# RECOGNITION OF FIGURATIVE LANGUAGE AND READING ABILITY IN POLISH SCHOOL CHILDREN

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#### Abstract

It is reported in literature (Nippold et al.., 2001; Qualls, Bodle et al., 2001, Levorato, Nesi, Cacciari, 2004) that reading ability is associated with figurative language competence. The assumption is that good reading ability enhances lexical development, which, in turn, increases knowledge of figures of speech. On the other hand, studies on the metaphorical use of language by children primarily provide information on the interpretation and understanding of figurative language forms, to a lesser extent, on the ability to recognize them in the text. The aim of presented study was to investigate the relation between reading comprehension and figurative language recognition in 8- to 9-year-old children . In a preliminary phase two standardized tests was used, to assess the reading comprehension skills. Study involved 60 children attending 2 and 3 grades at primary school, divided into 3 groups: poor, medium and good comprehenders. The group of skilled comprehension task, that include figurative expressions derived from school textbook. The study brings interesting results concerning the relationship between the ability to recognize metaphors with reading comprehension level, indicating that children with low levels of reading comprehension in less use context, making it difficult for them to differentiate literal from metaphorical expressions.

Key words: figurative language, reading comprehension, metaphor recognition, metaphor comprehension

#### 1. INTRODUCTION

It has been widely demonstrated in recent literature on figurative language that metaphor is not only stylistic device and the rhetorical flourish, but it is pervasive in everyday life, not just in language but also in thought. Contrary to the position often expressed in mainstream linguistics, in recent literature, metaphor is considered to be a central aspect of language and thought (Gibbs, 1994 2008; Gibbs, Colston, 2012; Gluckberg, 2008; Lakoff, Johnson, 1980; Lakoff, 1987; Turner, 1996) and

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1

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is treated as matter of ordinary rather than extraordinary language. Metaphor as well is a crucial variable in cognitive development, so any theory of language acquisition can't ignore how children are able to recognize the distinction between what is said and what is meant. Despite the fact that figures of speech as analogies, metaphors, idioms or proverbs are very common both in oral and written language, children's ability to comprehend and use them develops mainly during school years and is associated with cognitive development. On the other hand, it is reported in the literature Nippold et al.., 2001; Qualls, Bodle et al., 2001, Levorato, Nesi, Cacciari, 2004) that figurative language competence is associated with reading ability. The assumption is that good reading ability enhances lexical development, which, in turn, increases knowledge of figures of speech.

## 1.1 Figurative vs. literal meaning

A central debate in the area of figurative language is how to distinguish literal from figurative sentences. The task is difficult, because a set of necessary and sufficient criteria by which we can decide that the utterance is either literal or figurative, doesn't exist. According to Honeck (1997) we can only say "that it is more or less likely that some statement is literal or figurative" (p. 48). Honeck (1997) argue that there are three general reasons for this unresolved problem. The first reason is that there are different theoretical perspectives on literalness, that can't agree if literalness is conceived as a phenomenon of language, language use or mind. Second, the term "literal" has multiple meanings, and third - many factors can influence our decision about whether a particular sentence is literal or figurative as intentions of the speaker, knowledge shared by speaker and audience, the context and the utterance itself.

According to Gibbs (1994) metaphor studies have to examine 4 aspects of figurative language understanding:

- 1) *metaphor processing* very fast, mostly unconscious processes that lead to metaphor comprehension in real-time listening and reading,
- 2) *metaphor interpretation* slower, sometimes conscious reflective processes associated with richer deeper metaphoric meanings being understood,
- 3) *metaphor recognition-* process by which people recognize that a particular word or phrase conveys metaphorical meaning,
- 4) *metaphor appreciation* the processes that lead to metaphors being appreciated or evoking affective responses.

Recognizing metaphor as a figurative utterance is not the same thing as comprehending it (Olson, 1988). Moreover, the process of recognizing figurative language and discriminating it from literal ones is different among adults and children. According to Olson (1988), recognizing metaphor by the child requires concept of metaphor and a concept that distinguishes metaphor from literal meaning. To comprehend figurative language children has to recognize sentences as indirect or metaphorical, that is the consequence of seeing discrepancies between representa-

2

tions and the events they represent. Winner at al. (1978) suggested that it is possible that metaphorical perception depends on exposure to conventional linguistic norms.

