

1995

The effect of lower case letter forms on beginning reading and writing: An action research

Beverly A. Johnson

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Abstract

This paper reviews the literature on letter naming and conducts an action research to determine the value of focusing instruction on lower case letters for kindergarten students. The traditional practice of teaching letter names to kindergarten students involved teaching both letter forms, upper and lower case, concurrently or upper case first. The following questions are addressed: 1. What letters can children identify, by name, at the beginning of kindergarten? 2. Will the recognition of lower case letters transfer to upper case letters naturally or is specific instruction required? 3. Which lower case letters are the easiest to learn, and which lower case letters are the hardest to learn? 4. Do students experience more (or less) difficulty in writing lower case letters? A morning kindergarten class participated in the study. Students were given a pretest on their letter naming knowledge and for a ten week period students focused on lower case letter recognition. The classroom environment was designed to make lower case letters more readily accessible and visible to students. A post test was given at the end of the study and the results were compared with the pretest.

THE EFFECT OF LOWER CASE LETTER FORMS ON BEGINNING
READING AND WRITING: AN ACTION RESEARCH

A Graduate Research Paper

Submitted to the

Division of Early Childhood Education

Department of Curriculum and Instruction

in Partial Fulfillment

of the Requirements for the Degree

Master of Arts

UNIVERSITY OF NORTHERN IOWA

by

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June 22, 1995

This Research Paper by: Beverly A. Johnson

Titled: The Effect of Lower Case Letter Forms on Beginning Reading and Writing: An Action Research

has been approved as meeting the research paper requirement for the Degree of Master of Arts.

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Abstract

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1. What letters can children identify, by name, at the beginning of kindergarten?
2. Will the recognition of lower case letters transfer to upper case letters naturally or is specific instruction required?
3. Which lower case letters are the easiest to learn, and which lower case letters are the hardest to learn?
4. Do students experience more (or less) difficulty in writing lower case letters?

A morning kindergarten class participated in the study. Students were given a pretest on their letter naming knowledge and for a ten week period students focused on lower case letter recognition. The classroom environment was designed to make lower case letters more readily accessible and visible to students. A post test was given at the end of the study and the results were compared with the pretest.

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CHAPTER ONE

INTRODUCTION

Historical Background

In many present-day reading readiness programs, upper case and lower case letters are taught concurrently. The intention of teaching both letter forms concurrently is to make the beginning reading experience as natural as possible. This, however, “means that from the very first (sic) children will have to learn at each step to associate phonemes with nearly twice the number of graphemes needed were they to learn either upper or lower case letters only” (Feitelson, 1988, p. 137).

Concurrent teaching of upper and lower case letters has been around a long time. The alphabet method, in ancient Greece, is the earliest recorded procedure for teaching reading. Students were required to recite the alphabet by heart, forwards and backwards. Each letter name was associated with its correct graphic symbol. This

task of learning letters was difficult because upper and lower case letters were taught concurrently (Vensky, 1975).

In 1660, Hoole described the concurrent instruction of letters in his time. He stated:

This course (of teaching the letter-names) we see hath been very effectual in a short time, with ripe witted children, but others of a slower apprehension have been thus learning a whole year together (and though they had been much chid and beaten too for want of heed) could scarcely tell six of their letters at twelve months' end. (cited in Venesky, 1975, p. 10)

The space race between the United States and Russia began with the Russian launch of Sputnik, the first orbital satellite, in 1957. This event also launched a movement in American education. Kindergarten programs began changing from a social/developmental curriculum, to a more academic curriculum in the 1960's. Reading readiness activities became an important part of the kindergarten day (Durkin, 1977).

Learning about letters was stressed both in kindergarten and first grade. McKee (1966) insisted that ". . . in order to use letter

sounds in unlocking strange printed words or recognizing familiar printed words, the [first grade] pupil must be well acquainted with both the capital form and the small form of each of the twenty-six letters" (p. 70).

