



## THE DIDACTIC LINKS BETWEEN READING AND WRITING

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In this paper didactic links between reading and writing are analysed. Based on the research of literature the model of links between reading and writing was created. The didactic links of reading and writing were determined after the secondary analysis of the national studies on reading and writing achievements conducted in Lithuania. The didactic links between reading and writing were revealed with the help of two-dimensional tables and their statistical significance was assessed using chi-square criterion, as well as the correlation (contingency) coefficient, which was based on this criterion.

**Keywords:** Primary school, Primary school pupils, Reading, writing, Links between reading and writing, Learning achievements, Lithuania.

### Introduction

Reading and writing skills are attributed to skills of learning activities. They are important when seeking pupils' literacy, without which further education is not possible. Therefore reading and writing skills are basic skills and in schools they are taught from the first to the final grade (Bitinas, 2000, 92). Reading and writing are the areas of linguistic activities, which along with speaking and listening activities, form the basis of linguistic education. Linguistic education takes place during the activities of reading and writing texts. The concept of text (*textus* in Latin – link, connection, coherent arrangement of words, material) is interpreted in different ways. Text is characterised with coherent words consistency, which express some kind of content. The words in text have direct or figurative meaning. Texts convey different information, which is enabled by text coherence. The content of text can be simple or complicated. When creating texts authors use various kinds of text structure. The structure of text defines its boundaries, marks its contours and lets a reader to understand it. The theory of reading and writing integration perhaps more than any other lets us understand how these linguistic activities are linked together. Both a reader and a writer of text are involved into similar (even identical) thinking process, which is based on the understanding, imagination and creation (Squire, 1983). This phenomenon is not surprising, as thinking and language are basically inseparable (Vygotsky, 1979).

Integrating model (Squire, 1983) is based on reading and writing needs, which help to develop cognitive needs. These needs can be best illustrated when comparing the activities before reading and writing. For example, it is important for pupils to understand the purpose of reading before reading text in order to regenerate and activate knowledge they have already had on that topic. Similarly, before writing text pupils are preparing to create by determining the purpose of writing and remembering all information which is suitable for that topic. Preparation for reading and writing are important for the whole process of text comprehension and text creation. Conversation and discussion are often necessary in this stage, because they help to prepare the reader and the writer to create meaning more effectively. Reading and writing pupils can also be compared in the aspect of the process of

text comprehension and text creation. The reader is intellectually and emotionally involved in the regeneration of author's thoughts and the writer is intellectually and emotionally involved into the process of one's own thoughts' expression in writing. The reader consciously controls one's perception – actively plans, regulates, checks and rechecks one's thinking during the reading process (Palinscar & Brown, 1984). Similarly, the writer plans, regulates, checks and rechecks written text. Links between reading and writing are significant in the educational process when it is aimed to activate pupils' thoughts after reading text, which would help to understand the read text and which the pupil could use intellectually and emotionally when creating one's own text.

Reflection is particularly important when learning to read and write thus sufficient attention should be paid to it in this process. Reflection on what was read, considering what the author wanted to say and text comprehension through the prism of the reader's experience leads to the assessment of text: is it interesting, new, relevant, significant and etc. In order to assess written text the author reads it. This way the writer becomes the reader of this text.

### **The Theoretical Model of the Links between Reading and Writing**

Traditionally the language curriculum covers a great part of narrative reading, especially in primary grades. There are several reasons based on the results of various studies and stated in their reports about the necessity to focus on the narrative in the primary grades. One of the reasons is that narrative writing is less complex syntactically and therefore easier understood (Heller, 1987). Research shows, that persuasive writing (reasoning) is the most complicated in terms of sentences' composition (Hunt, 1977). The second reason why narrative is significant to pupils of this age is that when starting school the majority of pupils already have extensive prior knowledge about its form, which they gained mostly from the fairy tales told before bedtime. Thus, before starting formal education pupils already have basic knowledge about the structure of narrative (Applebee, 1978; Stein & Glenn, 1979). Reading for children at home and at school helps to acquire new forms of narrative and other discourses. Child's life experience in particular social environment influences one's comprehension of the read text and creation of a new text. Narrative writing is also relevant in primary grades where pupils are encouraged to create fictional and personal narratives. It is also easier for children to create narratives, because they already have prior knowledge about this form of text. In primary grades teachers are more often assigning or pupils choose by themselves to write narratives rather than any other creative written text (Heller, 1987). The opportunity for children to choose the topic of their creative written text is an important mean when teaching writing (Graves, 1983). Topics chosen by children are almost always given fictional or personal form. The exception in this case is teacher's intervention with an alternative task.