#### 1.2 Development of metaphorical competence

Pioneering research on the development of metaphor abilities in children concluded that children are unable to understand metaphors until middle or even late childhood. Traditionally metaphor is seen as late-developing skill (Cometa, Eson, 1978; Winner, Rosentiel, Gardner, 1976). The evidence for metaphor comprehension as a late-developing skill was based on children's inability to paraphrase correctly metaphoric sentences presented out of any situational or narrative context.

Researchers considering why younger children had a problem with the understanding of figurative expressions, noted that the important factor was method of measuring metaphorical competence. As Vosniadou and Ortony (1986) suggest, children's difficulties in comprehending metaphorical language often arise from factors unrelated to metaphor. Such factors are limited knowledge of the world, limited knowledge of the language, difficulty in creating an appropriate context for interpreting figurative language and difficulty in providing verbal explanation of metaphors. Especially important is the final reason, arising from the widely used method for measuring understanding of metaphor, which is paraphrase of figurative expression. Vosniadou and Ortony (1986) conclude that paraphrase task probably underestimates the young child metaphorical abilities. Failure in such task therefore entails inability to comprehend, though such conclusion is often drawn.

Another factor inhibiting the children's understanding of metaphors is that in most studies - these terms are presented in isolation, without the context of whether verbal or pictorial. Gibbs (1994), in surveying the psycholinguistic literature on figurative language, shows that in appropriate contexts people more often process the metaphorical properties of a message than they do so its so-called literal meaning.

Metaphoric competence requires the awareness that the topic and vehicle belong to different semantic domains. Thus, the child has to be conscious that the linguistic expression is literally false. This problem has gained a renewed interest since theory of mind (TOM) theorists investigated children's understanding of the distinction between communicative intention and literal meaning (Beal, Flavell, 1984). According to TOM theories, intentionality derives from the general ability of children to understand the mental states of others. Research show that the acquisition of metaphoric competence is the ability to derive sentence meaning from context, whether by selecting salient meanings and suppressing irrelevant ones, by drawing the necessary inferences or by comprehending the speakers intended meaning. More recent research based on new methodology, (presentation of metaphor in context, multiple choice task, repetition), shows that children as young as 4 years old are able to understand and distinguish between literal and metaphorical similarity (Vosniadou, Ortony, 1983).

#### 1.3 Literacy and metaphor

Children's literacy development involves an increased awareness of the properties of language, words and sentences, syllables and phonemes as well as of semantic relations such as synonyms and antonyms. The relationship between phonological awareness and reading is well known. But the relation extends not only to the analysis of sound but also to more abstract constituents of language, such as words and sentences. Traditionally, literacy has been defined as having the competence to read and write. However, in The Cambridge Handbook of Literacy, edited by Olson and Torrance (2008), to be literate is argued not only having the basic skills of reading and writing, but also possessing competence with more specialized intellectual or academic language in different social contexts. According to Olson (1994) reading and writing are not simply skills to be acquired but rather components of a distinctive mode of communication with a complex relation to the primary mode of communication - listening and speaking as well as to other modes of expression and communication. As metaphor and other tropes are an essential component of everyday, oral and written communication, as well as literature, they have important practical significance, especially in reading. Ortony et.al (1978) stress that children need to be able to comprehend figurative expressions to understand the text they typically encounter in school. Knowledge of figures of speech allows children to a better understanding of the cultural heritage contained in literary texts and textbooks. Moreover, metaphor comprehension come into play not only for understanding special usages in literary texts, but also for understanding ordinary teachers' communication in the classroom. It is a common instructional practice, in fact, to convey new notions and concepts through metaphors, often spontaneously created on the spot.

Language and literacy develop concurrently and influence one another. What children learn from listening and talking contributes to their ability to read and write and vice versa. For example, young children's phonological awareness (ability to identify and make oral rhymes, identify and work with syllables in spoken words, and the ability to hear, identify, and manipulate the individual sounds— phonemes—in spoken words) is an important indicator of their potential success in learning to decode print. Early vocabulary development is an important predictor of success in reading comprehension. Both phonological awareness and vocabulary development begin early with participation in rhyming games and chants, shared book experiences, and extended conversations with adults. As numerous studies suggest, adults in oral communication very often use metaphors and other forms of figurative language.

