

## Chapter #13

### READING COMPETENCY AND SUMMARIZING SKILLS IN PRIMARY SCHOOL CHILDREN: AN EXPLORATIVE SURVEY

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#### **ABSTRACT**

In the present society, one of the fundamental objectives of school is learning to read a text. "Learning to read" is a complex process, implying not only the ability to associate the corresponding phoneme to each grapheme, but also the ability to understand the meaning of a text. It is a crucial achievement, fundament of the more general study skills, on which largely depends the educational and academic future of each student. In the recent years, learning to read has become the subject of systematic international and national evaluations, associated with recurrent requests to carry out initiatives aimed at the reduction of the poor comprehenders. Summarizing is one of the key strategies for a good reading comprehension, since learning from long texts result difficult for many students. Starting from these considerations, we evaluated the summarizing skills in a group of primary school children. We also measured the skills of text comprehension, referring to the ability of semantic and lexical inference, to the vocabulary skills and to the metacognitive skills. The aim was to investigate the relations between summarizing and students' general reading competency.

*Keywords:* text comprehension, primary school, summarizing, general reading competency.

#### **1. INTRODUCTION**

Nowadays, one of the fundamental objectives of school is learning to read a text, which does not end with the simple acquisition of the decoding ability. "Learning to read" is a more complex process, implying not only the ability to associate the corresponding phoneme to each grapheme, but also the ability to understand the meaning of a text. This competence, fundamental in the everyday life, is a crucial skill, one of the fundamentals of the more general study abilities, on which the scholastic and academic future of each student largely depends.

Particularly, in the present literate society, understanding a text is of paramount importance for building the store of knowledge that every man learns through reading. This ability occupies a prominent place among the competences considered indispensable for lifelong learning (Council of the European Union, 2018).

The ability to read and understanding a text is considered "a basic condition for knowledge development, for personal development and for the social integration of individuals" (European Commission, 2000).

In the last decades, this competence has been investigated both nationally (Invalsi test) and internationally, to verify individual skills in reading students. At an international level, two projects play an important role: The Program for International Student Assessment (PISA), started in 2000 and promoted by the Organization for Economic Cooperation and Development (OECD) and the Progress in International Reading Literacy Study (PIRLS). Both investigations aim to assess the reading literacy. More precisely, the term reading

literacy refers to the ability of individuals to use reading in a functional way throughout their life. It is defined as the ability "to understand, use, evaluate, reflect on and engage with text in order to achieve one's goals, to develop one's knowledge and potential and to participate in society" (OECD, 2019, p. 27). Thus, the reading literacy entails the dimensions "relating to the commitment invested by the subject in the action of reading", together with the cognitive dimensions of the reading processes and to the metacognitive ones (typical of the "levels of awareness and intentionality of one's strategies of thought") (Grance, Onorati, Revelli, & Floris, 2012).

## 2. READING COMPETENCY AND SUMMARIZING SKILLS

Reading comprehension is a complex skill that involves different abilities: from the linguistic ones, such as vocabulary, to more complex cognitive skills (Carretti, Meneghetti, & De Beni, 2005). This competence presumes the intervention of complex cognitive processes, which do not end in the association between the written form of the word and its lexical and semantic characteristics, but require an active construction of the content of a text (De Beni, Cornoldi, Carretti, & Meneghetti, 2003).

The purpose of understanding, as defined by Gernsbacher (1990), is, therefore, to create a coherent representation of text, also called mental or situational model (van Dijk & Kintsch, 1983). Different cognitive abilities concur in this direction and, when damaged, can hinder the understanding process and prevent the construction of a coherent and global mental model of a text (Padovani, 2006). Among the functions closely associated with the understanding of text, there are the ability to make inferences, to organize a well-formed narrative and working memory, as well as the metacognitive abilities and the ability to elaborate a correct synthesis of the story (Carretti, De Beni, & Cornodi, 2007; Cain & Oakhill; 1999). The latter represents an essential strategy, as it promotes learning and metacognitive skills, leading students to reflect and to process what they read (Westby, Culatta, Lawrence, & Hall-Kenyon, 2010). The assessment of this competence is crucial. Summarizing is a reading strategy that allows students to understand a text more deeply, being, at the same time, an indicator of understanding (Pečjak & Pirc, 2018).