Feitelson (1988) visited a Boston kindergarten in 1980. She observed kindergartners working with letters. The children were printing letters in alphabetical order, one row for each letter, using a capital letter stamp. Eighth grade assistants were making sure the letters were printed in correct order and position. After talking with the teacher, Feitelson stated that the teacher had a well thought-out program. Capital letters were learned first, lower case letters second. Feitelson visited other kindergarten classes where she discovered similar practices. Students knew their letters when they were able to pair in correct sequence all upper case and lower case symbols with their name, and only then were they introduced to letter sounds.

Gardner, in a 1986 educational research report, surveyed kindergarten teachers about their kindergarten programs. When asked about the primary focus of their kindergarten programs, 62.9 % of the teachers indicated that they emphasized academic readiness and social skills. Twenty-nine percent reported academic skills and achievements as the focus. This information tends to support the early emphasis on academic learning that has been happening in our country.

Teaching children letter names has been done either concurrently or with capitals first, small letters second. There is little or no evidence of children being taught the lower case letter form at the onset.

Purpose of the Study

The purpose of this study is to review literature and to conduct an action research study to determine if there is value in focusing instruction on lower case letters instead of the traditional

practice of teaching both letter forms, upper and lower case, concurrently or upper case letters first. To achieve this purpose the following questions will be addressed.

1. What letters can children identify, by name, at the beginning of kindergarten?
2. Will the recognition of lower case letters transfer to upper case letters naturally or is specific instruction required?
3. Which lower case letters are the easiest to learn, and which lower case letters are the hardest to learn?
4. Do students experience more (or less) difficulty in writing lower case letters?

Need for the Study

Sebesta (1983) stated that "teachers must be experimentalists" (p. 77). As a first grade teacher, I spent much instructional time teaching children lower case letter names, recognition, and letter formation. I also spent much time building a connection between

upper and lower case letters. Beginning first graders struggle making the transfer from upper to lower case letters when they write and read. Many children look at the alphabet frieze in the front of the room to find the upper case letter so they can identify the corresponding lower case letter in order to write it. I observed this to be a time consuming and difficult task for beginning writers.

Feitelson (1988) concluded, after reviewing literature dealing with upper and lower case letters, that educators are dealing with a persistent problem on the beginning reading scene. Research that is directed at possible solutions would be worth the effort. Such an investigation needs to find out whether beginning readers would benefit from an instructional approach that introduced the more distinctive capital form or an approach that started with the lower case form that is more confusing but less difficult.

Limitations of the Study

This study is limited to the resources available in the University of Nebraska at Omaha library. It is also limited because of the lack of current research pertaining to the topic.

Delimitations of the Study

The results of this research is restricted to the subjects involved. It is not the intention of this study to generalize to other populations. All of the students enrolled in morning kindergarten class at Nathan B. Pusey Elementary participated in the research study. This study does not include consideration of letter-sound association or word-sound association.

Definitions

letter form: refers to the visual form written or printed on paper to symbolize the letter (or its sound) for upper case and/or lower case letters. No specific handwriting model is being addressed. Various

print types (or fonts) will be used in the study, the most common being book face.

lower case: refers to the letters of the alphabet written in their regular form (i.e. not capitals).

upper case: refers to the letters of the alphabet when written as capitals.

alphabet frieze: the alphabet chart that is often displayed above the chalkboard in the front of the classroom.

letter recognition: for the purpose of this study, stating visual letter forms by name.

letter naming or name knowledge: ability to state letter name when shown the letter in print.

facilitator: the role teachers play when they encourage students to learn in small group situations.

CHAPTER TWO

REVIEW OF LITERATURE

Letter Naming Knowledge

Knowledge of letter names is considered by some writers to be a prerequisite for reading. In fact, letter naming is considered by Dechant (1969), McCormick and Mason (1981), Speer and Lamb (1976), to be the best single predictor of achievement in beginning reading. In summarizing the Jenkins, Bausell and Jenkin study, Ehri (1983) stated that the best predictor of reading and comprehension was the total score on the reading readiness test, which included phoneme, letter naming, and learning rate subtest. The second best predictor was the measure of lower case letter-name knowledge taken in kindergarten.