In addition to mentioned above factors, children's literacy development involves comprehension skills. Text comprehension as a complex task, draws on many different cognitive skills and processes. Mayority of work in this field has focuses on single component skill rather than complex skills and processes that are engaged in reading comprehension development (Hannon, Daneman, 2001; Saarnio, Oka, Paris, 1990). The higher level language skills are involved in the integration of information across sentences and ideas in a text, namely, inference and integration, comprehension monitoring, and knowledge about text structure. Both processes, text comprehension and metaphor recognition and comprehension requires metalinguistic skills, in case of metaphor, specially metasemantic ability (Pinto at al., 2011). However, young children's reading comprehension is strongly predicted by lower level language skills, such as word reading accuracy and verbal and semantic skills.

Comprehension and reading skills that has to be engaged when a child encounters one of the types of figurative expression, eg. idioms, in a text are summarized by Levorato at al. (2004). These are:

- 1) the ability to make inferences from the single word level to sentence level using information provided by the context
- 2) the ability to select a specific word meaning from another possible meanings
- 3) the ability to suspend contextualy inappropriate meanings
- 4) the ability to monitor own comprehension of text

Until now, little research concerning the relationship between figurative language and reading ability has been done (Nippold et al., 2001; Qualls, Bodle et al., 2001, Levorato, Nesi, Cacciari, 2004). Recent studies of Italian and English children with low level of reading comprehension skills showed that a child's text comprehension level predicts his/her ability to understand and product an idiom (Cain, Oakhill, Lemmon, 2005; Levorato et al, 2004, 2006). Levorato at al. (2004, 2006) research shows that children with poor reading comprehension skills aged from seven to ten years provided a literal interpretation for idioms inserted in short stories even when the narratives biased toward the idiomatic meaning. On the contrary, children with good reading comprehension skills were able to go beyond a word-byword comprehension strategy and to integrate the figurative meaning into context. In next experiment Levorato (2004) found that the children whose general reading comprehension skills improved also improved in idiom comprehension.

According to Palmer & Brooks (2004) despite broadly usage of metaphors in oral language, many readers struggle to interpret figurative language when it is encountered in text. These difficulties in understanding figurative sentences leads to breakdown in text comprehension, causing frustration and disincentive to further reading. As a consequence it may cause a delay in later language development and literacy attainment (Nippold, 1998).

#### 1.4 Metaphor in literacy curriculum in Poland

Developing and improving reading skills, which is the basis of social communication, is the main goal of primary education. In the initial period of learning, reading

mainly involves decoding skills, as these skills become automatized, emphasis is placed on reading comprehension. Reading comprehension is a prerequisite for processing and use information contained in the text to an extent which allows children to acquire knowledge in various fields and to participate in social life.

Curriculum for grades 1-3 in Poland sets out the skills that a pupil should develop after three years of acquisition of reading and writing skills. Among them are reading and understanding texts appropriate for child's education level, drawing conclusions from them, analyzing and interpreting cultural texts. Student is supposed to reveal an aesthetic sensitivity, expanding vocabulary through contact with literary works. Understanding written texts, literary or textbooks is essential for young children in school. The current core curriculum emphasizes the importance of reception various types of texts, popular-science and literature. In order to glean knowledge students need to understand the written text presented to them. The authors of textbooks used in Poland in grades 1-3 presents the different approaches to the meaning of metaphors in the acquisition of reading skills. All books include texts from children's literature, and they inherently contain a metaphor. In some textbooks various forms of figurative language are introduced into almost any text in a systematic way. Idioms are placed in a meaningful context, then the figurative meaning is explained. In other books, only one or two topics are devoted to the introduction of figurative forms of the language.

Nationwide Testing of Skills of Third Grades, conducted by Educational Research Institute (2013) showed that children achieved the lowest scores in the skills of interpretation of the text and inferences based on the evidence contained in the text and the average level in the creation of sentences with the ambiguous words. For these reasons, an important research problem is the search for the causes of such results, and to suggest changes in the literacy curriculum.