As widely demonstrated by scientific literature, knowing how to summarize constitutes a competence that promotes the ability to understand a text. Summarizing means to formulate a reduced version of the text read, which restructures the entire construct while preserving its relevant elements (Brown & Day, 1983; Brown, Day & Jones, 1983; Kintsch & van Dijk, 1978). Synthesizing a text is one of the main processes of reading comprehension. Through this strategy, the student implements a series of cognitive abilities that promote learning and metacognitive skills (Wormeli, 2004). Both teachers and students benefit by using this strategy: the student has the opportunity to describe what is important within a text; while the teacher can evaluate the student's ability to select important information and to understand a text (Westby, Culatta, Lawrence, & Hall-Kenyon, 2010).

However, many students find this strategy difficult and seem not to understand its purpose. Many of them tend to use non-functional strategies, such as writing too much information, lacking important information or copying word by word, without a rework of the contents (Özdemir, 2018). To be able to summarize efficiently a text, students need to identify the most important information and write a new text, of a reasonable length, by reformulating the original work in their own words. To do this, students have to analyze each of the sentences/paragraphs, search for important words and details, exclude the unimportant information and, then, gather the essential information into a whole that makes sense (Westby, Culatta, Lawrence, & Hall-Kenyon, 2010; Pirc & Pečjak, 2018). A good summary

is, therefore, a text or a discourse made of the important things present in the text read (Calvani, 2018). Some strategies can help building a good summary (Brown, Campione, & Day, 1981; Brown & Day, 1983):

- eliminate all that is trivial;
- eliminate the material that, although important, is redundant;
- replace a list of elements or actions with a single word that contains the meaning;
- select a sentence in the text or, if not present, generate a new sentence that represents a general and fundamental meaning.

These strategies are based on the concept of macro-operations or macro-rules identified by Kintsch and van Dijk (1978), which allow the reader to analyze the text and identify the underlying theme.

As a matter of fact, those who provide a good summary prove to have understood the organization and the general theme of a text. They are also able to read between the lines, understand the main idea and make inferences about ideas and concepts that are not explicitly indicated in the text, but are essential for comprehension, discriminating among important information and irrelevant ones (Kisner, 2006). To use this strategy, students must also be aware of the explicit structure of text. The more students are aware of this structure, the more they are able to summarize it (Westby, Culatta, Lawrence, & Hall-Kenyon, 2010).

However, the summary activity is often viewed by teachers as a task that students should naturally perform even if complex cognitive processes are required. For this reason, the teaching of strategies to synthesize is neglected in every phase of education (Özdemir, 2018).

Pečjak and Pirc (2018) checked whether the skills for building a good summary could develop thanks to the direct intervention of teachers in primary school students of the fourth classes. The results of the study showed that teachers can develop summarizing skills of students by systematically training them to use these skills, but the training effects decrease if the learning environment does not encourage students to use these skills. The authors observed that the development of a metacognitive knowledge, acquired by reflection during discussions about summaries, promotes the intentional use of summarizing in different contexts. The results also show a correlation between the ability to summarize and general reading competency (Pečjak & Pirc, 2018). These results were confirmed in other studies that observed how the use of summarizing strategy, is able to influence the understanding of a text, and, consequently, the performance of students (McCulley & Osman, 2015).

In conclusion, the ability to summarize represents a fundamental skill for the process of understanding a text. This strategy, in younger students, is a multiplicative function between decoding and linguistic comprehension, which involves the lexical information and the representation of text derived from it (Pirc & Pečjak, 2018). Based on these considerations, it is useful to evaluate and promote this competence in the school environment to improve the understanding of texts and, thus, the academic performance of students.

### **3. METHOD**

#### **3.1. Objective**

The study intends to evaluate the ability to summarize in children attending the fourth grade of the primary school. We set the following objectives:

- analyze the relationship between the ability to summarize and competences involved in the process of understanding a text, such as the capacity of making inference, the metacognitive skills and the vocabulary;
- verify if poorer scores at the Summarizing Test are associated with lower scores at the tests investigating the other variables considered.

### 3.2. Participants

The sample of our research consisted of 104 children attending the fourth grade of the primary school, aged between 8 and 9 years ( $M = 8.80$   $SD = 0.35$ ), 56 females and 48 males. The sample was selected from the population of a larger project, whose main objective was to demonstrate the effectiveness of the Reading Comprehension – Reciprocal Teaching (RC-RT) program (Calvani & Chiappetta Cajola, 2019). Students with Special Educational Needs, with an intellectual disability, with specific learning disabilities and foreign students with poor fluency in the Italian language were excluded from the sample.