Walsh, Price, and Gillingham (1988) observed that "... letter naming involves processes which, if slow and awkward, obstruct the transitions through which novice readers ordinarily must pass. To

the beginner, lack of facile letter-name knowledge is a hindrance" (p. 110). This may account for the lack of success some children have with readiness tests. Ehri (1983) stated a similar conclusion,

Probably the main reason that knowledge of letter names puts children ahead in learning to read when they enter first grade is that the task of learning the names or sound for alphabet letter is quite difficult and very time-consuming. The number of associations to be mastered is considerable: 26 names and 40 or more sounds for 52 visual figures. (p. 144)

Some children develop an ability to recognize letter forms and sounds before kindergarten. According to Walsh, Price, and Gillingham (1988) and Ehri (1983) facility in letter naming provides an edge for beginning readers.

Kindergarten through second grade children in a study conducted by Smythe, Stennet, Hardy, and Wilson (1970-71) knew the names of more upper case letters from the first half of the alphabet than from the last half. They also observed that this outcome was even more evident in research with kindergarten

children. Several common elements can be found in the research dealing with knowledge of letter forms.

1. Kindergarten and first grade children can recognize more uppercase than lowercase letters (Smythe, Stennet, Hardy, & Wilson, 1970-71; McCormick & Mason 1981; Worden & Boettcher, 1990).
2. Children tend to master letter recognition by the end of second grade (Smythe, Stennet, Hardy, & Wilson, 1970-71; Worden & Boettcher, 1990).
3. The letters that are easier for children to recognize are also easier for them to learn to print. Letter-sound associations are also more difficult to provide for the hard to recognize letters (Worden & Boettcher, 1990).
4. Children do not tend to know the letter sound unless they know the letter name (Worden & Boettcher 1990).

In Becoming a Nation of Readers, it is suggested that teaching letters and the alphabet in kindergarten may not be necessary.

A staple of kindergarten reading instruction is teaching children to name the letters of the alphabet. However, increasing numbers of children can already do this when they enter kindergarten. In a 1984 study [Hiebert and Sawyer], beginning kindergarten children from a variety of backgrounds could name an average of 14 letters. (Commission on Reading, p. 31)

Blanchard and Logan (1988) do not agree with this statement. In their study, over 50% of kindergartners knew eight or less lower case letters. Seventy percent of the kindergarteners knew less than eight of the upper case letters. Research by Calfee, Cullenbine, DePorcel and Royston (cited in Blanchard & Logan, 1988), supports the notion that about one-half of our kindergartners come to school without the ability to identify more than six to ten letters.

Bissex (1980) suggests that capital letters are more distinctive than lower case letters. More than a third of the lower case letters are easily confused by young readers. Capital letters also have an advantage of their position on the baseline. The advantage of

introducing beginners to capital letters first was to prepare them for encounters with confusing letters such as *b*, *d*, *q*, and *p* (Dechant, 1982; Feitelson 1988).

Tinker and Paterson (1928) found that skilled readers read texts written in all lower case letters significantly faster than texts in all capitals. They also observed that capital letters were easier to distinguish at a distance and lower case letters were often misread.

Blanchard and Logan (1988) reviewed research literature on letter-naming knowledge and concluded that (a) letter-name knowledge has been a good predictor of future reading success, and (b) classroom teaching of letter names has had little, if any, impact on future success in reading. Letter-naming knowledge is an indication of previous language experiences and it is an important skill--perhaps a requisite reading skill.

Frequency of Words and Letters in Text

Many researchers have studied the frequency of words that appear in text for children. Children who are able to decode these relatively few high frequency words have an advantage in early reading experiences (Durr, 1973). These high frequency words are grouped to provide teachers a list of words that comprise anywhere from 35% to 50% of reading material. Dolch's list of 220 words and Eeds 227 Bookwords are examples of such lists.

Dewey (1923) compared Ayres' rating and Thorndike's rating with his own high frequency word rating. The following six words made up 20% of all words found: *the, of, and, to, a, in*. Durr's (1973) rating indicated the same six words and three of the six, *the, to, and*, accounted for nearly 12% of all running words in his study.

Routman (1988) analyzed a popular book, The Magic Fish. Almost 40% of the total list of basic vocabulary (Dolch) is included in the story, The Magic Fish. Routman recommended teachers focus on

high frequency words as they appear in context rather than in isolation.