Some children write personal narratives or stories (diaries). Writing of diary is a great way to develop the fluency of reading and writing (Siegler, 1998). Dialogue magazines, which are intended for children (Staton, 1988), promote narrative writing, contribute to the oral and written conversation between the teacher and the pupil.

When pupils start to create more complex texts a number of text structures for the effective text comprehension and creation must be recognised and used. The teacher can directly teach text structures by organising graphs and modelling (McGee & Richgels, 1985). Knowledge about the organisational models of texts help pupils to better remember what they have read. Reading and writing experience improves text comprehension and their creation (Pearce, 1984).

Cognitive and metacognitive skills, which are formed in particular sociocultural environment, such as family, classroom, school and national levels, are important for text

comprehension and creation. On the basis of these cognitive and metacognitive skills the author of this paper created the model, which shows the links between reading and writing (Fig. 1).

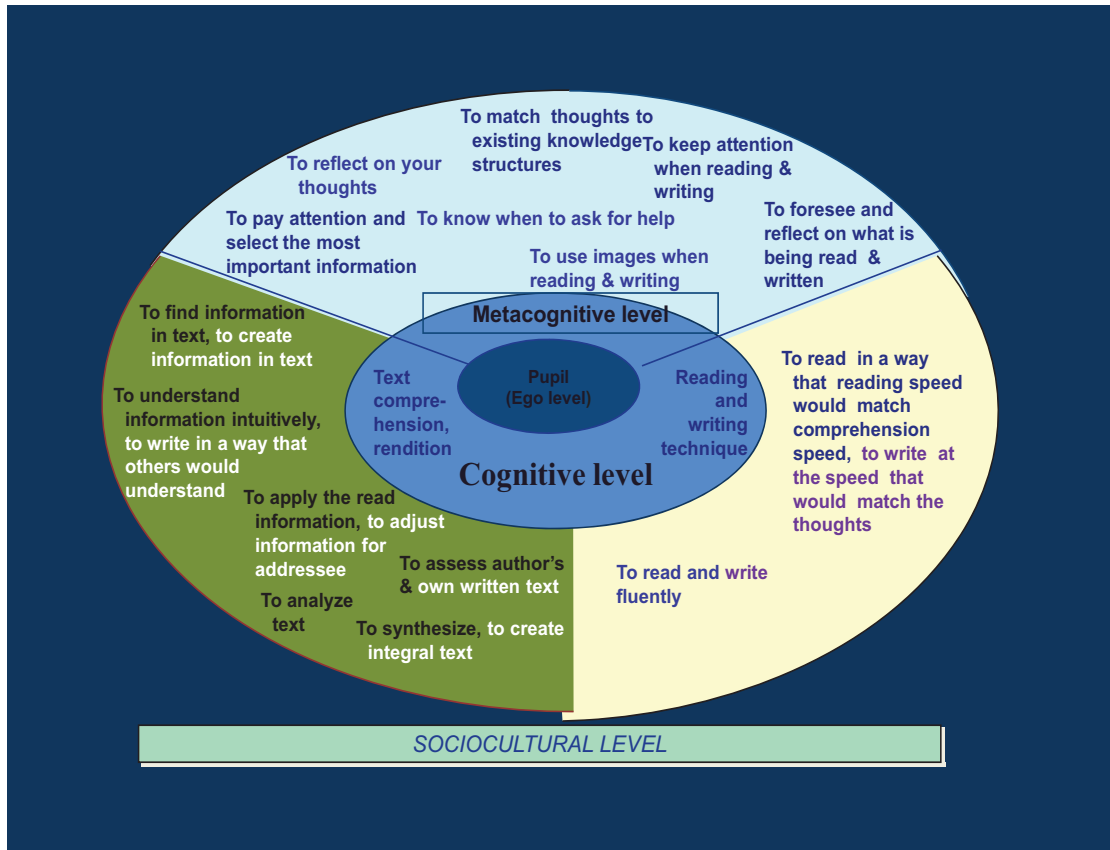


Figure 1. The model of the links between reading and writing.

