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ABSTRACT

A study evaluated the phonics performance of skilled adult readers using the D. Durkin phonics test, which was also used in 1984 to measure the phonics ability of children. The test, which was given to 25 college juniors and seniors, consisted of 29 regularly spelled pseudo or nonsense words to be pronounced aloud by the subjects. Results indicated that the skilled adult readers in this study scored substantially better than the elementary students tested by Durkin in 1984. Phonics ability improved with increasing grade levels in the Durkin study, and it continued to increase at the college level. The study concluded that phonics skill increases implicitly beyond formal elementary school phonics and reading instruction and that phonics skill is a differentiated function that increases upward as reading proficiency develops. Furthermore, the results suggest that the performance standards for elementary school children should be lowered to between 50% and 60% because (1) these standards would be more consistent with the average performance of elementary school readers, and (2) excessive classroom drill on synthetic phonics skills to reach unrealistic levels of performance is inconsistent with the development of implicit use of phonics rules that occurs through increased reading of connected texts. (Tables of data are appended.) (SRT)

A Comparison of Phonics Performance of Skilled Adult Readers and Elementary School Readers

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Phonics has become a "dead" issue in the past two decades of reading research . Researchers and experts in the field of reading have been focusing their attention on how readers comprehend texts, and strategies teachers could use to improve students' comprehension of printed material. Comprehension is the basic goal of reading, but an important step for the developing reader in achieving comprehension of texts is translating unfamiliar printed symbols to familiar spoken words.

Phonics skill is a means by which readers use alphabetic generalizations to decode new words. Although development of phonics skill is considered an important element of beginning reading instruction (Anderson, Hiebert, Scott, & Wilkinson, 1985), questions concerning the continued development of phonics skill from intermediate elementary school grades through adulthood remain unanswered.

In an attempt evaluate the phonics performance of children in the intermediate elementary school grades, Durkin (1984) constructed and administered a phonics test to third-, fourth-, and sixth-grade students. She concluded that children generally performed poorly considering the amount of time spent on phonics

instruction in the elementary school classrooms. Durkin's conclusion signified many disturbing questions concerning phonics:

1. How should we evaluate phonics? What is acceptable phonics performance for elementary school children?

2. How do skilled adult readers perform on a test that measures the use of phonics generalizations? Does phonics skill increase with reading, or does it fade as the reader becomes proficient in word identification?

3. Should the phonics performance of younger developing readers be similar to that of skilled adult readers?

This paper addresses these questions in a discussion of the following three basic areas: (a) what we know about phonics from the available research and past findings, (b) what the authors found concerning phonics skill of adult readers, and (c) what we know about phonics instruction.

Phonics Literature Review

During the first half of the Twentieth Century, reading was viewed as translating printed symbols to spoken words. This led to a research emphasis of word identification. The major issue in reading was whether the "whole-word" method, introduced by Horace Mann in

the early 1800's, or a phonics approach was the most effective means of early word identification instruction.

As reading experts began to reach a general consensus that phonics was the most successful method for teaching word identification (Currier, 1923; Currier & Duguid, 1916), questions concerning which phonics generalizations to teach were investigated. Clymer (1963) did a study using primary basal reader words and found only 18 generalizations that met a 75% utility criterion. His study was replicated (Baily, 1967; Emans, 1967) with higher level materials, basals from grades one to six. It was found that only six of the generalizations were both simple to understand and applicable to a large number of words with few exceptions. Also, more research was called for by these people in the area of determining children's ability to apply phonics generalizations.

In the late 1960's and 1970's, the view of reading shifted to getting meaning from print. Phonics became a process of "code-breaking" or decoding the written code to a language code. Comprehension research prevailed with decoding considered a low level process that was mastered to automaticity by skilled readers (LaBerge & Samuels, 1974). In other words, phonics was

used automatically, implicitly, or without conscious attention during the act of reading, allowing the reader's attention to focus on meaning.

A few notable findings during the 1970's and 1980's dealt with children's decoding ability. Perfetti & Hogaboam (1975) found that less skilled elementary school readers had more difficulty with phonics and decoding than skilled readers, and this difficulty was due to poor decoding ability rather than a lack of vocabulary knowledge or word meaning. It was not due to the child's inability to find a match between an unknown printed word and stored verbal vocabulary knowledge. Also, aural and visual practice improved decoding of unknown words, and adding a meaning element to the practice did not cause any improvement (Hogaboam & Perfetti, 1978).