Just as high frequency words suggest a sequence for teaching beginning vocabulary, the frequency of lower case letters in print as compared to upper case letters may also suggest a sequence of instruction. Dewey's (1923) letter frequencies studies indicated that three letters make up over 25% of total letters; six letters make up over 50%; and 11 letters make up 75% of the total. The following letters are the six letters indicated by Dewey: *e, t, a, o, l, n*. Four of the six letters are vowels, which are usually the last letters introduced to beginning readers in most traditional reading programs.

Groff (1972-1973) investigated sequences of teaching lower case letters. Lower case letters have been ranked in various ways to aid instruction and ease of learning. Letters can be arranged for instruction, keeping in mind four main areas:

1. The need to contrast letters with different graphic features

Mckee (1966); MaCracken (1972);

2. The frequency with which consonant letters appear at the

beginning of high-frequency monosyllabic words (DeChant

1970);

3. The relative difficulty children have in learning to copy,

write, name, and associate sounds with these letters;

4. The need to provide for contrasting sounds that the letter

represents.

Groff's major point is that there are many variables associated with the task of learning lower case letters; keeping these variables in mind will allow us to make better decisions about which letters to introduce first.

CHAPTER THREE

PROCEDURES AND RESULTS

The intention of this study is to focus instruction, at the kindergarten level, on recognition of lower case letters of the alphabet. This is contrary to the present day practice of teaching upper and lower case letters concurrently or teaching upper case letters first. The goal is to determine how lower case recognition will affect the development of beginning reading and writing skills. The key is to shift the classroom environment and instructional focus from upper case or concurrent teaching of upper and lower case letters to that of focusing only on lower case letter forms.

Classroom Environment

One key element of the design of this study was to provide a classroom environment that made lower case letters more readily accessible and visible to students. Since lower case letters are the focus of this study, only lower case letters were displayed in the

classroom. After reviewing several preprimers and counting letters and words that occur frequently, three words were identified as significant. The words identified were *The*, *I*, and *A*. These words were written and displayed with a capital letter throughout the study. Students used these words in writing activities and in developing a beginning reading vocabulary. It is important to note that upper case letters were not ignored and they were used in conventional manners (e.g. names, months, beginning of a sentence). Capital letters were not displayed nor were upper case letters taught concurrently.

Instructional Approach

The students' ability to recognize upper and lower case letters was assessed at the beginning of the study. Using the letter identification assessment techniques developed by Clay (1979), each student was tested individually to determine upper and lower case letter knowledge. Clay's letter identification assessment includes the 26 upper case letters and 28 lower case letters; the bookface and

manuscript forms of *a* and *g* were included. Students were asked to identify letters by name, sound, or word association. Procedures for administering the test are provided in Appendix A. Each student was also asked to write the letters he/she knew. This was done in small groups in a non-print environment. Based on the review of literature, a particular sequence for introducing the letters was not deemed to be necessary.

The teaching style used in the classroom was whole language based, it integrated the curriculum with hands on-activities. The class environment was set up for the students to play, to investigate, and to experience lower case letters through a variety of mediums. Students worked in large and small groups. In large group instruction, letter identification was based on whole words. Students' names, print in the classroom, books, and high frequency words were used. A series of activities were developed called Letterworks. These were used in small groups. The Letterwork activities are

similar to center activities. Students worked with these activities for 10 minutes daily and groups rotated to a new activity each day. By the end of this study, 12 Letterwork activities and games were developed (see Appendix B for complete description of Letterworks).

My role during Letterworks was that of a facilitator. It was important that the students verbally share information dealing with the letters. Based on the pre-assessment, students did not know lower case letters well enough to work independently. Students needed to question and share their work. It was difficult to have all the students share with me. In order to solve this problem, students were regrouped for Letterworks and each group had a leader who could identify by name most lower case letters. Students shared their work with the group leader, or with me. This new way of involving students ensured that letters were being identified accurately.

Results

The students' letter knowledge was assessed in three areas: recognition, sound, and word association. As it was stated earlier only recognition scores were examined in this study. Twenty-seven students were tested between the third and fourth week during the month of September; only 21 students completed the study.

