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**REVISITING THE VIEW OF PHONOLOGICAL AND
PHONEMIC AWARENESS AS EARLY PREDICTORS IN
READING DIFFICULTIES**



Abstract: Over the past two decades phonological awareness as an issue caught much attention. Phonological awareness is when children demonstrate an appreciation of rhyme and alliteration. As they grow older their basic phonological awareness does not necessarily



develop into the more sophisticated phonemic awareness. This paper challenges the approach that phonological and phonemic awareness are powerful predictors of reading difficulty, since there are numerous studies indicating high correlation between morphological awareness and reading comprehension.

Key words and phrases: phonological awareness, phonemic awareness, reading difficulty

Introduction

Reference literature on literacy abounds in findings claiming that an underlying awareness of speech sounds is critical to enable a student to discern patterns and sequences and manipulate sounds within words.

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The discovery of the nature, importance and necessity of phonological awareness and manipulations is the biggest breakthrough in reading pedagogy in this century (Adams, 1990). In addition, Lyon (1995) reported that around 260 studies converged in terms of the finding that "the awareness of phonology is the core deficit for reading disabilities", a problem that affects a significant percentage of learning disabled children.

This paper revisits the postulates that phonological awareness is a major component in considering a diagnosis of dyslexia.

Traditional approaches to the study of reading take children's entry into the formal school environment as their starting point, while emergent literacy approach views acquisition of literacy as a developmental continuum with its origins early in the life of a child and it suggests that there is no clear demarcation between reading and pre-reading. Emergent literacy consists of the skills, knowledge, and attitudes that are presumed to be developmental precursors to conventional forms of reading and writing (Teale & Sulzby, 1986), and therefore it is believed that significant sources of individual differences in later reading skills are present prior to school entry. According to Whitehurst and Lonigan (1998) emergent literacy skills identified three factors contributing to preschool children's later word-decoding abilities and they include: oral language, phonological sensitivity and print knowledge.

This paper focuses on phonological sensitivity.

The role of phonological awareness

Some of the critical research findings regarding phonological awareness as a powerful predictor of success in learning to read include the following points:

- A preschooler's phonological aptitude predicts future skill at reading (Yopp, 1992, Lyon, 1995);
- Phonological awareness is a most important core and causal factor separating normal and disabled readers (Adams, 1990, Share and Stanovich, 1995);
- One of the best predictors of reading success in kindergarten and first grade is phoneme segmentation; young children who perform well on measures of phonological awareness are likely to be among the best readers (Duane, 1991);
- Phonological awareness abilities have a greater relationship to learning to read than do IQ factors, reading readiness, and listening comprehension (Stanovich 1994, Lyon 1995).

The highest level of our language system if conceptualized as a hierarchical series of functions includes grammatical structure, sentence connections and meaning. The lowest level includes phonological components. The process of hearing and distinguishing sounds occurs independently from the process of dealing with letters and sound/symbol correspondence.

Adams (1990) claims that deep and thorough knowledge of letters, spelling patterns and words and of the phonological translations of all three are of inescapable importance to both skillful reading and its acquisition.

The majority of students intuitively discover the relationship between spoken and written words and learn to read regardless of the teaching method. This is specifically true for students who begin school with good phonemic awareness Griffith and Olson, 1992).

Some approaches to reading instruction emphasize the meaning of the language being read (whole word, whole language) while others stress the importance of the ability to break the phonetic code (phonics and linguistic approaches).

The most sophisticated level of phonological awareness is phonemic awareness (Chard and Dickson, 1999).

Phonemic awareness (Lindamood, 1997) is described as 'an ability to identify individual sounds and their order within words - to divide a whole word into parts'. The child must have an awareness of the individual sounds in words in oral language. It can be difficult to learn without explicit teaching, primarily because in speech many sounds are co-articulated and elided.

Phonological awareness is defined by the Natural Literacy Strategy (1998) as 'an awareness of sounds within words, demonstrated by the ability to generate rhyme, alliteration, and segmenting and blending component sounds'.

The role of morphological awareness

Equally relevant is the morphological awareness, although the views can be grouped into two opposed groups. The first group attributes the difficulties on morphological level as a result of the phonological processing deficiencies and problems with phonological structure (Mann, 2000).

The opposite view is that morphological awareness is a significant contributory factor in terms of reading comprehension, even in cases where orthographic and phonological aspects were considered. In this respect, a large-scale study (Siegel, 2008) revealed high correlations between reading comprehension and morphological awareness, rather than phonological awareness. Morphological awareness is viewed as essential in the overall reading achievement (single - word reading and written text comprehension). A similar finding was contributed to this thesis by a study (Casalis et al., 2004) in which it was identified that morphological awareness depends on the age and reading experience rather than phonological awareness.