### The Design of the Empirical Research

The secondary analysis of data of the Lithuanian national study on pupils' achievements was performed. The sample size was formed from 1408 fourth grade pupils and 192 teachers. Research methods used in the study were pupils' testing and pupils' and teachers' questionnaire. Correlations between the results of pupils' testing (which measured reading and writing achievements) and pupils' and teachers' answers about their applied reading and writing didactics were investigated.

The proportions of the groups of pupils' reading and writing skills in the tests were as follows: tasks of text comprehension – 70%, tasks of text creation – 30%. 35% of tasks in these tests were designated for the assessment of pupils' reproductive skills and 65% of tasks were devoted for the assessment of pupils' productive skills. Tasks with optional responses (selective) and open responses were used for the measurement of pupils' reading skills. Creative task in the type of essay was used for the measurement of pupils' writing achievements. In order to determine the links between reading and writing *the dependence of pupils' text creation skills on the frequency of reading tasks given by the teacher, the dependence of pupils' text creation skills on the frequency of writing tasks according to the*

previously read text, the dependence of pupils' elementary literacy on the frequency of tasks according to the previously read text given by the teacher were examined.

### Results of the Empirical Research

Correlations between pupils' testing (which measured their reading and writing achievements) results and pupils' and teachers' answers about reading and writing didactics were analysed in order to determine the dependence of pupils' achievements on given reading and writing tasks. It was found that several learning tasks, which were assigned to pupils after reading the text, do not influence their text creation skills (such as to formulate a written question from what was read; to create a script or a play about what was read; to estimate what is going to happen in the read text). Thus it can be concluded that these tasks are related to giving meaning of the read text that is such a skill, which in the childhood can rarely have a characteristic of the transfer to practical activity. It is likely that this is the reason why links between these reading and writing activities were not determined.

Data given in the Table 1 shows that pupils' text creation skills are directly influenced by the majority of writing tasks assigned after reading the text (to write a test on what was read; to compare the read text with other texts; to indicate the main thoughts of the read text in writing; to answer text comprehension questions in writing). Such related to reading tasks given frequently indulge pupils to create new texts better. For example, in the group of pupils who rarely get a task to compare what was read with other read texts there are no pupils with high text creation skills. However, this statement is only valid with the proviso that these tasks are not performed too often. Teachers who indicated that they assign such tasks two times a week get a little bit worse results in developing pupils' text creation skills than those who assign this task once a week.

As the frequency of assigning discussed writing tasks after reading the text is directly related to pupils text comprehension skills, some minor contradictions can be seen between two teaching goals: text comprehension skills are developed by very frequent tasks, connected to the read text, while in order to develop text creation skills the frequency of such tasks should be limited.

**Table 1.** The dependence of pupils' text creation skills on the frequency of tasks according to the previously read text (percentage).

Tasks according to the read text	Frequency	Achievement levels				
		Low	Lower than average	Higher than average	High	Link
To answer text comprehension questions in writing	Very rarely or never	3.6	46.4	35.7	14.3	C=0.32
	1-2 times a moth	7.5	47.5	35.0	10.0	
	Once a week	11.5	26.2	45.9	16.4	
	Two times a week	-	45.5	22.7	31.8	
To write a test on what was read	Very rarely or never	6.6	44.3	41.0	8.1	C=0.28
	1-2 times a moth	8.9	39.3	36.6	15.2	
	Once a week	5.7	33.3	27.7	33.3	
To indicate the main thoughts of the read text	1-2 times a moth	-	75.0	25.0	-	C=0.28

in writing	Once a week	10.8	32.4	51.4	5.4	
	Two times a week	7.5	40.4	33.6	18.5	
To compare the read text with other texts	1-2 times a moth	11.4	57.1	31.5	-	C=0.31
	Once a week	4.4	43.5	34.7	17.4	
	Two times a week	9.4	31.8	41.2	17.6	

It would be quite natural if all writing-related tasks lead to the development of pupils’ text creation skills. But in this research such didactic hypothesis was confirmed only partly: the frequency of application of only half of the eight presumed components were statistically related to pupils’ text creation skills after reading the text. It can be didactically justified why the writing of dictations or the frequency of the use of vocabularies does not influence pupils’ skills to create coherent text. However, it is difficult to interpret the fact that the development of these skills is not influenced by the tasks intended for this purpose (to create an objective text, such as instruction, message, invitation, letter; to create artistic text, such as narrative, story, poem). Statistical relation describing data shows relatively similar percentage of pupils’ text creation skills in all the frequency groups of these tasks. Thus, this fact cannot be explained statistically; its interpretation requires new qualitative analysis.