## 2. METHOD

In presented research the relationship between children's comprehension skills and their recognition of figurative expressions presented in meaningful context were investigated. Figurative language recognition was tested by using method described by Steen (2004) and metaphor comprehension – by multiple-choice task, a method widely employed in studies on comprehension. It was assumed, that school children's comprehension skills predicts their ability to recognize metaphoric utterances in text. More skilled comprehenders should recognize more metaphoric expressions correctly.

#### 2.1 Participants

The participants of the present study included 60 pupils , all children were native Polish speakers, who were students at elementary school. Thirty children attended 2-nd grade (aged from 8.1 to 9.4, mean age 8.11) and 30 - 3-rd grade (aged from

9.2 to 10.4, mean age 9.10). The study was carried out at the school. The study did not specifically included children with a reduced intellectual level. The groups were balanced due to the socio-economic status of parents.

#### 2.2 Materials and procedure

Children completed two reading comprehension tests and two metaphor tasks.

#### 2.2.1 Assessment of reading comprehension

To assess the children's reading comprehension skills, 2 standardized tests, designed for Polish third-graders, were administered: "Reading with deletions" (in Polish "Czytanie ze skreśleniami") and "Dwarfs House" (in Polish "Domek krasnoludków") developed by Krasowicz-Kupis (Bogdanowicz at al., 2009). The first method, the "Reading with deletions" provides for an evaluation of reading comprehension at the lexical level. The task is performed individually and time of performance is measured. The task of the child is to differentiate words with meaning from those that do not mean anything and plotting the latter. The test material consists of real words (representing different grammatical forms) and artificial words. Correct and fast task execution proves effective updating of lexical representation. The second of the methods used - "Dwarfs House" - measures the reading comprehension ability at the level of sentence and text. The task consists of short story inspired by Disney fairy tale "Seven Dwarfs Find a House". In several places of the story, the child has to make a choice of one of two given words, deleting the wrong. According to the author's intention, the words are chosen in such a way that both match the content of the sentence, but only one is correct because of the content of the text. The task is based on the assumption that a measure of understanding of the whole text is an ability to complement components. The main indicator is the time of the task performance.

#### 2.2.2 Assessment of figurative language recognition and comprehension

In the first phase – 10 short texts (in total - 2 pages font 14) containing figurative expression were selected from standard textbooks of Polish language for second and third classes in elementary school. Each text contains one or more figurative expressions (analogy, metaphors, idioms) used in meaningful context. Before assessment children had received a brief explanation of figurative meaning in text during conversation, as described below.

<sup>&</sup>quot;We use figurative language to describe an object, person, or situation by comparing it to or with something else. For example, "She is as pretty as a picture" describes or compares a pretty girl to a beautiful piece of art. Metaphor suggests something or someone actually becomes or is something else. For example, what we mean by saying "Dad is a lion when he's mad"? Another example of figurative language is an idiom.

What we mean by saying: "To learn something the hard way". Can you give other examples of figurative sentences?"

Children received feedback. If the examples given by them, were correct, they were praised.

In the first task – Metaphor Recognition Task (MRT) - recognition of metaphoric expressions were measured by asking children to read the text silently and underline any word or words they thought had been used metaphorically. The index obtained in this phase of the study was the number of correctly identified figurative expressions. Additional indicators are the number of incorrectly identified expressions (literal expressions recognized as a metaphor- false recognitions), and the time of performance.

The second task, the Metaphor Comprehension Task MCT), immediately following the earlier, was designed to measure the level of understanding of metaphorical expressions that have occurred in previously read texts. Comprehension of metaphors were measured by multiple-choice task, that consists of ten figurative utterances, followed by one correct (metaphorical) and one incorrect (literal) answer. Children were instructed to read carefully each utterance and choose the correct interpretation. The number of correct figurative interpretations were counted for each participant.

Participants completed all tests individually. Mean time of administration was 20 minutes.