### 3.3. Materials and procedure

The tests administered to evaluate the variables object of the study are the following:

*Test of Verbal Meaning-new version* (Montesano, 2019). The test of Verbal Meaning - new version (P.S.V.<sub>nv</sub> is the Italian acronym) allows to obtain a measure of the child's vocabulary. The test was specifically tuned for this research, including items with a higher grade of difficulty compared to the standard version (Thurstone & Thurstone, 1962). It consists of 30 items, of which 15 were modified from the previous version. The time available to complete the test is 7 minutes. The score is calculated as follows: one point for each correct answer and zero points for each incorrect or omitted answer. In the presence of a double answer, half a point is attributed provided that one of them is correct. The total score is obtained by the sum of each point scored.

*Summarizing Test*. The Summarizing Test (ST) provides an assessment of the child's abilities to summarize, that is the identification of the most relevant information and their combination in constructs (Menichetti, 2018; Calvani & Menichetti, 2019). The test is constituted of two versions (ST<sub>A</sub> and ST<sub>B</sub>). For the purposes of this research we used the ST<sub>A</sub> version. The ST<sub>A</sub> consists of four short texts, for each of which three questions are asked. Each question presents six alternative answers: the student must identify the three answer which appear to be the best. Each correct answer is assigned a point, therefore for each text is possible to obtain a maximum score of nine points and the maximum score obtainable in the ST<sub>A</sub> test is 36.

*Test for the evaluation of semantic inferences for the third and fourth primary classes*. To measure semantic inference, the "Gimmy" test was administered (Tressoldi & Zamperlin, 2007). The child is asked to read and answer 10 multiple-choice questions, which require to obtain inferential information from reading a piece.

*Lexical and Semantic Inference Test (LSIT)*. The Lexical and Semantic Inference Test, present within the program New Guide to Reading Comprehension (criterial tests, Level A, De Beni, Cornoldi, Carretti, & Meneghetti, 2003), allows to evaluate the ability to infer information not reported explicitly in a text. The test focuses on two types of inferences: semantic inferences (concerning the meaning of unwritten information, or the recovery of information related to the topic, which help to understand what is said in a text) and lexical inferences (to recover the meaning of an unknown word based on the context in which it is

located). The child is asked to read and answer 15 multiple-choice questions. Each correct answer is assigned a point.

*Metacognitive Questionnaire.* The Metacognitive Questionnaire (QMeta) allows to detect the metacognitive strategies of understanding a text in the fourth class of the primary school (La Marca, Di Martino, & Gülbay, 2019). It consists of ten items related to the following dimensions: questioning, clarifying, predicting, discussing. In the questionnaire the student is invited to analyze a series of statements describing possible metacognitive strategies and to express to what extent they correspond to his personal way of proceeding, by a three-point Likert scale (0 - No, never or almost never; 1 - Yes, sometimes, 2 - Yes, often). The tool provides both partial scores, relative to the five dimensions explored, and an overall score.

The tests were given collectively in the individual classes, during school hours. The tests were provided one at a time and preceded by a moment of detailed explanation of the instructions. The total time taken to complete the work in each class was approximately 90 minutes.

#### 4. RESULTS

Table 1 shows the descriptive statistics (mean, standard deviation) of the sample of our research.

*Table 1.*  
*Mean e SD of the scores obtained by the sample.*

	Total score P.S.V. <sub>nv</sub>	Total score "Gimmy"	Total score QMeta	Total score LSIT	Total score ST <sub>A</sub>
Mean	22.65	4.12	10.2	7.79	21.61
SD	3.80	1.73	3.74	2.75	4.97

To examine the relationship between the ability to summarize and the other variables of the study, given the asymmetric distribution of some indicators (in particular, the vocabulary), non-parametric correlations (Spearman's  $\rho$ ) were calculated. Significant correlations ( $p < 0.01$ ) emerged between the ability to summarize and the variables taken into consideration. Specifically, we observed the presence of a linear and significant relationship between the ability to summarize a text, measured through the Summarizing Test, and the vocabulary ( $|\rho| = 0.48$ ;  $p < 0.01$ ). Furthermore, we observed the presence of a positive linear relationship between the ability to summarize and the ability to draw inferences (*Gimmy*  $|\rho| = 0.27$ ;  $p < 0.05$ ; *LSIT*  $|\rho| = 0.43$ ;  $p < 0.01$ ) and the metacognitive abilities ( $|\rho| = 0.44$ ;  $p < 0.01$ ).