When analysing tasks related to writing (Table 2) the trends of didactic novelty can be noticed. Paraphrase is the only traditional learning task. The best results are achieved by those pupils who are assigned to write a paraphrase once a week (as well as in the cases of already discussed learning tasks). Other tasks are given: a) when teaching to plan a text, for instance, to discuss a topic, purpose, addressee, situation before creating text; b) when teaching to improve written text (to read and discuss texts with classmates, to correct them according to their comments). And yet a clear linear relation is valid only when these tasks are performed by pupils with higher than average or high levels of text creation skills. Their use for pupils with lower than average levels of text creation skills is problematic.

**Table 2.** The dependence of pupils’ text creation skills on the frequency of tasks related to writing according to the previously read text (percentage).

Writing tasks	Frequency	Achievement levels				
		Low	Lower than average	Higher than average	High	Link
To write a paraphrase	Once in three months	14.8	33.3	40.7	11.1	C=0.29
	Once a month	9.6	45.2	30.4	14.8	
	Once a week	-	33.3	50.0	16.7	
To consider the topic, purpose, addressee, situation before creating text	Once in three months	15.4	23.1	53.8	7.7	C=0.28
	Once a month	4.3	48.9	33.0	13.8	
	Once a week	10.0	31.2	40.0	18.8	
To plan narrative writing in various ways	Very rarely or never	10.0	40.0	50.0	-	C=0.25
	Once in three months	10.6	46.8	34.0	8.5	
	Once a month	6.9	34.2	43.8	15.1	
	Once a week	6.6	41.0	29.5	22.9	

To read and discuss written texts with classmates and to improve them according to their comments	Once in three months	10.0	28.0	50.0	12.0	C=0.31
	Once a month	7.2	47.6	33.3	11.9	
	Once a week	7.1	39.3	32.1	21.5	

The dependence of pupils' text creation skills on the frequency of assignment of some tasks, which are intended for the assessment of text comprehension and other linguistic skills, was determined. First of all these are creative tasks performed in writing or orally. The linear dependence of text creation skills on these tasks is quite clear: among pupils who perform creative tasks given by the teacher in writing once in three months there are no pupils who reached high level of text creation skills, while there is one-fifth of pupils with high text creation skills among those who perform such tasks once a week. A task to write a response of one paragraph is not so clearly linked with text creation skills; this relation has a non-linear form only when this task is given for pupils with higher than average text creation skills.

Primary school pupils' elementary literacy is a goal of the whole educational process. Thus it is purposeful to discuss the role of didactic methods, which are dedicated to teaching conscious reading and writing. According to the data given in the Table 3 it can be assumed that elementary literacy of pupils can be influenced by such learning tasks, which at first sight do not have such purpose. For example, among pupils who are assigned a task to estimate what is going to happen in the read text twice a week clearly dominate those pupils whose level of elementary literacy is higher than average (78%) and among pupils who are assigned this task rarely or never, the same number of pupils are with lower than average level of elementary literacy. Similar connection to elementary literacy has a task when pupils are asked to compare what they have read with other read texts – a greater part of pupils who perform it more frequently achieve higher than average level of elementary literacy. Pupils who very often answer text comprehension questions in writing also achieve better elementary literacy results. And the task to formulate a question on what was read is best performed by those pupils who are given such task once a week, which is quite often.

**Table 3.** The dependence of pupils' elementary literacy on the frequency of writing tasks according to the previously read text (percentage).