Skilled readers had a better implicit knowledge of syllable units (Hogaboam & Perfetti, 1978) and the application of phonics rules (Rosso & Emans, 1981). They could use phonics rules implicitly to decode unknown words better than they could explicitly state the rules or define phonics terms such as "consonant", vowel", "blend", "digraph", etc. (Rosso & Emans, 1981; Tovey, 1980).

In summary, these findings clearly confirm the

importance of phonics and decoding skill for the the developing reader. More research is needed in the area of evaluating phonics skill of children. In order to begin to establish reasonable guidelines for evaluating children's phonics performance, it is necessary to determine what constitutes proficient phonics skill by examining the performance of skilled adult readers.

The Present Study

The Durkin phonics test (Durkin, 1984) was administered to 25 skilled adult readers, college Juniors and Seniors, by the experimenters. The test consisted of 29 regularly spelled pseudo or "nonsense" words to be pronounced aloud by the subjects. Durkin used pseudo words in order to isolate phonics ability from other sources of decoding unfamiliar words, such as using contextual cues and oral vocabulary familiarity.

The pseudo words were constructed from seven letter-sound correspondences and phonics generalizations (see Appendix). Durkin based the test on three principles: (a) syllables are the unit of decoding, (b) phonics is a device for root word decoding whereas meaning or grammatical functioning (e.g., ed or ing) is the device for teaching affixes, and (c) syllable stress was not counted in the test.

The results showed that the skilled adult readers in this study substantially outperformed the elementary school children tested by Durkin (See Table 1). With a possible score of 29, the college students had a mean

Insert Table 1 about here

score of 21.3. The elementary students in Durkin's study had mean scores of 9.3 for third grade, 12.2 for fourth grade, and 14.9 for sixth grade. Phonics ability improved with the increasing grade levels in the Durkin study, and it continued to increase to the college level where subjects in our study were proficient in word identification.

The percentages of correct pronunciations of the 29 individual test words for the elementary school subjects in the Durkin study (1984) and the college students in the present study were reported in Table 2.

Insert Table 2 about here

Durkin found that 50% of the students at each grade level, three, four, and six, did not even pronounce one-half, or 15, of the total 29 words correctly. Only six words were mispornounced by 50% of the college students. The college students also had above 80%

correct pronunciation to approximately two-thirds of the 29 test words.

Percentage scores on the pseudo word phonics test were reported by grade level in Table 3. College students averaged 72% correct pronunciation of the pseudo words, sixth graders averaged 51%, fourth graders averaged 42%, and third graders averaged 32%.

Insert Table 3 about here

From these results, it was reasonable to conclude that phonics skill increases implicitly beyond formal elementary school phonics and reading instruction.

Elementary School Phonics Instruction

Considerable attention has been drawn to the recommendation of the Commission on Reading (Anderson, Hiebert, Scott, & Wilkinson, 1985) that beginning readers should be engaged in well-designed phonics instruction. Although the research findings reviewed above lend some credibility to this recommendation, the components of a well-designed phonics instruction program need extensive clarification.

What do we know about phonics instruction? There are three basic areas of phonics instruction that have been researched, presenting some important factors to consider.

First, there are two distinct developmental stages in the acquisition of letter-sound correspondence rules. (Venezky & Johnson, 1973; Guthrie & Seifert, 1977). The first is learning consonant-vowel combinations and short vowel words, and the second stage consists of learning long-vowel and special rule tasks that are neither long or short, such as those in "corn", "partial", and "food". In this study with college students, five words below 70% correct responses contained these special rule tasks (yanse, cuxot) and long-vowels (zalnire, judkeve, plere).

The second researched area in phonics instruction deals with teaching methods that develop phonics skill. A three-step method of instruction is suggested: 1) students are taught letter-sound correspondences from their speaking and listening vocabularies, 2) they are then taught to segment words into phonics units, and 3) blend these isolated parts into new units, enabling them to transfer and apply phonics to unfamiliar words. (Fox & Routh, 1976; Jeffery & Samuels, 76; Johnson, Pittleman, Shriberg, Sthwenker, & Dahl, 1980). Most commercial phonics materials and basal readers include extensive practice in the segmentation of words into phonics units, but a lack of blending instruction must be compensated by the classroom reading teacher.

