio of knowns to unknowns is important because it permits the student to stay on task and maintain adequate comprehension. Some juggling may be required to keep the number of new and still unfamiliar words within this percentage range.

Instructional level reading not only permits the student to make progress in word recognition development, but it also provides sufficient useful context to aid in identifying new and unfamiliar words. It is a level that can foster prediction and use of context. Additionally, the student can benefit from application of other word identification skills when they are coupled with this context.

Regardless of the word identification program the teacher employs, these four considerations on word recognition development are important. Word identification programs differ widely in approach and emphasis. Some skills presented may or may not be a part of various programs, or they may be placed in different order in the teaching sequence. Whatever program is used, the students will undoubtedly benefit more from it if these four conditions regarding word recognition are given primary consideration.

A different emphasis in assessment must be taken to deal with word recognition development. The emphasis must be placed on known words. After all, to meet the instructional level objectives, at least 96 percent of connected discourse must be familiar. When working with students who have little reading ability, finding even a few words may require considerable reaching.

When a teacher discovers that a student knows scarcely any words, this is not an insurmountable problem. Repetition of the very few knowns can accomplish the requirements for the instructional level. Pictures, for picturable words, or labels on actual objects can be used if familiar context cannot be provided in printed discourse.

For older students who have a potential for acquiring reading skill but still have none, the tape-recorded selection method can be a big lift. This method is a failure-free device to help far-behind older children make a big increase in word recognition level. For a morale and confidence boost after chronic failure, it has considerable value. It also can provide a large stock of words in a student's word recognition vocabulary that are a big asset in either preparing or finding reading material at an appropriate instructional level.

The importance of word recognition development with students with severe reading problems cannot be overemphasized. Such systematic attention to word recognition is probably not as essential for typical learners. The fact that careful attention to word recognition development is more necessary for children with learning problems may be due in part to a greater focus on word identification skill deficits. If those deficits are emphasized, it will usually be at the expense of other aspects of reading development rather than in a balanced complementary combination. Subskills and sight word teaching that are fragmented and isolated from real reading almost never produce much progress.

REFERENCES

- Betts, E.A. *Foundations of reading instruction*. New York: American Book Co., 1946.

Chomsky, C. If you still can't read in third grade: After decoding, what? In S. J. Samuels (Ed.), *What research has to say about reading instruction*. Newark, DE: International Reading Association, 1978.

Dolch, E. W. *Teaching primary reading*. Champaign, IL: Garrard Press, 1941.

Gates, A. J. *Interest and ability in reading*. New York: Macmillan, 1931.

Gickling, E. E., Hargis, C. H., & Radford, D. *Word recognition development among retarded and nonretarded prereaders as a function of high versus low imagery nouns*. Manuscript submitted for publication, 1982.

Hargis, C. H. *Word recognition development as a function of imagery level*. Paper presented at the meeting of the Linguistic Society of America, Champaign-Urbana, July, 1978.

Hargis, C. H., & Gickling, E. E. The function of imagery in word recognition development. *Reading Teacher*, 1978, 31, 870-875.

Mangieri, J., & Kahn, M. S. Is the Dolch list of 220 words irrelevant? *Reading Teacher*, 1977, 30, 649-651.

Spache, G. D. *Good reading for poor readers*. Champaign, IL: Garrard Publishing Co., 1964.

Wolpert, E. M. Length, imagery values and word recognition. *Reading Teacher*, 1972, 26, 180-186.

ALERT

June 11-13, 1982

Association for the Gifted (Tag)
Regional Conference on Gifted Minorities
Tucson, Arizona
Write: Dr. June Maker, Dept. of Special Education
University of Arizona, Tucson, AZ 85721

June 14-18, 1982

TAG Institute on Gifted Minorities
Tucson, Arizona
Write: Dr. June Maker, Dept. of Special Education
University of Arizona, Tucson, AZ 85721

INDEX VOLUME 14

Author Index

Donn E. Brolin (March 1982)
Sandra B. Cohen (November 1981)
Nancy N. Creekmore (September 1981)
W. N. Creekmore (September 1981)
Beverly Dexter (September, October,
December 1981; March, 1982)
George L. Duerksen (December 1981)
Steve Graham (April 1982)
Doug Guess (January 1982)
Charles H. Hargis (May 1982)
William V. Mayer (February 1982)
Mary Jo Noonan (January 1982)
James R. Patton (November 1981)
Edward A. Polloway (November 1981)
Florence M. Taber (October 1981)

Chronological Index of Titles

The Internal Advocacy System: An Alternative
Strategy for Teacher and Child (September
1981)
The Microcomputer — Its Applicability
to Special Education (October 1981)
Written Language for Mildly Handicapped
Students (November 1981)
Music for Exceptional Students (December 1981)
Curricula and Instructional Procedures for
Severely Handicapped Students (January 1982)
Curriculum Development: A Process and a
Legacy (February 1982)
Life-Centered Career Education for Exceptional
Children (March 1982)
Composition Research and Practice: A Unified
Approach (April 1982)
Word Recognition Development (May 1982)
CLASSROOM FORUM (September, October,
December, 1981; March, 1982)