The study was conducted in a ten week period. Students were reassessed at the end of the ten weeks using the same letter identification test that was used as the pretest (Clay 1979). The purpose of this study was to answer the questions that were outlined in Chapter One.

What letters can children identify, by name, at the beginning of kindergarten? Based on the pre-assessment, kindergarten students can identify a wide range of letters. Figure 3:1 shows a breakdown of letter identification on the pretest. In looking at figure 3.1; the letters A, O, and X were the most frequently identified upper case letters and

G, Q , and V the least frequently identified upper case letters. In comparison, the lower case letters, o and s were the most frequently identified letters and the least frequently identified letters were d, manuscript and book face g, l, n, and q.

Individual results indicate that students identified more upper case letters than lower case and not all letters identified correlated between upper and lower case. Many upper case letters do not resemble or have the same configuration of their lower case counterpart. Letters that did resemble each other showed little advantage for the majority of the students. For example, a student would identify upper case S, but not lower case s.

Figure 3.1 shows the number of students that correctly identified, by name, each letter in print form on the pretest.

Figure 3.1 Pretest Letter	Number of students that correctly identified each letter	
	Upper Case	Lower Case
A	16	5
Manuscript "a"		8
B	10	4
C	11	10
D	9	2
E	9	8
F	8	4
G	5	1
Manuscript "g"		2
H	10	8
I	7	7
J	7	5
K	12	10
L	8	3
M	13	11
N	8	2
O	17	17
P	13	11
Q	5	0
R	11	7
S	13	14
T	13	4
U	6	5
V	5	6
W	10	9
X	15	13
Y	11	11
Z	10	9

Will the letter-recognition knowledge of lower case letters

transfer to upper case letters naturally or will specific instruction be required? Twenty one students completed the study and the individual scores were averaged. For the 26 upper case letters, an average student score 11.7 was obtained on the pretest . The lower case letters including the book face a and g making a total of 28 letters. The average student score on the lower case letter portion of the pretest was 8. 0. The total score combined upper case and lower case letter recognition, including the book face a and g giving a score of 54. The average student score for lower and upper case letters on the pretest was 9.9.

The average student score on the lower case portion of the post-test was 18.9 and the average student score on the upper case portion of the post-test was 18.4. The average student letter recognition score for both portions of the test was 18.69. These post-test averages indicate that students did learn upper case letters without receiving direct instruction and without the letters being

directly taught or displayed concurrently. Figure 3.2 shows the number of children that correctly identified, by name, each letter in print form on the post-test.

Figure 3.2 Post-test Letter	Number students that correctly identified each letter	
	Upper Case	Lower Case
A	18	10
Manuscript "a"		18
B	17	10
C	15	15
D	12	8
E	12	19
F	14	14
G	8	12
Manuscript "g"		15
H	15	13
I	15	16
J	15	12
K	18	17
L	16	12
M	17	16
N	13	12
O	21	21
P	12	12
Q	8	7
R	15	16
S	19	19
T	16	15
U	12	11
V	14	13
W	19	19
X	19	20
Y	15	14
Z	18	18

On the lower case pretest, fourteen students identified less than ten letters, five students identified between ten and twenty letters and two students identified more than 20 letters. Ten students identified less than ten letters, four students identified between ten and twenty letters, six students identified more than twenty letters on the upper case pretest.

On the post-test, four students identified less than ten lower case letters. Six students identified between ten and twenty letters. Eleven students identified more than twenty lower case letters. The four students that recognized less than ten letters on the lower-case post-test were the same four students that identified less than ten on the upper case post-test. Figure 3.3 shows a comparison between the number of students that correctly identified, by name, each letter presented in print form on both the pretest and post-test. Also indicated in figure 3.3 is the increase in the number of students that correctly identified each letter.

Figure 3.3 shows the number of students that correctly identified, by name, each letter in print form on both the pre and post-test.