#### 3. RESULTS

According to purpose of the present study, the children's performance on the comprehension tests was used as the criterion for differentiating among groups of children. This allowed to divide a sample of children into 3 groups corresponding to different levels of reading comprehension.

 Table 1. Mean scores and standard deviations obtained in reading tests according to level of reading comprehension

		Text: Reading \	Text: Dwarft House <sup>a</sup>		
Level of reading comprehension	Ν	М	SD	М	SD
Poor	30	17,23	4,56	465	123
Medium	23	38,45	5,78	324	78
Good	22	54,87	6,87	187	54

8

The mean scores obtained in Metaphor Recognition Task for three levels of reading comprehension are presented in Table 2.

Level of reading	Correct re	False	False recognition			Time (minutes) <sup>a</sup>	
comprehension	М	SD	М		SD	М	SD
Poor Medium Good		6,96 7,82 8,04	2,95 3,58 3,55	5,36 3,73 2,45	5,62 4,99 2,93	9,45	4,88 3,61 1,74

Table 2. Mean scores and standard deviations obtained in Metaphor Recognition Task

The performance on the metaphor recognition task, measured by number of correct metaphor recognitions, differ significantly only between the group of poor comprehenders and both groups of children representing higher level of reading comprehension skills (t-Test for independent samples, p<.001). Thus, children with medium (mean=7,82, SD=3,58) and good (mean= 8,04, SD=3,55) reading comprehension skills demonstrated better recognition of figurative expressions in literary text than pupils with poor reading comprehension abilities (mean=6,96, SD=2,95). No such differences were observed between and medium and good comprehenders. As can be seen from Table 2 results indicates that group of medium and good comprehenders outperformed the group of poor reading comprehenders in the number of figurative expressions have been recognized. The number of false recognition was also compared between the groups of children. t-Test for independent samples found that poor comprehenders more often recognize literal utterances as a metaphorical (mean=5,36, SD=5,32) as compared with medium (mean=3,72, SD=4,99) and good comprehenders (mean= 2,45, SD=2,93, p<.001). Thus, children representing medium level of reading comprehension skills more often made a false recognition than the group with good comprehension skills. Analysis indicated that there is also significant difference between the three groups of children in the time of task performance.

The mean number of figurative and literal interpretation in Metaphor Comprehension Task chosen by poor, medium and good comprehenders are summarized in Table 3.

The performance on the Metaphor Comprehension Test differ between group of children with poor reading comprehension skills and medium as well as good comprehenders. Children with low level of reading comprehension skills generated significantly higher number of literal interpretations than children with medium and good comprehension skills (p<.001). Results show that the understanding of

figurative expressions measured by multiple-choice test did not differ between the group of medium and good comprehenders.

Table 3. Mean scores and standard deviations obtained in Metaphor Comprehension Task

Level of reading comprehension	Correct interpretations			
	М	SD		
Poor	8,67	0,98		
Medium	9,23	0,43		
Good	9,87	0,11		

#### 4. DISCUSSION

Previous research on development of figurative language in children focused on comprehension and interpretation processes. However, recognition of metaphor in literary texts usually encountered in school textbooks and it's relation to reading comprehension skills is relatively unknown. The aim of the current study was to investigate the relationship between figurative language recognition and reading comprehension in typically developing children after 2 or 3 years of reading instruction.

As has been shown, children with low level of reading comprehension skills scored significantly lower than children representing good and medium comprehension abilities on recognition of figurative utterances. Proficient readers were able to recognize sentences as indirect or metaphorical, that is the consequence of seeing discrepancies between representations and the events they represent. Less proficient readers probably encounter difficulties in the integration of information across sentences and text, and make mistakes in inference and comprehension monitoring.

At the same time poor comprehenders scored significantly higher in false recognitions, they made more mistakes, classifying literal expressions as figurative ones. Significant differences in false recognitions were also observed between groups of medium and good comprehenders. Skilled comprehenders were better at recognition of metaphor than children with poor comprehending skills. Results shows that capacity to make inferences regarding the meaning of an ambiguous phrase strongly relies on the ability to use contextual information (Gibbs, 1994, 2001).