It is suggested by some authors that awareness of morphemes can be trained independently of awareness of phonological units (Ambak and Elbro, 2000).

In a more recent study, Katz and Carlisle (2009) report on an intervention programme where three students with mild to moderate reading and language difficulties received instruction in morphological analysis strategies. All three students showed improvement in word reading and reading comprehension skills.

Carlisle (2003) underlines that the idea of the findings is not intended to diminish the importance of the finding that poor readers have difficulties with phonological complexities of opaque or "shift" derived forms. Normally achieving readers also have difficulties with shift words than with transparent words, and it is apparent that students' problems with phonological processing may be a matter of degree, not kind.

Research

The initial hypothesis was that the abilities related to phonological awareness are developed in continuum from rhyming through blending, manipulation and segmentation.

The tests used for the purposes of this paper were designed on the basis of the peculiarities of the Macedonian phonological system and included exercises aimed at testing: initial

sounds, rhyming, blending, segmentation and manipulation. Both the test and the intervention exercises consisted of Macedonian words.

The sample included sixteen preschoolers (aged 5,1 to 5,8 y.) with Macedonian as L1. After parents provided consent for their children to participate, children were tested individually in their center. They were divided into two groups (of eight): a group that was tested and re-tested after one year without any additional explicit intervention, and another group which was tested and then exposed to interventions, activities intended to enhance their phonological awareness, and then re-tested.

Formal observations were not conducted of the kindergarten, but during the multiple observations their educational environment was analyzed. Their daily activity structure included a variety of concepts such as letters, numbers, and storybooks. There were no explicit attempts to teach the children to read. The daily schedules included free play, story time, and arts and crafts projects.

The test conducted consisted of five tests of phonological sensitivity, including:

Test 1 - Initial sounds

Children were asked to identify which of the four pictures presented had the same initial phoneme. They were asked to point pictures with the same initial sound as the first picture. In addition, they were asked questions related to alliteration oddity.

Test 2 - Rhyme recognition

A rhyming test was designed and presented in picture format. It consisted of 10 groups of 4 pictures. Children were asked to mark the picture of the word that rhymed with the first picture. Rhyme oddity was also included in this test.

Test 3 - Blending recognition

This test was also based on pictures as stimuli and asked to mark the picture that depicted the stimulus linguistic units when blended together. The examiner read the linguistic units at a rate of one unit per second.

Test 4 - Segmenting production

The child was required to segment orally presented words into constituent phonemes. The child was asked to tell each sound of the word, from shorter to longer words.

Test 5 - Elision

The examiner presented four pictures to the child. The examiner asked questions relating to manipulation recognition.

Results and comments

The easiest task to the Macedonian children in the experiment was rhyming, while the most difficult segmentation and manipulation. Phonological awareness improves with age and it has its own ontogenesis and line of development with age.

The test was repeated after one year and indicated significant correlation (76%) between segmenting and manipulation and learning to read. However, first graders in Macedonia are aged 6 or 7, which as a developmental stage does not represent an age when we can draw reliable conclusions about reading ability. This study tends to be longitudinal and examine the development of the reading ability and comprehension in particular.

Another significant and consistent finding is that the group exposed to additional explicit activities demonstrated better performance during the first grade in the whole range of subsets of skills, including the most demanding ones such as segmentation and manipulation.

There are significant relationships between reading fluency and four constructs, including phonological awareness, rapid naming / eye movement, reversal and visual perception skills (Kim 2004).

In perspective the following research can expand to include possibilities for finding interaction between phonological awareness with vocabulary and ability to name rapidly objects and colors, as well as test the interaction between phonological and morphological awareness.

Pedagogical implications

Adams (1990) categorized phonemic awareness into five tasks: knowledge of rhymes, sound categorization, blending, segmentation, manipulation. In fact, the continuum of complexity of phonological awareness is summarized in the following sequence: rhyming songs, sentence segmentation, syllable segmentation and blending, onset-rime segmentation and blending, blending and segmenting individual phonemes.

Phonological awareness has its own ontogenesis and improves with age.

Critical levels of phonological awareness can be developed through carefully planned instruction, and this development has a significant influence on children's spelling and reading achievement.

Homophones cause many spellers difficulty, particularly those who spell phonetically and those who find visualizing words difficult. Strategies have to be devised to help with memorization such as the use of mnemonics and illustrations. The high frequency homophones should be tackled first.

Long words are perceived as difficult to pronounce and spell. For those who can divide words into syllables, breaking them into parts makes reading and writing easier. Syllables need to be taught and learned as an oral activity. Awareness of rhyme, rhythm and sound develops from an early age in normal children with the help of games and word play. Those who have difficulties with phonological awareness will require explicit teaching about the sound structure of the language and will require longer to learn.