Letter	Pretest	Post test	Increase	Letter	Pretest	Post test	Increase
A	16	18	2	a*	5	10	5
				a**	8	18	10
B	10	17	7	b	4	10	6
C	11	15	4	c	10	15	5
D	9	12	3	d	2	8	6
E	9	12	3	e	8	19	11
F	8	14	6	f	4	14	10
G	5	8	3	g*	1	12	11
				g**	2	15	13
H	10	15	5	h	8	13	5
I	7	15	8	I	7	16	8
J	7	15	8	j	5	12	7
K	12	18	6	k	10	17	7
L	8	16	8	l	3	12	9
M	13	17	4	m	11	16	5
N	8	13	5	n	2	12	10
O	17	21	4	o	17	21	4
P	13	12	-1	p	11	11	0
Q	5	8	3	q	0	7	6
R	11	15	4	r	7	16	9
S	13	19	6	s	14	19	5
T	13	16	3	t	4	15	10
U	6	12	6	u	5	11	6
V	5	14	9	v	6	13	7
W	10	19	9	w	9	19	10
X	15	19	4	x	13	20	8
Y	11	15	4	y	11	14	2
Z	10	18	8	z	9	18	9

* bookface type **manuscript

What lower case letters are the easiest to learn? Which ones are the hardest to learn? In comparing pretest and post-test letter recognition scores, *c, k, m, o, s,* and *x* were the letters most frequently identified on the pretest. There was an increase in students' ability to recognize manuscript *a, e,* manuscript *g,* book face *g, t,* and *w* on the post-test. The hardest letters for students to identify were book face *a, b, d, p,* and *q.* These letters were the least frequently identified on the pretest and the students showed little improvement on the post-test. Except for the book face *a,* the other four letters are mirror images of each other; this makes them more difficult to identify.

Do students have more or less difficulty writing lower case letters? At the beginning of this study, the majority of the students could write their name; that was the extent of their writing and print knowledge. Four students were able to write the alphabet, missing a few letters. Upper case letters were by far the most commonly used written form, since many students were limited by their lower case

letter print knowledge. This was evident in journal writings and other writing activities.

As students learned lower case letters, more lower case letters occurred in their writing. Students that were learning many letters for the first time used the lower case form when writing. Students who already had a prior knowledge of written form, which was usually upper case, continued to write using the upper case form. These students had the most difficulty using the lower case form in writing activities.

I did not observe any special difficulty (or ease) in writing upper or lower case letters. If a student was having difficulty writing the lower case s, the upper case S was just as difficult. In respect to fine motor control, each case (i.e. upper and lower) has letters which are difficult to write and letters which are easy to write.

The difficulty (or ease) in writing the letters was not what made one letter form easier to learn than another; the student's

ability to recall what the letter looked like was the most important factor of writing ease. Letters that were recalled easily were easy to write; and letters that were difficult to recall were difficult to write. Letters were written in whatever form the student could quickly recall.

CHAPTER FOUR

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

Summary

Print in text is comprised mainly of lower case letters; therefore, a teaching strategy which focuses on teaching lower case letters seems logical. This, however, is not evident in teaching young children. The current practice of teaching upper and lower case letters concurrently requires kindergarten children to identify twice as many graphic symbols for identification. Learning only one type of graphic symbol would seem to simplify reading instruction at this early stage of reading.

The purpose of this study was to review literature and to conduct an action research study to determine if there is value in focusing instruction on lower case letters instead of the traditional practice of teaching both letter forms concurrently or upper case letters first. If reading is the goal, then the tools that are necessary to

read should guide the instruction. Research has shown that facile knowledge of lower case letters is an important factor for beginning reading and writing success.

Conclusions

The findings of this study support the literature in the following ways:

1. Children can identify more upper case letters than lower case letters at the beginning of kindergarten.
2. Students knew an average of 9.9 letters at the beginning of kindergarten; this supports the research cited in Blanchard and Logan (1988). This study revealed that kindergarten children do not begin school with letter recognition knowledge beyond six to ten letters.
3. Students' scores indicated that *c*, *k*, *m*, *o*, *s*, and *x* were the most identified. These letters were also observed to be the most easily recalled and the easiest to learn to write. Students

could also identify some letters but not be able to recall how to write them. This was evident in the students' journal writing.