Tasks according to the read text	Frequency	Achievement levels				
		Low	Lower than average	Higher than average	High	Link
To answer text comprehension questions in writing	Very rarely or never	-	35.7	50.0	14.3	C=0.32
	1-2 times a months	16.2	35.0	42.5	6.3	
	Once a week	11.5	37.7	47.5	3.3	
	Twice a week	4.6	31.8	40.9	22.7	
To formulate a question on what was read	Very rarely or never	14.3	47.6	28.6	9.5	C=0.27
	1-2 times a months	12.5	45.8	37.5	4.2	
	Once a week	8.3	28.3	50.0	13.3	
	Twice a week	13.6	35.6	44.7	5.1	

To compare what was read with other read texts	Once in three months	8.6	40.0	48.7	2.9	C=0.27
	Once a month	8.7	44.9	36.2	10.2	
	Once a week	15.2	25.9	51.8	7.1	
To estimate what is going to happen in the read text	Very rarely or never	11.1	66.7	11.1	11.1	C=0.31
	1-2 times a months	13.0	41.3	37.0	8.7	
	Once a week	13.4	37.3	38.8	10.5	
	Twice a week	8.8	23.5	61.8	5.9	

The relation of elementary literacy with the frequency of assignment of text comprehension and other tasks for the assessment of linguistic skills is not very strong. From 10 ways given for the assessment of frequency only three correlate with pupils' level of elementary literacy; however, even the relation of the latter is not unambiguous. For example, the frequency of giving short answers to questions in writing as well as answers to questions orally are related in reverse relation: better elementary literacy is achieved by those pupils, who do not get such tasks rather than those who perform such tasks very often. Direct relation is characteristic to only task to give an answer of the extent of a paragraph in writing: elementary literacy of pupils of those teachers who assign such task once a week (64%) is of higher than average level.

The relation between teacher's offered teaching methods for reading and writing and pupils' text comprehension skills was determined. After the disclosure of the connection of several teaching methods' application with pupils' text comprehension skills the goal to express the relation of this generalized estimate with this linguistic achievement emerges. This goal can be achieved by applying a method of multiple correlation coefficient, that is by summarizing correlation coefficients of text comprehension and applied didactic elements. This analysis was performed in several stages by eliminating components with inessential relations in every stage. Final results of this analysis are presented in the Table 4.

**Table 4.** Results of the correlation analysis of writing tasks and pupils' text comprehension skills.

No.	Methodical component of teaching	1	2	3	4	5	6	7	8	"Weight" of attribute
1	To write a test on what was read	1.0	0.35	0.68	0.30	0.80	0.36	0.35	0.31	0.13
2	To indicate the main thoughts of the read text in writing	0.35	1.0	0.32	0.38	0.35	0.32	0.37	0.32	0.55
3	To use various vocabularies	0.30	0.38	0.41	1.0	0.49	0.37	0.31	0.32	0.10
4	To "publish" creative texts in different ways	0.80	0.35	0.72	0.49	1.0	0.33	0.40	0.36	0.26
5	To perform creative tasks in writing	0.36	0.32	0.20	0.37	0.33	1.0	0.26	0.33	0.30

6		0.35 0.37 0.34 0.31 0.40 0.26 1.0 0.34	0.24
	Multiple correlation coefficient		0.53

Multiple correlation coefficient is quite high. Didactic components given in the table explain the distribution of pupils' text comprehension skills. These components are distinguished in several steps by eliminating the least significant one. The greatest value depends to the task to indicate the main thoughts of the read text in writing. Other components, which are assessed in the context of the system, play a subsidiary role. This result can be explained psychologically (a person is able to express the main thoughts of the text only after understanding it all) and pedagogically (when teaching pupils to find and formulate main thoughts of the text the teacher inevitably uses various methods, which as a whole are interpreted as the achievement of this goal). In addition to that, the ability to indicate the main ideas of text is the assumption for independent and successful lifelong learning.

### Conclusions

Therefore when summarizing didactic relations of reading and writing it can be concluded, that not all tasks which are related to integrated reading and writing activities are equivalent, but reading and writing links are important to the didactics of primary school.

1. Based on the research of literature the model of links between reading and writing was created. The levels (ego, cognitive, metacognitive, sociocultural) that describe components of the read and written texts were distinguished in it. The model enables a new approach to the essence of reading and writing and reveals their didactic links in detail.
2. It can be concluded that language teaching in primary grades should be oriented to education of elementary literacy, which is a necessary condition for all learning achievements. However, this assumption is not sufficient; taking into account child's need for comprehensive education, the assumption of elementary literacy should be supplemented with integrated teaching activities, which include teaching text comprehension and text creation and should be organized according didactic links of reading and writing. Optimisation of learning activities on the basis of these links and moderate application of various teaching methods oriented to different goals are essential requirements for teacher's pedagogic activities.

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