The final area of elementary phonics instruction, evaluation of phonics skill, has received scant attention in the research literature (Pikulski & Shanahan, 1980). What is acceptable phonics performance for students at the various elementary school grade levels? Norms from standardized tests that contain a phonics section show that average performance is not to the 90% level by fourth graders, and second graders at the end of the school year are only at a 50% phonics proficiency level. Johnson, et al. (1980) suggested performance criteria of 70% to 80%, but these levels may be too high for elementary school students.

Comparison of the phonics performance of elementary school readers of the Durkin (1984) study and adult skilled readers of this study indicates that phonics skill is a differentiated function increasing upward as reading proficiency develops. Average phonics performance increased from 30% in grade three, to 40% in grade four, to 50% in grade six to 70% in skilled adult readers. Lowering the performance standards for evaluation of synthetic phonics instruction to 50% in primary grades and 60% in intermediate elementary school grades is recommended because (a) these standards are more consistent with

the average performance of elementary school readers, and (b) excessive classroom drill on synthetic phonics skill to unrealistic levels of performance is inconsistent with the development of implicit use of phonics rules that occurs through increased reading of connected texts.

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Appendix

Content Of The Durkin Phonics Test

The 29 pseudo words of the Durkin Phonics Test were constructed from the following letter-sound correspondences and phonics generalizations:

1. 4 syllabication rules
2. 6 vowel sound rules
3. 15 standard consonant sounds and 3 consonant rules for C, G, and S
4. 5 standard consonant diagraphs and 2 consonant diagraph rules for Q and X
5. 5 vowel diagraph sounds
6. 3 Y sounds
7. 4 R-controlled vowel sounds

Table 1

Scores on the Pseudo Word Test By Grade Level

Subjects	n	Range	M	SD	t value
College	25	10-26	21.3	3.2	
					8.7*
Grade 6	64	5-26	14.9	5.5	
					3.58*
Grade 4	64	3-25	12.2	5.5	
					3.68*
Grade 3	56	0-21	9.3	5.6	

Note. The data for grades 3, 4, and 6 are from "The Decoding Ability of Elementary School Students" by Dolores Durkin, 1984, Reading Education Report No. 49, Copyright 1984 by Center for the Study of Reading.

* $p < .001$

Table 2

Percent of Correct Responses to Each Pseudo Word by Grade Level

Word	Grade 3	Grade 4	Grade 6	College
rincy	58.9	79.7	85.9	100.0
flure	57.1	50.0	60.9	92.0
ximdle	10.7	12.5	23.4	80.0
zalnire	26.8	45.3	56.3	64.0
dowx	42.9	62.5	75.0	96.0
naubircude	19.6	26.6	43.8	92.0
gysan	5.4	9.4	20.3	16.0
yanse	28.6	48.4	53.1	48.0
shigur	55.4	60.9	75.0	92.0
cuxot	21.4	21.9	32.8	40.0
tylm	10.7	23.4	34.4	80.0
judkeeve	48.2	43.8	50.0	68.0
gik	8.9	20.3	7.8	12.0
arfeaple	32.1	64.1	64.1	80.0
voog	58.9	79.7	82.8	92.0
cef	16.1	34.4	50.0	88.0
dilque	5.4	14.1	17.2	72.0
thorge	30.4	28.1	34.4	44.0
gavvore	50.0	46.9	75.0	88.0

Table 2 (Cont.)

quawz	28.6	42.2	57.8	80.0
plere	44.6	45.3	67.2	68.0
vipho	30.4	31.3	42.2	92.0
wobe	76.8	79.7	89.1	88.0
chaylar	51.8	70.3	62.5	88.0
jownare	37.5	59.4	54.7	80.0
gebthor	8.9	23.4	32.8	12.0
hoyk	35.7	43.8	60.9	92.0
ciftaung	12.5	25.0	37.5	84.0
thoipder	10.7	28.1	42.2	92.0

Note. The data for grades 3, 4, and 6 are from "The Decoding Ability of Elementary School Students" by Dolores Durkin, 1984, Reading Education Report No. 49, Copyright 1984 by Center for the Study of Reading.

Table 3

Percentage Scores on the Pseudo Word Test By Grade Level

Subjects	n	Range	M
College	25	34-90	72
Grade 6	64	17-90	51
Grade 4	64	10-86	42
Grade 3	56	0-72	32

Note. The data for grades 3, 4, and 6 are from "The Decoding Ability of Elementary School Students" by Dolores Durkin, 1984, Reading Education Report No. 49, Copyright 1984 by Center for the Study of Reading.