4. The letters *b*, *d*, *q*, and *p* were the most difficult letters to recognize; this supports Dechant (1982) and Feitelson (1988).

The review of research indicated that kindergarten students are normally able to identify more letters from the first half of the alphabet than the last half. In this study, this was not found to be the case.

Recommendation

Based on the results of the study, further research is needed involving letter recognition of upper and lower case letters. A comparison should be made between groups of students receiving this method of letter instruction and students receiving concurrent methods of letter instruction.

It is also recommended that other researchers continue to observe this group of kindergarten students as they complete the first grade. A reading readiness test might be administered comparing these students to other first grade students.

Appendix A

Letter Identification Test

LETTER IDENTIFICATION SCORE SHEET

Date: _____

Name: _____ Age: _____

TEST SCORE: /54

Recorder: _____ Date of Birth: _____

STANINE GROUP:

	A	S	Word	I.R.		A	S	Word	I.R.
A					o				
F					f				
K					k				
P					p				
W					w				
Z					z				
B					b				
H					h				
O					o				
J					j				
U					u				
					a				
C					c				
Y					y				
L					l				
Q					q				
M					m				
D					d				
N					n				
S					s				
X					x				
I					i				
E					e				
G					g				
R					r				
V					v				
T					t				
					g				

Confusions:

Letters Unknown:

Comment:

Recording:
A Alphabet response:
 tick (check)
S Letter sound response:
 tick (check)
Word Record the word the
 child gives
IR Incorrect response:
 Record what the child
 says

TOTALS

TOTAL SCORE

A	F	K	P	W	Z
B	H	O	J	U	
C	Y	L	Q	M	
D	N	S	X	I	
E	G	R	V	T	
a	f	k	p	w	z
b	h	o	j	u	a
c	y	l	q	m	
d	n	s	x	i	
e	g	r	v	t	g

Appendix B

Letterworks Descriptions

Clay Letters

Materials: clay, letter outlines stencils

Procedure: Student use letter outlines and formed clay in shape of the letter. Student identifies letters made.

Stamp a Letter

Materials: letter stamps, stamp pad, double 5 grid paper, pencil

Procedure: Student stamps a letter in each box across the top, then student writes the letter in the corresponding box at the bottom.

Student identifies letters.

Letter Match

Materials: large poster grid with letters written in ABC order, magazines, glue

Procedure: Student cuts from magazines letters that matched the poster. Student may sing the ABC song to help identify letters and placement.

Sand Writing

Materials: sand tray, letter cards

Procedure: Student works with a partner. Partner draws a letter card and ask student to write the letter in the sand then shows the letter card. If letter is incorrect, the student repeats the letter name requested and then with or without partners help writes the letter.

Letter Puzzles

Materials: letter puzzles

Procedures: Student put together puzzles. Randomly recall letters for group leader or teacher. Letters missed are repeated by student and help is given for identification.

Scented Letters

Materials: Jell-O or Kool-aid powder, letter outline stencils, glue, paper

Procedure: Student uses letter outline, apply glue to outline, remove stencil and sprinkle with powder, shake off excess. Student identifies scented letters made.

Letter Steps

Materials: letters written on foot prints

Procedure: Student lays out footprints in order or randomly. Walk on prints naming letters as they move.

Word It

Materials: Picture cards with name printed on pack,
letter shape (Laurie foam letters were used)

Procedure: Student used letters to copy name from picture card.
Student names the letters used to make the word.

Build a Letter

Materials: manipulative materials (beads, cessionaire rods, learning links, jewels), ABC card, penny

Procedure: Student place ABC card on floor, toss the penny on board then identified the letter. Use materials to build the letter. If the letter is unknown student can sing ABC song or ask group leader or teacher.

Letter Zap

Materials: paper sack, letter cards, zap cards

Procedure: Students sit in circle, one player draws a card, if the player can name the letter on the card he keeps the card, if unknown the group identifies the letter and it is placed back in the bag. If a Zap card is drawn from the bag the player loses all their cards. Play continues each player takes turns drawing letters from the bag. The player with the most cards is the winner. The winner names each of their letter cards and the other players repeat the letter name as they are called off by the winner.

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