Based on the score obtained at the ST<sub>A</sub> we identified two groups of students: those "with good summarizing skills" and those "with poor summarizing skills". This data allowed us to verify the possible correlation between the scores obtained at the Summarizing Test and at the other tests applied. A threshold of 17 points was used to identify the group of students "with poor summarizing skills" (total score  $\leq 17$ ). We choose this threshold as it corresponded to -1.5 standard deviations from the mean, according to the normative data of Italian standardization (Mean = 24.47, SD = 4.50; Menichetti, 2018). Using this classification criterion, the group "with poor summarizing skills" consisted in 14 children, who represented 13% of the total sample.

The two groups were compared by the Mann-Whitney (non-parametric) U test for independent samples. Results showed that the group "with poor summarizing skills " had statistically lower scores than children "with good summarizing skills " in the metacognitive questionnaire ( $z = -2.40$ ;  $p < 0.01$ ). No statistically significant differences emerged regarding the inference making ability (*Gimmy*  $z = -1.62$ ,  $p = 0.11$ ; *LSIT*  $z = -1.09$ ;  $p = 0.27$ ) and the vocabulary ( $z = -0.72$ ,  $p = 0.08$ ).

## 5. FUTURE RESEARCH DIRECTIONS

Our results highlight the close relationship between the ability to summarize and the other variables analyzed: the vocabulary, the metacognitive skills and the ability to make inferences. The present work is only a pilot study. A desirable goal, in the future, would be to expand the study sample, in order to obtain more reliable data, representative of the Italian situation. Furthermore, future analyses should focus on the development of these skills over time and their relationship with academic success.

## 6. CONCLUSION/DISCUSSION

Reading comprehension is a complex skill that involves different abilities, ranging from linguistic skills, such as vocabulary, to more complex cognitive skills, such as the ability to make inferences, working memory and metacognitive skills. Among these competences, the ability to summarize represents an important metacognitive strategy to improve the comprehension of text. It promotes learning, leading students to reflect and to elaborate what they read and to focus on the main contents of a text (Westby, Culatta, Lawrence, & Hall-Kenyon, 2010).

On this basis, one of the objectives of the present work was to evaluate the ability to summarize in a sample of students attending the fourth primary class. We also analyzed the relationship among this ability and some competences involved in the process of understanding a text. Our results showed a significant correlation between the summarizing skills and the ability to make inferences. Furthermore, significant correlations emerged between the ability to summarize and lexical knowledge and metacognitive skills. These results are not surprising, as both these skills are considered fundamental in the process of understanding a text (Pečjak & Pirc, 2018; Pirc & Pečjak, 2018; Meneghetti, Carretti, & De Beni, 2006; Soto, Gutierrez de Blume, Asun, Jacovina, & Vásquez, 2018; Montesano, Iazzolino & Valenti, 2019). The synthesis strategy promotes a better text comprehension, but no understanding of text is possible if the subject is unable to understand the meaning of the words present in the text.

Another aspect analyzed in this paper is the difference between students with "good summarizing skills" and students with "poor summarizing skills ". The results showed that students with "poor summarizing skills " are characterized by poor metacognitive skills, compared to peers with "good summarizing skills ". This finding is probably linked to the close relationship between these two abilities. Also, some students may be able to explain a text, but be unable to make a correct summary, as it requires different strategies. As Palincsar and Brown (1984) reported, the ability to summarize a text can be considered one of the metacognitive strategies. In fact, asking students to summarize a text not only induces them to focus on the main contents, but also sensitizes them to self-evaluate on the comprehension of the text. Aspects that are part of the concept of metacognition. Our results underline the importance of promoting students' metacognitive skills together with the summarizing strategy. In the literature, students with poor skills of text comprehension perform worse in

tests that evaluate the knowledge and the use of appropriate reading strategies and metacognitive control (Cataldo & Cornoldi, 1998; Mirandola, Ciriello, Gigli, & Cornoldi, 2018). In particular, Mirandola, Ciriello, Gigli, and Cornoldi (2018) observed a poor metacognitive monitoring in children with reading comprehension difficulties, compared to good readers.

In conclusion, our data highlight the close relationship between the ability to summarize and the general reading skills, and the importance of the metacognitive skills. However, the present work was only a pilot study, limited to the analysis of some of the competences involved in the process of understanding. Future researches will be able to deepen these results, possibly analyzing the relationship between the ability to summarize and the academic performance.

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A. Valenti & L. Montesano

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