Both results: greater number of errors and a lower score in the Metaphor Recognition Task in children who are poor readers testify to the fact that children are not familiarized with these conventional expressions, and do not have them in their linguistic repertoire. Findings also show that children with poor reading comprehension skills provided more literal interpretations of figurative expressions in Metaphor Comprehension Task. It means that although after reading the text containing the same expression in the meaningful context, they are less able to cope with the interpretation of figurative utterances. It may reflect difficulties with extracting the intended meaning from context. According to Levorato (1993), with respect to idioms, in order to create correct figurative meaning, the child has to construct a coherent semantic representation of the text in light of intend meaning and at the same time suppress inappropriate literal meaning. Result are consistent with studies on lexical processing in poor comprehenders, that control for both levels of decoding and basic language skills such as vocabulary, that shows that poor comprehenders have problems on a variety of measures involving semantic judgment and fluency (Nation & Snowling, 1998).

One of the reasons of difficulties in recognizing the metaphor in the text by children with poor reading comprehension skills can be that they read less than good compreheders. Children who read less and truncate their exposure to less common words (Cunninghm & Stanovich, 1998) and figurative expressions fare worse in comparison with their peers who read more frequently. Moreover, their poor ability to use semantic cues to decode less frequent words may constrain higher levels of lexical development (Nation & Snowling, 1998).

From the other hand, good ability to recognize and interpret metaphors in literary texts and textbooks are associated with high levels of metalinguistic, especially metasemantic abilities.

As has been found "good readers who possess meta-cognitive skills in reading ... actively seek to clarify the purposes or task demands through self-questioning prior to reading given materials ... and evaluate their own comprehension of materials read" (Wong, 1991, pp. 239-240).

Results of presented research suggests that greater emphasis in reading instructions in school should be put on the understanding of texts containing various forms of figurative language. Mainly because both literary texts as well as school textbooks contains a different forms of figurative language. Figurative language is so common that the difficulties in understanding these forms of expression significantly impedes the reception of literature as well as communication in the classroom.

Relationship between text reading comprehension and figurative utterances recognition and understanding might be causal, improvement in reading skills can be paralleled by an improvement in metaphoric competence and vice versa.

The relatively small sample size limits the generalizability of findings. Further studies on the ability to recognize metaphors in the text should take into account not only the level of reading comprehension, but also other variables associated with the later language development (vocabulary, metasemantic awareness) and cognitive abilities. It is possible that metaphorical perception depends on exposure to conventional linguistic norms, therefore further research should take into ac-

count the factor of knowledge of metaphorical expressions and apply not only conventional but also original metaphors.

#### 5. CONCLUSIONS

The present study indicates that students who are less proficient readers experience difficulty recognizing and comprehending figurative expressions than their peers who read more proficiently. Reading is a major source of later language development. Through reading students gain knowledge about the worls, exposure to new voacabulary – all of which contribute to their ability to interpret unfamiliar figurative expressions. It is likely that they are less able to use reading as a tool for acquiring other aspects of later language development. The results support the view that reading is an important language modality in older children, significantly related to their understanding of words and figurative expressions.

The results indicate a gap in early childhood education, where the emphasis is on developing only the basic skills related to reading and understanding the text. One of the aims of education in grades I-III should be developing the ability to find the deeper symbolic meanings in the text. In current curriculum it is treated as one of the final stages of learning to read. Thus, figurative language instruction is a necessary component of a teacher's reading comprehension curriculum. It is necessary to provide children the experience necessary to support development of interpretative capacity by the choice of different genres of literature, short stories, novels, fairy tales, fables, legends, myths, containing figurative language. Students should be taught how to recognize figurative sentences or phrases in the text, as well as universal meanings of symbols and metaphors, which can help them to look for a range of possible meanings within the text. Furthermore, figurative language interpretation instruction needs to extend, and it should be taught as a reading skill necessary for text comprehension. Literacy curriculum should contain figurative language recognition and interpretation instruction. Instructional strategies can include comprehension monitoring, cooperative learning, question answering, providing the knowledge necessary to understand figurative sentences and their meanings. Ability to interpret figurative language not only expand creative thinking abilities, communication skills but allows to comprehend oral and written language on a deeper and more meaningful level.

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14