Non-word reading and spelling - Nonsense words or pseudo words may be used to identify underlying weaknesses on phonological and phonemic skills.

Phonological awareness activities are essential in preschool, kindergarten and early elementary years. Reading disabilities based on phonological awareness gaps can be remediated, although the percentage of success varies according to the researcher and the methods used.

There are some children who may learn to read even with significant gaps at the level of phonological awareness, usually because they are visually skilled at remembering basic words and word configurations. However, their spelling is significantly impaired.

Five types of activities are regarded as essential from the domain of phonological awareness and in the process of learning to read successfully.

- 1. Retention of nursery rhymes**
- 2. Compare and contrast sounds of words for rhyme and alliteration**
- 3. Blending /c//a//t/ for cat**

4. Segmenting**5. Phonemes manipulation (comparing, adding, deleting and moving sounds)**

The following listing approximate student expectations:

Kindergarten expectations:

- produce a rhyming word for a given word
- recognize and produce alliteration
- clap syllables (90% accuracy by age 5)
- count sounds in words. How many sounds do you hear in cat?)40-50% accuracy
- blend two sounds to make a word (/a/t/ = at)
- determine which of three words begins with the same sound as a target word (dog: mat, dime, top)
- determine which of three words begins with a sound that is different from the other two (ball, baby, horse)
- Delete phonemes from words (Say pat. Now say it again, but don't say /p/)
- begin to substitute beginning sounds (Changes the /m/ in mat to /h/ hat)

First Grade expectations:

- demonstrate awareness of sounds and how print is organized
- understand that a word is comprised of sound units
- count sounds in words (mat /m//a//t/ (70% of accuracy by age 6)
- recognize rhymes
- -segment initial and final sounds in words
- blend to three phonemes (auditorily and visually)
- substitute beginning or ending sounds (change the t in cat to p cap)
- hear and segment medial phonemes

Following is the summary of activities suggested in terms of phonological and phonemic awareness (Richards, R., 1999) :

Level 1 - Rhyming and alliteration - through recognition

- sound discrimination activities
- rhyme recognition
- nursery rhymes, discussing words that rhyme
- make additional rhymes - twinkle twinkle little star (car)
- fill in the words that rhymes (using pictures)
- create silly words using rhyme and alliteration as names for animals, dolls, puppets
dino rino, silly billy

Level 2 - Sound awareness and rhyming production

- fill in the word that rhymes
- complete poems/rhymes (provide cues if needed - initial letter)

- poems with made-up rhyming words - ask students to create their own nonsense word
- phoneme counting activities - lets walk or march taking one step for each sound
- using pictures sort by initial sound or ending sound
- odd man out - auditory tasks
- what ends with a different sound? - pop, hop, hot
- what has a middle sound that is different - mat, pat, pit
- say a silly sentence and ask - which word does not start with the /s/ sound

Sally smiles sweetly at Sue?

Level 3 - Segmenting sentences into words

These activities help students perceive word boundaries. This is an auditory analytic task critical for syllabification skills. To reinforce student's awareness of separate words manipulative and kinesthetic activities are used.

- students use blocks to represent each word in a sentence or walk/march taking one step forward for each individual word.
- oral segmentation of words - by clapping, taping the table for each word, throwing a ball when sitting in a circle where each child says one word in a familiar nursery rhyme. the student holding the ball says the next word.
- identifying missing words - the teacher reads a sentence and then repeats it without one word. students are expected to recognize the missing word.
- alliteration can be combined with counting.

Level 4 - Auditory blending and analysis

- recognition activities - two or three words from which to select the answer regarding the beginnings and endings of words
- word games with syllable and phoneme blending
- sound isolation activities
- sing songs that play with phonemes or that substitute words and word parts in a rhyming pattern.

Conclusion

Phonological awareness and morphological awareness have been identified as two underlying constructs. Dyslexics who lack phonological awareness have very poor decoding skills which may cause problems with comprehending written texts. But in print exposure, many dyslexics learn to compensate for their decoding deficits by developing alternative reading strategies, and extensive reliance on context.

It is important to note that great variability exists among different learners in terms of sub-sets of skills.

Reading is a complex process depending on a number of sub-skills such as an ability to recognize letters as well as comprehend the content. It is not a natural, innate skill and therefore requires explicit teaching. Children in the pre-school age and during the first and second grade should be extensively exposed to activities

aimed at enhancing their phonological and phonemic awareness. Activities in the auditory level focus on helping students appreciate sound patterns in language they hear. Students are helped to identify their listening skills while identifying rhyme and alliteration.

Recenzente

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